Regis University Student Publications
(comprehensive collection)

Regis University Student Publications

Fall 2019

Experiences of Providers in Caring for the Obese Hispanic Population

Emma Gladson
Regis University

Follow this and additional works at: https://epublications.regis.edu/theses

Experiences of Providers in Caring for the Obese Hispanic Population

Emma Gladson

Submitted as Partial Fulfillment for the Doctor of Nursing Practice Degree

Regis University

September 26, 2019

Table of Contents

Copyright page

Executive Summary

Problem

The national obesity rate continues to rise along with numerous correlating health disparities in Colorado. While there are numerous health inequalities, obesity is a major concern and a growing epidemic. The PICO statement for this project is**:** Population: Medical providers working in urban clinics in Aurora, Colorado with Hispanic patients. Intervention: Interview providers working in urban clinics who work with obese Hispanic patients, regarding their experiences in caring for this population. Comparative: none. Outcome: Perceptions and experiences of treating and teaching obese Hispanic patients.

Purpose

The purpose of this capstone is to study how providers, including Nurse Practitioners, Physician Assistants and Medical Doctors care for the specific patient population in the surrounding Denver area of obese Hispanic patients and determine the experiences of providers in caring for this population.

Goal

The objective was to examine the experiences of health care providers in caring for obese Hispanic patients and the way healthcare providers care for this population. Determining if there arebarriers to care for this population help establish ways to improve our care for this population.

Plan

This project is a qualitative research study involving personal interviews of providers regarding their experiences in caring for the obese, Hispanic patient population.

Outcomes and Results

Three broad themes have been identified in this project with subcategories. The three main themes include 1) barriers to caring for obesity, 2) factors contributing to client obesity and 3) proposed changes to care.

Abstract

The national obesity rate continues to rise along with numerous correlating health disparities in Colorado. According to Andolf and Fisichella (2018), obesity currently affects 78.6 million people in the United States. Obesity is without a doubt a major health concern. Obesity in children and adolescents is a growing concern in the United States, where one fifth of the entire population from age two to nineteen in 2011-2014 was obese (Obesity, Diet and Mortality Trends, 2016). The objective of this project was to examine experiences of healthcare providers caring for the obese Hispanic population. Determining the experiences in providing care for these patients will ideally determine ways to improve their health outcomes. Nearly 1/3 of the adult US population is now estimated to be obese (Flegal, Graubard, Williamson, & Gail 2016). Furthermore, initiating change in practice may occur based on outcomes of this project. Delivering equality healthcare for the underserved may help reduce the ill effects of social determinates of health and can improve correlating health impacts that directly relate to obesity. Illnesses such as diabetes, hypertension, coronary artery disease, healthcare access and affordability directly impact the underserved and equality in healthcare can bridge the gap with the underserved population. Exploring provider experiences may identify ways to allow healthcare to be proactive verses reactive in terms of obesity. The nurse researcher conducted 15-20-minute voluntary face-to-face interviews that were audio-recorded, transcribed and coded for themes. Methodology used for this project was a phenomenological qualitative study that looked at lived experiences of providers. Three broad themes were identified, with subcategories. The three main themes include, nursing barriers to caring for obesity, factors contributing to client obesity, and proposed changes to care.

Key words: DNP project, obesity, Hispanics, healthcare providers

Obesity is a concern to the public health and a growing problem in the United States. According to Muturi, Kidd, Lindshield, Kattelmann, Adhikari, and Zies (2017), low-income individuals, particularly those of ethnic minorities, are at higher risk for obesity. Determining the experiences of providers in caring for the obese Hispanic population may assist in bridging the gap of low-income communities that are disproportionately affected from this disease (Muturi et al, 2017). According to Mozumdar and Liguori (2016), an estimated 300,000 deaths per year in the United States can be contributed to obesity. Clearly, this needs to be addressed and healthcare providers are on the front line of this challenge. The purpose of this paper is to describe the project including the problem statement and recognition, market and risk analysis, project objectives, and evaluation plan.

Problem Recognition and Definition

The national obesity rate continues to rise along with numerous correlating health disparities in Colorado (Trujillo, 2017). There is an increased risk of mortality with an elevated body mass index (BMI) (Abramowitz, et al. 2018). While there are numerous health inequalities, obesity is large contributor to other healthcare disparities. Currently heart disease is the number one overall cause of death and obesity is a major associating factor. Evidence has shown that reducing weight and obesity can impact hypertension and cardiac disease, and improve overall health (Tian,et, al, 2017). As providers, it is imperative to educate patients to develop healthy habits now so future generations can maintain appropriate weights. Weight management is becoming even more of a problem with childhood obesity and the amount of technology children are engaged in versus active playing. Sedentary lifestyles are becoming more of a "norm" (Brawley, Rejeski, Gaukstern, & Ambrosius, 2012).

Obesity rates have been shown to be higher in the underserved population. This is often due to lack of education, poor economic status, access to nutrition, and sustainability of day to day needs (National Health and Nutrition Examination, 2017).

Statement of Purpose

The purpose of this project was to study the experience of providers, including nurse practitioners, physician assistants, and physicians as they care for obese Hispanic patients in Aurora, Colorado.

PICO Statement

The PICO statement for this project is**: Population**: Medical providers working with obese, Hispanic patients in urban clinics in Aurora, Colorado. **Intervention**: Interview providers working in urban clinics who work with obese Hispanic patients, regarding their experiences in caring for this particular population. **Comparative:** none. **Outcome:** Perceptions and experiences of treating and teaching obese Hispanic patients.

Project Significance

While this patient population has several identified health outcomes, one of the most important outcomes relates to the objective of the project. Specifically, the objective is to examine the experiences of healthcare providers who care for this population, to determine their experiences and if there are barriers to care, as well as establish ways to improve care for this population. Changing the way care is provided for these patients will ideally improve their overall health outcomes. The long-term goal is reducing the obesity rate in this population in the Denver-metro area. This is particularly important as an estimated 160 million Americans are either obese or overweight (Heisel, & Persaud, 2014).

Changes in practice may occur based on outcomes of the project. A study conducted by Natvik, Raheim, Andersen, and Moltu, (2018), explored successful weight loss after severe obesity. It is known that long term weight loss is difficult, and weight regain is common. Committing to keeping the weight off involves profound life style changes. This study found that effective behavior, intervention, and social support is essential in maintain weight loss. While studies have been conducted that have examined successful weight loss programs, there is little evidence available regarding the overall health and barriers in caring for the obese Hispanic patient population.

In this DNP project, the goal is to determine what the experiences of providers are in caring for this patient population through qualitative research. This study focuses on the experiences of providers in caring for this population. Exploring effective approaches in how providers care for these patients will ideally improve their overall health outcomes. One of the main reasons this project was chosen is based on the need for change in the obese population. Many health determinants can be correlated with obesity, such as hypertension, coronary artery disease, pulmonary hypertension, sleep apnea, cancers, and diabetes (Centers for Disease Control and Prevention, 2016). In a community health center in Aurora Colorado, with a large underserved Hispanic patient population, many healthcare disparities have been identified. For example, many patient visits address weight management, diabetics, metabolic syndrome, and obesity. This provided some insight on a clear health problem that needs further exploration and intervention to aid in helping this specific patient population. Presenting evidence-based research and conclusions of this project to Metro Community Provider Network may lead to improved patient interactions and ability to change behaviors and health outcomes in this population.

The purposed project outcomes are patient sensitive as this change directly relates to the patient. While the project included interviewing providers, the goal is to improve patient care and health outcomes, specifically related to obesity in the chosen population. While there are numerous components to the care provided, being culturally sensitive and competent is a step towards improving outcomes for patients. Educating future providers in becoming culturally competent is also important. While this project focuses on improvements in patients, it is also an organizational sensitive project, following the rules and regulations within Metro Community Provider Network. This includes reporting results and educating the providers within the organization to fully make changes.

Theoretical Foundation

Two nursing theories correlate to the DNP project. The first one is Nola Pender's health promotion theory looking at how health maintenance is the absence of disease, (Da Silva Santos, et al. 2018). This is a practice theory, which is defined as exploring one particular situation found in nursing. It identifies precise goals and details and how these goals will be achieved. This explicitly applies to the problem statement because obesity and numerous other health effects correlate with one and another and impact health. The theory states that everyone has unique experiences and characteristics that affect the actions performed. Every person has a different experience and involves unique characteristics with implementing engagements of healthy living. Nola Pender's theory focuses on three areas; individual characteristics and experiences, behavior-specific cognitions and affect, and behavioral outcomes. The specific knowledge and affect have important motivational significance, which can correlate to obesity and weight loss. Realizing weight loss is not all motivational can impact a patient's willingness to attempt to improve their diet. Weight loss is more than just motivation, but includes factors such as

socioeconomic influences, culture, resources, genetics and food choices. Nola Pender's Health promotion model correlates with many health impacts, and obesity is no exception.

A second theory that relates to this project is Dorothy Johnson's Behavioral System theory. Johnson's theory discusses how behaviors are organized to achieve a specific goal. Dorothy Johnson's theory is a behavioral system theory. Behaviors and actions have consequences, positive or negative. The concept of people making changes to meet goals and having to make constant adjustments to continue the healthy lifestyle is extremely applicable to obesity and the correlating health impacts. For instance, clinical participates in behavior weight management is an example of Johnson's theory of dependence and how behaviors are designed to get results. For example, exercises and regular physical activating yields results, (Rothberg, et al. 2015). Behavior system and changes are important in any health aspect and for obesity Dorothy Johnson's Behavior system is extremely fitting.

Literature Selection/Systemic Process

A literature review identified specific themes to this project. The search engines used were EBSCO Host, Academic Search Premier and CINAHL. Specific key words were used to obtain pertinent articles that related to the topic, including obesity, Hispanics, nursing, healthcare providers, nutrition, and healthcare disparities associated with obesity resulting in 2,371 articles. Using key words such as "Hispanics and obesity, healthcare and obese Hispanics", Colorado obesity and healthcare, narrowed the search to less then one hundred articles that was specific research that pertained to this project. According to Terry (2018), the literature review is a direct route to the researchable problem. In this instance, obesity is a huge epidemic so the literature review was conducted to narrow the focus. Using a comprehensive review process, the research was broken down into three categories, including Hispanic culture, obesity, and nursing care. In

the three categories, common themes have been identified. For example, Hispanic culture has

particular themes such as the time consideration it takes to prepare authentic food. Another

example is the lack of education and resources such as transportation to access food. According

to Centers for Disease Control and Prevention (2016), lack of resources and food insecurity

largely contributes to obesity in the under-served population.

Additionally, the obesity category consists of themes such health benefits of reducing obesity,

benefits of exercise regardless of weight change, and psychological impacts of weight reduction.

The literature also illustrates that education and socioeconomic status also influence weight

management. According to Yu Wei Chang, Hussin, Rahim, Muthuvadivelu, and Chan Wai

Scong (2018), obesity increased from 15.7% to 38.8%, in the last ten years and there were more

increases in obesity in students who did not graduate college compared to a four-year college

graduate. This suggests that less education is an identifiable risk factor for obesity. Another

example is how language impacts adolescents and physical activity. A study conducted by

Jihong, et al (2016), looked at how acculturation influences Hispanic adolescents and physical

activity. This study showed the prevalence of obesity was higher in homes where English was

not the primary language (22.5% vs. 16.1%; $p<0.01$). This suggests that public health

interventions aiming to increase physical activity in the Hispanic adolescents should be based on

generation status and English language use. Education is fundamental to taking care of patients.

Healthy living and weight loss are no exception.

Another major contributor to obesity is physical inactivity and sedentary lifestyles.

Increasing activity and movement produces lower body mass indexes and overall improvements

in health (Tian, et al, 2017). According to Golden, et al. (2015), cancer and cardiovascular

diseases, while different conditions, share some common risk factors such as physical inactivity

and obesity. Additional health determents associated with obesity and the Hispanic culture has also been found throughout the literature. Cancer is the leading cause of death among Hispanics compared to non-Hispanic Whites and Hispanics are more likely to be diagnosed with advanced stages of the disease, (Yanez, McGinty, Buitrago, Ramirez, & Penedo, 2016). Obesity is without a doubt an issue in a variety of ethnicities, however in the Hispanic population, it is disproportionally higher (Ogden, Carroll, Kit, & Flegal, 2014). In 2018, House, Shearrer, Boisseau, Bray, and Davis evaluated Hispanic college students and looked at how often they consumed food. This study determined that infrequent eaters had 8% higher BMIs and ate 44% less often. Infrequent eaters consumed 27% more calories per EO ($p \leq 0.01$), while consuming 21% less kcals per day ($p \leq 0.01$) compared to frequent eaters. These findings suggest that regardless of physical activity, infrequent eating has increased obesity in Hispanic college students, despite a decreased daily energy intake. This once again shows how obesity impacts many other health conditions and physical inactivity is a major culprit to problem at hand.

The third category is nursing care for this population. In the literature review, consistent themes that were found under this category include relationship building, cultural awareness, and time constraints for education. For example, in a cross-sectional study conducted by Wright, Giger, Norris, and Suro (2013), it was demonstrated that nurses should provide culturally appropriate education regarding dietary behaviors with every patient. While this is an ideal practice, appointment lengths in primary care often do not allow adequate time for proper education. This is true for many other health disparities such as diabetes, hypertension, and obesity. Improvements in preventing obesity in Latino children in addition to education and working with communities to develop obesity prevention education is to improve care for our patients, (Wright, et al, 2013).

While obesity is a very broad area of interest, further research such as genetics, sedentary lifestyle, and additional impacts obesity has on health has been identified in the literature review. The impact of obesity and the correlating effects are health are astronomical. This includes not only hypertension but also cardiovascular disease, metabolic syndrome, diabetes, pulmonary diseases, and psychological impacts as well. (Elagizi, Sergey, Lavie, Carbone, Pandey, Ortega, & Milani, 2018). Obesity is a multifactorial disease and many affected individuals suffer from declines in mental and physical health. Research has found that genetic factors also play a role into obesity (Tian, et al, 2017).

Unfortunately, millions of Americans have obesity related disease such as hypertension, diabetes, sleep disturbances, acid reflux, coronary artery disease and pulmonary disorders. One out of three Americans have obesity related hypertension, (Andolf & Fisichella, 2018). Another major contributor to obesity is physical inactivity and sedentary lifestyles. Studying the impacts of hypertension and the relation to diet, and obesity can largely impact a patient's health and potentially increase life expectancy. Hypertension and obesity are an example of the correlating health impacts that obesity influences. According to Blaschke (2017) certain types of cancer have also been shown to be associated with obesity. Research has also found that cardiovascular disease, diabetes, metabolic diseases and mental health is also associated with obesity and disproportionately affects underserved and minority communities (Berger, et al 2014). Furthermore, Berger's study demonstrated effective intervention with prevention programs that specifically target minority children who are at higher risk for obesity. It involved education with children, teachers, parents and the community to foster improvement in healthy behaviors and lifestyles. While it is clear that the literature has shown obesity to be multifactorial and involve many health impacts, obesity and the Hispanic population and provider perceptions has not been

well studied. Determining healthcare providers perceptions and experiences is one way to help bridge the gaps of healthcare disparity.

Market/Risk Analysis

Project Strengths/Weakness

Overall reducing the obesity rate in the Denver Metro area is a long-term goal of this project, which starts with determining the experiences of healthcare providers who are working with the underserved. Educating physician assistants, nurse practitioners, and physicians in providing culturally competent care will improve outcomes in the Hispanic population. Changing the way providers care for this population will improve overall healthcare outcomes and reduce obesity in this population.

Strengths for this project included access to many providers who work with this particular population. There are over 50 providers who were available through the network to participate in this study. Another strength of this study was the high volume of Hispanic patients with obesity cared for by these providers.

Restraining forces for this project include the amount of time healthcare providers realistically have with patients, language barriers, and cultural knowledge of diverse patient population. Another restraining force was the time required for completing a qualitative study with interviews and questionnaires for data collection impose possible challenges of gaining an adequate sample size. This is another reason why one on one interviewing was imperative to this project.

Stakeholders and Project Team

Stakeholders for this study include those who are affected by the outcomes of this project. Stakeholders include providers, patients, the clinic and possibly insurance providers. Improving healthcare for this population includes assisting both consumers and providers. Ultimately reducing the obesity rate in this specific patient population would save numerous healthcare dollars and lead to a more preventative care approach.

All legal requirements of Metro Community Provider Network were adhered to in order to ensure all legal ramifications were met within the organization as well with researching human subjects. Another important member of the team is a co-worker who was born in Mexico and has become a provider in the United States. She helped provided an understanding of the Hispanic culture and her experiences of nutrition change and economics coming over to the United States.

Cost/Benefit Analysis

The cost benefit analysis looks at the cost of the project set against the possible benefits. Direct costs were limited to the recording device, which was $32.00. In addition, the cost included the interviewee's hourly salary, which is $55.00 an hour, plus the average salary of the providers who were interviewed, which is $55-70 an hour. This equals approximately $118.0 per hour. Since ten providers were interviewed the total cost of interviews was about $1,180 to complete the study. Another large cost to this study is time to send out emails asking for providers to volunteer for this study, to set up interviews, conduct the interviews, and then to analyze the data.

Although the costs were low to implement the project, the potential savings and benefits to the US healthcare system cannot be understated. According to the Centers for Disease Control and Prevention, in 2016 the medical cost of adults associated with obesity has been estimated to

be $147 billion dollars in the United States. With the correlating health impacts on obesity, prevention is essential. Inhibiting this epidemic, Colorado has the potential to save thousands of dollars in healthcare each year.

Project Objectives

Mission and Vision

Determining the barriers to care and implement change for the underserved population were the ultimate objective for this project. The mission statement for this project is to determine experiences of healthcare providers when caring for this population. To expand on the mission, is to create and eliminate obstacles for different cultural backgrounds and obtain sustainability to caring for these patients to aid in their overall health. The vision of this project is to improve the health of patients and reduce obesity rates. The long-term goal is to form equality in healthcare regardless of culture or background. While this goal will take more than the lifespan of this specific project it will continue to be a passion of the author with a desire to continue to help the underserved. Determining barriers can aid in helping reduce obstacles and create more equal healthcare.

Goals

Setting goals for the project is imperative for success. The goal of this project was to determine the experiences of providers in caring for the obese Hispanic population. Obtaining surveys and interview questions and transcribing the interviews were done prior to data analyzing. Attempting to set aside all personal basis was also a goal of this project. Achieving accurate timelines and goals were imperative for success. Conducting interviews in a timely manner and staying updated on the latest research contributed to the success of this study.

Evaluation Plan

Logic Model

Obtaining target goals and benchmarks for this project was done using the logic model (Appendix B). First, obtaining the correct resources was necessary to implement the project. Continuing to work closely with the DNP mentor and the DNP project chair at Regis University was important. This step of the conceptual model was established early on in this study. The author explored the Hispanic culture, obesity, and nursing care to ensure adequate research was available on this purposed topic. After interviews were conducted and completed, qualitative coding was used to analyze interview responses. Using the logic model was a way to evaluate the project as it progressed.

Objectives and Research Design

The objection of this study was to determine experiences of health care providers working with the obese Hispanic patients. After resources were determined specific activities needed to be accomplished. Obtaining International Research Board (IRB) approval was the first step to completing this study, to maintain ethical standards of practice. Determining questions that were going to be asked for the study was done before any conducted interviews. An expert in the field (a medical doctor working with this particular population for more than five years) then reviewed the questions. Once the expert approved the questions, volunteers were asked to participate in the study. Settings up interviews was done by asking for volunteers to participate in the study through emailing healthcare providers within Metro Community Provider Network. Once interviews were established, scheduling a time and date in a private setting was done to maintain confidentially. Prior to interviews, informed consent was obtained and then interviews

were conducted one on one with a recording device. Once all ten interviews were complete, they were transcribed verbatim. The transcription of the interviews was then coded into qualitative categories by common reoccurring themes that providers have been experiencing. Once data was analyzed into themes it become apparent that there were three common themes with subthemes in the data that was collected from the ten interviews.

Population and Sampling Parameters

The population was healthcare providers, including physician assistances, nurse practitioners, and physicians who work with the patient population in the aforementioned clinic. This was a convenience sample as the participants were selected from the same provider network. The interviews continued until answers reach saturation, which was achieved after ten interviews.

Setting for EBP Project

This project was a qualitative research study involving personal interviews of providers regarding their experiences in caring for obese, Hispanic patients. The setting for this project was determined to be in a private setting, with recorded interviews which were transcribed after all interviews had been conducted.

Methodology and Measurement

Detailed plans and preparation for analyzing outcomes include using qualitative measures and analyzing data through subjective responses while interviewing healthcare providers. Determining the experience and barriers of providers in caring for the identified population is the purpose of the project.

Methodology used for this was a qualitative, phenomenological study that looked at personal experiences of providers through interviews that lasted about 45 minutes to an hour.

Data collection was done through obtaining volunteers that work with the specific population, of obese Hispanic patients as healthcare providers. After obtaining volunteers, a time was set up to complete the interviews. Written consent was obtained prior to interviewers and interviewers were reordered for the capability to transcribe for data collection. Participants were interviewed about their experiences in caring for this patient population. Appendix C shows specific interview questions. This study interviewed ten healthcare providers in various capacities. Six interviews were conducted with family nurse practitioners, one pediatric nurse practitioner, two medical doctors and one physician assistant. The researcher conducted interviews in a private setting. The responsibilities related to human subjects was first done with obtaining informed consent to interview, (Appendix F). After all ten interviews were completed; the data was transcribed by the interviewer and then organized and coded into qualitative research themes.

Protection of Human Subjects

Researching human subjects and complying with federal guidelines involves knowing and understanding the proper regulations. Laws have been set in place to protect human subjects such as informed consent, international review boards, and maintaining confidentiality. Approval by the Regis University Institutional Review Board (IRB) as an expedited study was obtained prior to any conducted interviews. The researcher ensured all of the organization regulations were followed in addition to the Regis University IRB (Appendix E). Participants were interviewed individually and a recording device was used. Confidentiality was maintained with no personal identification used. The interviews were voluntary. Recorded interviews and transcripts will be kept confidential and locked in a safe for three years and then destroyed.

Instrumentation Validity and Reliability

Challenges that have occurred with this project involve some inherent risks of interviewing with open-ended questions and analyzing qualitative data. Sample size could have impacted data analysis if saturation was not reached, however with ten interviews conducted, saturation was met. Reliability and validity were essential to validate the project. A physician that works with the patient population in question reviewed the interview questions to determine that they would be useful in obtaining information.

Attempting to place biases aside with field notes during interviews was crucial with this qualitative study. For example, field notes were maintained during the interview to document and observe provider behaviors, body language and take note if a provider had to think about an answer to a question. This assisted in setting basis aside as well as a way to observe the interviews while it was being recorded. Journaling was done after each interview was conducted to reflect on how the interview went and determining the theme of each interview. This was a way to attempt to identify and set bias aside.

The researcher transcribed recorded interviews verbatim, and then themes were identified. Reading the interviews repeatedly, looking for common words and phrases allowed the researcher to code the qualitative data. After data was coded the results were reviewed with the interviewees to determine that they agreed with the themes. The interviewer identified three major themes with additional subthemes. This assisted in additional validation of the results.

Project Findings and Results

After the interviews were conducted and completed the data was analyzed. There were three main themes identified. The main themes include; provider's barriers to caring for obesity,

factors contributing to patient obesity, and proposed changes to care. Obesity, Hispanic culture, and nursing care were three additional themes that were identified in the study.

Provider Barriers

Provider barriers were a common theme that was identified in the ten interviews conducted. Many healthcare providers discussed lack of education and resources as a common barrier for caring and providing the best care to the Hispanic population. During one interview, a nurse practitioner stated, "We are trained to educate and treat but sometimes, we get busy and don't spend the time we need too, to truly educate our patients." Not only was education a subtheme for barriers, but also language barriers were also discussed. Out of the ten providers interviewed, only one was comfortable speaking Spanish in the office sitting. Most interviewees brought up how language impacts the office visit and using an interrupter can be time consuming and it is often difficult to ensure the accuracy of translation. Lack of time and proper follow up was also mentioned numerous times as a barrier. Participants discussed limited appointment times and the numerous issues to be discussed. Consequently, education is often overlooked when providing care, depending on the complexity of the patient. Lack of follow up, particularly with this population has also been challenging as transportation, work schedules and affordability with healthcare appointments can compromise patient's follow up. One of the interviewees noted that patients sometimes do not come to their follow up visits, making it difficult to get ahead of preventative care, "Follow up visits have also been challenging, just working in community health, often times patients do not show up." Clearly there are numerous challenges for healthcare providers in properly providing care for this patient population.

Factors Contributing to Obesity

Factors contributing to patient obesity was another major theme identified in the data. Culture, education, and socio-economics are sub themes identified as some patient barriers and factors that contribute to the obesity epidemic. For example, many interviewers discussed how it is culturally acceptable to be overweight, especially in this culture. Some people in the Hispanic population view childhood obesity as showing prosperity. During one of the interviews a provider mentioned how this culture believes thin children are not eating enough. For example, another interview stated, "Many patients that it is simply a part of the culture to eat high fats, and high carb foods".

Education

Education is an additional sub theme that has been identified in this study. Many people choose unhealthy food items, without knowing how this is influencing their long-term health. It is more convenient for working parents to give their children something quick, which is often prepackaged and filled with carbs and sugars, which untimely can contribute to obesity. Not only the convenience of these foods but also lack of education to the parents influences these decisions. "Many of our patients are not aware of our discount program, so awareness of resources also seems to be barrier". In community health, providers mention how access and awareness is an important aspect to caring for this population. Another interview mentioned, "Having access to clinics that can help with medication understanding diet changes as well, and exercise programs would be beneficial".

Healthy food options and socio-economic status plays a large role into food choices. Another interview mentioned, how junk food is often more affordable then the high nutrient and foods that are less nutrient rich are more affordable; therefore, they often have a higher

consumption rate. Financial hurdles clearly also impact obesity. Many patients have to miss work in order to get to their appointments, and transportation can become a hurdle as well. It is not uncommon for families to share one car, which contributes accessibility to health care, which is another economical challenge within the culture. A pediatric nurse practitioner stated, "Access to transportation also seems hard with this population and working with children who rely on the parents to get to their appointments". This then makes it difficult to play "catch up" when it has been numerous years since their last appointment. Often, "medical provider has not seen some patients in many years due to financial difficulties, especially with the underserved population". Clearly a common reoccurring theme for healthcare providers is financial and socio-economic status with this patient population and regarding their care.

Proposed Changes to Improve Care

The third major theme identified is ideas for proposed changes to improve patient care. Proposed changes include education for patient and providers, overcoming the language differences, and providing additional resources. Education has been a common theme in all three major categories of this project. Particularly as health care providers, education is a core value of medicine. One person stated, "We are trained to educate and treat but sometimes, we get busy and don't spend the time we need too, to truly educate our patients". Having more time to spend with patients on education will improve outcomes in the long run. "Going back to the way they are raised and the culture makes it challenging which can be hard as a provider going back to the way they are raised and their culture makes it challenging." Education has been a recurring theme to improve care. Another interviewee stated, "It is our responsibility to provide the most education and offer resources to our patients to help obtain the best outcomes". Furthermore, being culturally sensitive to the Hispanic culture while educating on proper nutrition and

spending the time during the office visit to discuss specifically healthy food choices would ultimately improve care for these patients. One of the interviewees discussed how having a live interrupter would improve education, "Having a live interrupter come to the visits would be a huge benefit to our patients and as providers, make the education go much smoother". According to the healthcare providers, educating patients regarding resources, making sure they can afford their medications, assisting them with discount programs or generic brands, and if necessary changing the medication, would improve adherence due to improved affordability.

Language is a huge barrier in community health, as it takes more time and it is difficult to assess if the patient is receiving direct translation. Using a translator phone poses its own challenges and is time consuming, taking up precious time with the patient. A proposed change would be using a live interrupter for all office visits, which would allow for a smoother education process and patient ease. Another idea is having a Spanish-speaking provider see these patients to aid in comfort to the patient and cultural comradery. For example, "Language barriers, for sure is a huge one for me, I do not speak Spanish, so using the language line can be hard without facial cues or having proper translation is a huge obstacle". Providing English and Spanish handouts on diet and exercises also aids in supporting language differences and provides educational tools that can be incorporated into office visits.

Additionally, having resources for these patients is critical. Several interviewees discussed having group visits where education can be a team approach. This could include a pharmacist to review medications and reason for taking them, as well as nutritionists to discuss food options in relation to their patient health. "Having group visits for patients with specific diagnosis would also be beneficial and a way we could help implement their culture". Having an integrated care approach would be largely beneficial as many patients do have difficulty with

access to care and this would be a way to assist patients in numerous forms during one visit.

Having access to clinics that can help with medication understanding diet changes as well, and

exercise programs would be favorable.

Using the health policy development method, this project has identified best practices and

collaboration with the organization, Metro Community Provider Network to ensure change

occurs to improve the health of these patients. The overall goal of this project was to determine

the experience of providers working with this specific patient population.

Limitations

Limitations of this study include convenient sampling and subjective data. Convenience

sampling was used to interview healthcare providers that are colleagues. Interviewing coworkers

in the same clinic limits experiences and sample to this specific geographical area. If this study

was reproduced in a different geographical area, the data could potentially vary. Ten providers

were interviewed, including six family nurse practitioners, two medical doctors, one pediatric

nurse practitioner and one physician assistant. This study was a qualitative study, which means

subjective data was used for analysis. This provides some limitations as it is difficult to compare

central themes and analysis of core concerns has been identified by provider's experiences with

the specific patient population.

Recommendations and Implications for Change

Recommendations to practice changes may ultimately improve patient outcomes and

reduce obesity in this Hispanic population. Acknowledging that obesity is a complex and

multifactorial disease, focusing on the Hispanic population in the Denver Metro area was a

primary focus for this project. Determining the experience in caring for these patients was

essential in order to identify possible barriers and possible changes to practice. One suggestion

for a practice change is improving education by allowing adequate time for healthcare providers to educate patents. Providing education classes or expanding appointment times to specifically be able to integrate education as part of the office visits are possibilities. Increasing access to care, through increased additional resources and assisting the underserved patients with discount programs can improve adherence, which would improve outcomes.

Conclusion

Determining barriers to caring for this population is the first step in reducing this epidemic, which was the goal of this project. Changing the way healthcare providers care for this population may have a large benefit to preventative healthcare, patients, providers and insurers. Delivering equality healthcare for the underserved will reduce determinates and improves correlating health impacts that directly relate to obesity. Exploring provider experiences, challenges and barriers allow healthcare to be proactive verses reactive with the determinant of obesity. Implications for these changes are to improve preventative care, and overall reduce obesity in this population. Changing practice would not only improve patient satisfaction, overall healthcare outcomes but change would also reduce long-term health care costs and eventually reduce insure premiums. Nola Pender's nursing theory, and health promotion is very fitting when discussing preventive care and determining barriers to assist in improvements. Direct patient care with additional health education and overcoming the language barriers would ultimately provide additional resources to our patients. Implementation of change to improve our healthcare to the underserved population is imperative to expand outcomes.

References

Abramowitz, M. K., Hall, C. B., Amodu, A., Sharma, D., Androga, L., & Hawkins, M. (2018).

Muscle mass, BMI, and mortality among adults in the United States: A population-based

cohort study. *PLoS ONE, 13*(4), 1–16.

Andolfi, C., & Fisichella, P. M. (2018). Epidemiology of Obesity and Associated Comorbidities.

Journal of Laparoendoscopic & Advanced Surgical Techniques, 28(8), 919–924

Berger-Jenkins, E., Rausch, J., Okah, E., Tsao, D., Nieto, A., Lyda, E., & McCord, M. (2014).

Evaluation of coordinated school-based obesity prevention program in a Hispanic

community: Choosing Healthy and Active Lifestyles for Kids/healthy Schools Healthy

Families. *American Journal of Health Education*, *45*(5), 261– 270

Blaschke, S. (2017). The role of qualitative and meta-synthesis in cancer. *Journal of American

Cancer Society 6* (1)*, 171-173.

Brawley, L., Rejeski, W. J., Gaukstern, J. E., & Ambrosius, W. T. (2012). Social cognitive

changes following weight loss and physical activity interventions in obese, older adults in

poor cardiovascular health. *Annals of Behavioral Medicine, 44*(3), 353-364.

Centers for Disease Control and Prevention. (2016). Nutrition, Physical Activity and Obesity

Data, Trends and Maps. Retrieved from

https://www.cdc.gov/nccdphp/dnpao/state-local-programs/profiles/colorado.html

Da Silva Santos, A., Amaral Viana, M. C., Camelo Chaves, E. M., de Morais Bezerra, A.,

Gonçalves Júnior, J., & Ribeiro Tamboril, A. C. (2018). Educational Technology Based on

Nola Pender: Promoting Adolescent Health. *Journal of Nursing UFPE / Revista de

Enfermagem UFPE, 12*(2), 582–588.

Elagizi, A, Sergey, K, Lavie, S, Carbone, S, Pandey, A, Ortega, F, & Milani, R, (2018). An

overview and update on obesity and the obesity paradox in cardiovascular diseases. *Progress*

in Cardiovascular Diseases. 61 (2), 142-150.

Flegal, K. M., Graubard, B. I., Williamson, D. F., & Gail, M. H. (2016). Cause-specific excess

deaths associated with underweight, overweight, and obesity. *JAMA, 298*(17), 2028–2037.

Golden, S. H., Ferketich, A., Boyington, J., Dugan, S., Garroutte, E., Kaufmann, P. G., &

Srinivasan, S. (2015). Transdisciplinary cardiovascular and cancer health disparities

training: Experiences of the centers for copulation health and health disparities.

American Journal of Public Health, 105, S395–S402.

Heisel, W, Persaud, M, (2014). The vast majority of American adults are overweight or obese,

and weight is a growing problem among US children. *The Institute for Health Metrics and*

Evaluation. Retrieved from http://www.healthdata.org/news-release/vast-majority-american-

adults-are-overweight-or-obese-and-weight-growing-problem-among

House, B,. Shearrer,G,. Boisseau,J,. Bray,M,. Davis,J,. (2018). Decreased eating frequency

linked to increased visceral adipose tissue, body fat, and BMI in Hispanic college freshmen.

BMC Nutrition, 10, (4), 15-28.

Jihong, L., Janice, C., Probst, N., Harun, K., Bennett, J., & Torres, M. E. (2016). Acculturation,

physical activity, and obesity among Hispanic adolescents, *Ethnicity & Health, 14*(5), 509-

525.

Mozumdar, A., & Liguori, G. (2016). Corrective Equations to self-reported height and weight

for obesity estimates among U.S. adults: NHANES 1999-2008. *Research Quarterly for*

Exercise and Sport, 87(1), 47–58.

Muturi, N., Kidd, T., Lindshield, E., Kattelmann, K. K., Adhikari, K., & Zies, S. (2017).

Motivation for obesity prevention among adolescents in low-income communities in three

U.S. states. *Journal of Communication in Healthcare*, *10*(3), 169–179

Natvik, E., Råheim, M., Andersen, J. R., & Moltu, C. (2018). Living a successful weight loss

after severe obesity. *International Journal of Qualitative Studies on Health and Well-Being,*

13(1), 43-55.

National Health and Nutrition Examination. (2017). *U.S Department of Health and Human*

Services. Prevalence of Overweight and Obesity in the United States. Retrieved from

https://www.niddk.nih.gov/health-information/health-statistics/overweight-obesity

Obesity, Diet and Mortality Trends: There's work to be done. (2016). *Running & FitNews, 34*(4),
8–11

Ogden,C., Carroll,L., Kit,.K, Flegal,. M. (2014). Prevalence of childhood and adult Hispanic

obesity in the United States. *JAMA. 311*(8) 806–14.

Rothberg, A. E., McEwen, L. N., Kraftson, A. T., Ajluni, N., Fowler, C. E., Miller, N. M.,

& Herman, W. H. (2015). Factors associated with participant retention in a clinical, intensive,

behavioral weight management program. *BMC Obesity*, (2)11, 12-24.

Tian, X., Yan, C., Liu, M., Zhang, Q., Liu, D., Liu, Y., & ... Han, Y. (2017). CREG1

heterozygous mice are susceptible to high fat diet-induced obesity and insulin resistance. *Plos*

ONE, 12(5), 1-17.

Terry, A. J. (2018). *Clinical research for the doctor of nursing practice. (3rd ed.).* Burlington,

MA: Jones & Bartlett Learning.

Trujillo, T. (2017). Childhood obesity in Colorado: A growing problem--The impact of the

epidemic and recommendations for solutions. *Colorado Children's Campaign*. Retrieved

from https://files.eric.ed.gov/fulltext/ED538955.pdf

Wright, K., Giger, J. N., Norris, K., & Suro, Z. (2013). Impact of a nurse-directed, coordinated

school health program to enhance physical activity behaviors and reduce body mass index

among minority children: A parallel-group, randomized control trial. *International Journal*

of Nursing Studies, *50*(6), 727-737.

Yanez, B., McGinty, H. L., Buitrago, D., Ramirez, A. G., & Penedo, F. J. (2016). Cancer

outcomes in Hispanics/Latinos in the United States: An integrative review and conceptual

model of determinants of health. *Journal of Latina/o Psychology, 4*(2), 114-129.

Yu Wei Chang, E., Hussin, N., Rahim, M. A., Muthuvadivelu, S., & Chan Wai Seong. (2018).

Prevalence of obesity and screening for diabetes among secondary school students.

International Journal of Public Health Research, 8(1), 907–912.

Appendix A

Review of Literature

STUDENT NAME: Emma Elliott. Systematic Review Evidence Table Format [adapted with permission from Thompson, C. (2011). Evidence table format for a systematic review. In J. Houser & K. S. Oman (Eds.), Evidence-based practice: An implementation guide for healthcare organizations (p. 155). Sudbury, MA: Jones and Bartlett.]

Article/Journal	The role of qualitative and meta-synthesis in cancer and obesity.	Journal of American Cancer Society 6 (1), 171-173.
Author/year	Blaschke, S.	2017
Database/key words	EBSCO HOST	Cancer, obesity, metabolic syndrome
Research Design	Qualitative	Meta synthesis
Level of Evidence	Level III	High quality qualitative research questionnaire
Study Aim/Purpose	To understand the underlying mechanisms of both carcinogenesis and risk factors in order to develop more effective prevention and treatment.	The cultural values surrounding the disease, in association with obesity.
Population/Sample size Criteria/Power	21 qualitative studies	Cancer survivors to analyze the implications of this relationship for the maintenance of health care.
Methods/Study Appraisal	Meta synthesis of 21 qualitative studies	Performed in the LILACS, MEDLINE and CINAHL databases, with the scientific descriptors of DeCS and MeSH terms masculinity, obesity and cancer risks.

Synthesis Methods		
Primary Outcome Measures/Results	Molecular data, the interplay between cancer carcinogenesis with obesity and genetics, as well as current targeted therapies	Metabolic syndrome is associated with total cancer and breast-cancer mortality, with waist circumference, blood pressure and blood glucose
Conclusions/implications	A threefold increased risk of breast cancer mortality was observed for women with enlarged waist circumference, ≥100.9 cm, [and in those with increased blood glucose, ≥101 mg/dL	Metabolic syndrome and obesity can now be considered as a modifiable risk factor of cancer.
Article/Journal	Social cognitive changes following weight loss and physical activity interventions in obese, older adults in poor cardiovascular health.	Annals of Behavioral Medicine, 44(3), 353-364.
Author/year	Brawley L; Rejeski WJ; Gaukstern JE; Ambrosius WT,	2012
Database/key words	EBSCO HOST	Weight loss, physical activity
Research Design	Translational	randomized controlled trial
Level of Evidence	Level IV	Cohort Study of randomized control

Study Aim/Purpose	The study objectives were to determine the effects of group-mediated cognitive-behavioral interventions.	change in performance self-efficacy, satisfaction with function, and with appearance among older, overweight/obese adults in poor cardiovascular health and (b) whether self-efficacy mediated change in 400-m walk time.
Population/ Sample size Criteria/Power	Participants where both female and males over the age of 65 years old.	Participants were randomized to three intervention arms. Physical activity, weight loss or a successful Aging education control.
Methods/Study Appraisal Synthesis Methods	Randomized Control with random intervention applied.	cohort study
Primary Outcome Measures/Results	Cross 18 months, the Weight Loss + Physical Activity intervention demonstrated greater results.	Improvements in self-efficacy, satisfaction with function, and appearance versus other trial arms, including behavior interventions.
Conclusion/Implications	Physical Activity intervention participants also experienced significant improvements in self-efficacy and satisfaction with function versus those in Successful Aging. Self-efficacy mediated 400-m walk time at 18 months.	Both group-mediated cognitive behavior interventions yielded desirable improvements in social cognitions and preserved mobility improvements post-intervention.
Article/Journal	Wright, K., & Suro, Z.	2011
Author/year	Latino, Hispanic, Obesity, culture, food	EBSCOHOST: JOCEPS
Database/key words	Descriptive cross-sectional	Pilot study with the aim of describing weight status and assessing the fruit and vegetable intake among low-income, Latino children

		within community schools in urban Los Angeles, California, USA
Research Design	Level IV	Well-designed cross-sectional study
Level of Evidence	This community-based participatory research study describes dietary behaviors, specifically daily fruit and vegetable intake, among Latino urban, low-income elementary school children.	Examine possible associations between BMI and dietary habits.
Study Aim/Purpose	140 Children	nurses assessed dietary behavior using the Child and Adolescent Trial for Cardiovascular Health (CATCH) School Physical Activity and Nutrition (SPAN) Student Questionnaire Survey and weight status was determined through BMI
Population/Sample size Criteria/Power	Children were recruited via a mailed and posted flyers and verbal announcements. Permission from parents were obtained to participate in the study.	The specific inclusion criteria included: (1) age 7-11 years, (2) attend an elementary school that is low-income (indicated by > 50% of student population eligible for the free/reduced lunch program) (3) Latino ethnicity, and (4) ability to speak English or Spanish.
Methods/Study Appraisal Synthesis Methods	The univariate analysis examined each of the fruit and vegetable variables and BMI between the 5th-84th percentiles for age-gender. The number of obese Latino children is >95th percentile.	In general, all variables, fruit, 100% fruit juice, specific types of vegetables, and overall vegetables, were significantly associated ($p < .05$) with a BMI >85th percentile
Primary Outcome Measures/Results	Thirty-nine percent were overweight (BMI > 85%). Overweight children, girls and Spanish-Speaking children had significantly lower intake of fruit, 100% fruit juice and vegetables. Significant	Nurses should provide culturally and linguistically appropriate health promotion education, regarding dietary behaviors to prevent obesity in Latino children; and work with communities to develop appropriate obesity-prevention intervention

	associations were seen between BMI and other vegetables.	
Conclusions/implications	Strengths: At the community level, school-based Community Advisory Boards can assist school administrators by use this information to help reduce disparities in child obesity among Hispanic populations by advocating for a school-based curriculum that includes child and parental education regarding the benefits of and need for healthy nutritious breakfast, lunch and snack options for school age children and follows the recommendations of the USDA and State Department of Education	Limitations: This study did not test interventions, conscious-raising about lack of fruit and vegetable intake carries implications for practice.
Article/Journal	Cause-specific excess deaths associated with underweight, overweight, and obesity.	JAMA
Author/year	Flegal, K. M., Graubard, B. I., Williamson, D. F., & Gail, M. H.	2016
Database/key words	JAMA Network	Obesity
Research Design	cross-sectional sample	2004 mortality rates in groups greater then age 25 from specific causes of obesity

Level of Evidence	Level II	Level II- Cross-sectional
Study Aim/Purpose	To estimate cause-specific excess deaths associated with underweight (BMI <18.5), overweight (BMI 25-<30), and obesity (BMI ≥30).	The BMI-mortality association varies by cause of death. These results help to clarify the associations of BMI with all-cause mortality.
Population/Sample size Criteria/Power	groupings and the total number of deaths from each cause in the United States, based on 2004 mortality data[3] for people 25 years and older.	Numbers of deaths in 2004 for people 25 years and older came from US vital statistics.
Methods/Study Appraisal Synthesis Methods	Calculated cause-specific attributable fractions for each BMI category by comparing the estimated risks from the current distribution of covariates with the estimated risks with BMI category. Cause-specific relative risks of mortality from the National Health and Nutrition Examination Survey (NHANES) I, 1971-1975; II, 1976-1980; and III, 1988-1994, with mortality follow-up through 2000 (571 042 person-years of follow-up) were combined with data on BMI and other covariates from NHANES 1999-2002 with underlying cause of death information for 2.3 million adults 25	Estimate the association of specific causes of mortality with BMI categories. For each cause, we estimated excess deaths in each BMI category, defined as deaths in 2004 .

	years and older from 2004 vital statistics data for the United States.	
Primary Outcome Measures/Results	Combined diabetes and kidney disease mortality, however, was significantly positively associated with increased mortality in both the overweight and obese categories. Cardiovascular disease was associated directly with obesity and increased mortality rate.	Cause-specific excess deaths in 2004 by BMI levels for categories of cardiovascular disease (CVD), cancer, and all other causes (non-cancer, non-CVD causes).
Conclusions/implications	Obesity was associated with significantly increased CVD mortality (112 159 excess deaths; 95% CI, 87 842 to 136 476)	obesity also was associated with increased mortality overall
Article/Journal	Diet quality is associated with obesity and hypertension in Australian adults: a cross sectional study.	Four Decades of Obesity Trends among Non-Hispanic Whites and Blacks in the United States: Analyzing the Influences of Educational Inequalities in Obesity and Population Improvements in Education
Author/Year	Livingstone, K. M., & McNaughton, S. A	2016
Database/Keywords	EBSCOHOST	Obesity, Education, culture, hypertension
Research Design	Cross-sectional study	Quantitative
Level of Evidence	Level II	Level II: Evidence obtained from well-designed case-control and cohort studies

Study Aim/Purpose	Logistic regression investigated relationships between diet quality score and odds ratio of obesity, hypertension and obesity-associated hypertension.	Four decades of obesity trends among Non-Hispanic Whites and Blacks in the United States: Analyzing the Influences of Educational Inequalities in Obesity and Population Improvements in Education
Population/Sample size **Criteria/Power**	45.2+/- 0.24 years from 2011-2013	U.S. non-Hispanic whites and blacks, aged 25±74
Methods/Study Appraisal **Synthesis Methods**	The present analyses were based on adults (19–85 y) from a subset of the latest (2011/13) AHS [15]: the Australian National Nutrition and Physical Activity Survey (NNPAS; n = 4908). As described elsewhere [15], the AHS is a population-based survey that sampled households in urban and rural areas across all states and territories in Australia.	The NHANES series consists of independent cross-sectional multistage stratified probability samples that represent the U.S. non-institutionalized population. Publicly available data for 10 samples were analyzed:
Primary Outcome Measures/Results	Higher diet quality, as estimated using DGI, was associated with lower odds ratio of obesity in men and women. Odds ratio of hypertension was lower in men, but not women, with a high diet quality score compared with a	Obesity increased over time for all groups, and the less educated were more likely to be obese than the four-year college group. The sample size was smaller for the black than white samples, and in NHANES I, only 38 black females and 19 black males were in the four-year college group.

	low score, while obesity-associated hypertension was only associated with diet quality score in men with obesity. Longitudinal studies are needed to evaluate whether diet quality predicts risk of obesity and hypertension.	
Conclusions/Implications	Odds ratio of hypertension was lower in men, but not women, with a high diet quality score compared with a low score, while obesity-associated hypertension was only associated with diet quality score in men with obesity	Educational inequalities in obesity were generally larger for females than males and for whites than blacks, and obesity did not differ by educational attainment among black males. As a result, the impact of obesity inequalities on national obesity level was largest among white females (as large as a 47% reduction of the increase in obesity level if obesity inequalities were eliminated), and virtually zero among black males.
Article/Journal	Transdisciplinary Cardiovascular and Cancer Health Disparities Training: Experiences of the Centers for Population Health and Health Disparities. ,	American Journal of Public Health
Author/year	Golden, S. H., Ferketich, A., Boyington, J., Dugan, S., Garroutte, E., Kaufmann, P. G., Srinivasan, S.	2015

Database/key words	EBSCO-HOST	Healthcare Disparities, obesity, cardiovascular health
Research Design	Qualitative	Multilevel statistical models
Level of Evidence	Level II	High quality multilevel statically model investigating disparity factors
Study Aim/Purpose	Summarized 5 areas of scientific training for empowering the next generation of health disparities investigators with research methods and skills that are needed to solve disparities and inequalities in cancer and cardiovascular disease	To Study the frequency, distribution, and social determinants of health outcomes in a population.20 It goes beyond analyzing individual risk factors
Population/Sample size Criteria/Power	5 areas of scientific training that influences health disparities	These include, for example, organizational and interpersonal relationships, social networks, and early life influences on health. It includes health norms distinctive to specific subpopulations, such as when the concentration of individuals within a neighborhood who have high body mass indexes encourages dismissive attitudes toward the risks of obesity
Methods/Study Appraisal Synthesis Methods	Multilevel statistical models allow investigators to examine the influence of a factor at one level	Community-Based Participatory Research. The philosophy of CBPR has gained increasing attention among contemporary health disparities researchers. Research consistent with this model targets a system of care and its providers, the patient population, and the neighboring geographic community.

Primary Outcome Measures/Results	It is a critical core of skills and rigorous methodologies necessary to advance the knowledge needed to eliminate health disparities. Although every effort must be made to eliminate health disparities as quickly as possible, it is likely that they will persist at some level for many years to come, both nationally and internationally	The CPHHD community is preparing to create a model draft curriculum and invites other organizations with similar interest to join the effort
Conclusions/implications	5 areas of scientific training for empowering the next generation of health disparities	multitude of approaches to training for research in health disparities provides a cadre of investigators with diverse skills. However, it is not clear whether these ad hoc methods can fill the need for sophisticated investigators.
Article/Journal	Improving food environments and tackling obesity: A realist systematic review of the policy success of regulatory interventions targeting population nutrition.	Public Library of Science
Author/year	Sisnowski, J., Street, J. M., & Merlin.	2017
Database/key words	Plos ONE	Health policy; Nutritional Status; obesity epidemiology; obesity physiopathology
Research Design	Systemic review	Methodological approaches that contained some measure of comparison, including studies of implementation progress

Level of Evidence	Level II	Meta-Analysis- prospective comparative study
Study Aim/Purpose	Assessing intermediate outcomes along the assumed causal pathway to "policy success", in addition to the final outcome of changed consumption patterns.	Aiming to improve population nutrition have become an increasingly popular public health strategy against obesity.
Population/Sample size Criteria/Power	**a** search of 16 databases through October 2015.	All publications that reported the effect of statutory provisions aimed at reducing the consumption of energy-dense foods and beverages in the general population. We allowed all methodological approaches that contained some measure of comparison, including studies of implementation progress.
Methods/Study Appraisal Synthesis Methods	studies using the appraisal tools for pre-post and observational studies developed by the National Heart, Lung, and Blood Institute.	assessed, study designs employed, and outcome measures reported, we opted for **a** narrative synthesis of results.
Primary Outcome Measures/Results	Realist approaches review interventions along a continuum of indicators of successful implementation	Regulatory interventions can improve intermediate outcomes, but fail to affect consumption at clinically significant levels. The included literature covered six different types of interventions**,** with 19 studies reporting on calorie posting on chain restaurant menus.
Conclusions/implications	Results drawn from 36 peer-reviewed articles and grey literature reports	The large majority of the identified interventions w/were conducted in the US. Early results from recent taxation measures were published after the review cut-off date but these suggested more favorable effects on consumption levels. Nevertheless, the evidence assessed in this review suggests that current policies are generally falling short of anticipated health impacts.

Article/Journal	CREG1 heterozygous mice are susceptible to high fat diet-induced obesity and insulin resistance.	Cardiovascular Research Institute and Department of Cardiology
Author/year	Ian, X., Yan, C., Liu, M., Zhang, Q., Liu, D., Liu, Y., & ... Han, Y.	2017
Database/key words	Plos ONE	Obesity, Genetics, Hispanics.
Research Design	Qualitative	Comparative Study
Level of Evidence	Level 1	Meta- analysis with Random Control.
Study Aim/Purpose	What role does CREG 1 play into genetics and obesity in mice	Diet induced obesity in coloration to CREG1 +/- mice.
Population/Sample size Criteria/Power	20 mice with CREG1 +/- mutation	littermates were used as control. All mice were housed in specific pathogen-free animal facility at ambient temperature of $23 \pm 2\,℃$ with a dark-light cycle of 12–12 hrs. and ad libitum access to food and water. Mice of 8 weeks of age were fed with either control normal diet (ND; 10% of total calories from fat, 70% from carbohydrate and 20% from protein, D12450J, Research Diets Inc., New Brunswick, NJ) or high fat diet (HFD; 60% of total calories from fat, 20% from carbohydrate and 20% from protein, D12492, Research Diets Inc.) for 16 weeks.
Methods/Study Appraisal Synthesis Methods	Food consumption and body weights were measured daily and weekly respectively. After 16 weeks of feeding, the mice were	All data are presented as means $\pm$ standard error of mean (SEM) and analyzed using SPSS soft-ware version 20.0

	fasted overnight prior to anesthesia	
Primary Outcome Measures/Results	CREG1 mice displayed increased weight gain with unchanged food intake on high fat diet.	CREG1 mice showed increases susceptibility to high fat diet and adiposity.
Conclusions/implications	data showed that **Creg1**+/- **mice** exhibited a more prominent **obesity** phenotype with no change in food intake compared with WT controls when challenged with HFD. **Creg1**haploinsufficiency also exacerbated HFD-**induced** liver steatosis, dyslipidemia and **insulin resistance**.	Given that adipose tissue inflammation has been shown to play a key role in **obesity-induced insulin resistance** and metabolic syndrome, our results suggest that **Creg1** haplo-insufficiency confers increased susceptibility of adipose tissue to inflammation, leading to aggravated **obesity** and **insulin resistance**
Article/Journal	Childhood Obesity in Colorado: A Growing Problem--The Impact of the Epidemic and Recommendations for Solutions. Colorado Children's Campaign.	Colorado Children's Campaign
Author/year	Trujillo, T., & Colorado Children's Campaign	2017
Database/key words	ERIC EDUCATION	Child Health; **Obesity**; Economic **Impact**;
Research Design	Statewide Survey asking parents about child health	Qualitative study
Level of Evidence	Level III	High level of Evidence Case Control study
Study Aim/Purpose	**Determining why Children** today are taking in more calories--eating out at restaurants	**Obesity** is linked with a number of health risks, including increased incidences of heart and liver disease, type 2 diabetes and high blood pressure

	more often, with bigger portions of less healthy foods, and drinking more sugary beverages than ever before.	
Population/Sample size Criteria/Power	Colorado children both female and male from the ages of two to eighteen.	The CDC defines children at or above the 85th percentile of the BMI distribution—meaning that at least 85 percent of children of the same age and sex in the reference group had lower values of BMI—as being "at risk for overweight" and those at or above the 95th percentile as being "overweight.
Methods/Study Appraisal Synthesis Methods	Children are assessed by comparing their BMI values with those of a fixed reference group of U.S. children of the same age and sex.	The 2006 statewide Child Health Survey asked parents the question: "What do you think is the most important health problem facing Colorado children today?" Of the parents who responded with a specific answer, 28 percent said "obesity and/or overweight"? In Colorado, Hispanic children ages 2 to14 are almost three times as likely as their white peers to be overweight. Colorado children living in poverty are more than three times as likely to be overweight than children in higher-income families (400% or more above the federal poverty level.
Primary Outcome Measures/Results	The Cost associated with obesity are staggering. In Colorado, annual obesity-related expenditures for adults is approximately $874 million. Of that $874 million, $139 million was financed by Medicare and $158 million was financed by Medicaid.	It is estimated that hospital costs of treating children for obesity-associated conditions more than tripled from 1979-81 to 1997-99, rising from $35 million to $127 million.

Appendix B

DNP capstone Conceptual and Evaluation Model
Program Implementation

Resources: *In order to accomplish our set of activities we will need the following:*	*Activities:* *In order to address our problem or asset we will accomplish the following activities:*	*Outputs:* *Expect that once accomplished these activities will produce the following evidence of service delivery:*	*Short/long term outcomes:* *If accomplished these activities will lead to the following changes in 1-3 then 4-6 years:*	*Impact:* *If accomplished these activities will lead to the following changes in 7-10 years:*
DNP mentor-Dr. Pawlowski DNP Regis advisor-Dr. Witt IRB approval Adequate research of identified problem Nurse driven protocol for caring for this population	Systemic review of literature Research on Hispanic culture Research on obesity Asses diet and nutrition in Hispanic culture Research Hispanic obesity specific to Colorado Begin study with interviewing healthcare providers who work with this population	Improve obesity rate in the Hispanic population in the Denver Metro Implement practice change Improve preventative care	Overcoming language barrier Increasing nutritional education in the Hispanic population Increase resources for the underserved Expand provider appointments with the Hispanic population	Reduce the overall obesity rate in the Hispanic population Save long term healthcare costs Provide culturally competent care Educate Nurse Practitioners how to more effectively care for the obese Hispanic population Implement change within MCPN

Appendix C

DNP Capstone Interview Questions

Obtaining Demographic Data:

1) How long have you been a health care provider?

2) How long have you worked with the obese Hispanic patient population?

3) How many Hispanic Patients do you see each week?

4) Are you a fluent speaker of Spanish or do you have use an interpreter/phone?

Open Ended Interview Questions:

3) What have your experiences been with caring for the obese Hispanic population?

4) What do you feel has worked with caring for this population?

5) What are some barriers and challenges with this population?

6) What are your ideas or suggestions in how we can help better care for these patients.

Appendix D

Collaborative Institutional Training Initiative

Completion Date 27-May-2016
Expiration Date 27-May-2019
Record ID 19605513

This is to certify that:

Emma Elliott

Has completed the following CITI Program course:

Human Research	(Curriculum Group)
Social Behavioral Research Investigators and Key Personnel	(Course Learner Group)
1 - Basic Course	(Stage)

Under requirements set by:

Regis University

CITI
Collaborative Institutional Training Initiative

Appendix E

IRB Letter of Approval

REGIS UNIVERSITY

Institutional Review Board

DATE: October 9, 2018

TO: Emma Elliott, DNP

FROM: Regis University Human Subjects IRB

PROJECT TITLE: SUBMISSION TYPE: New Project

ACTION: EFFECTIVE DATE: EXPIRATION DATE: REVIEW TYPE:

October 9, 2018

Emma Elliott, DNP Regis University Human Subjects IRB

[1309997-1] Healthcare provider perceptions on caring for obese, Hispanic patients in the Denver, Metro area.

New Project

APPROVED October 9, 2018 October 8, 2019 Expedited Review

Thank you for your submission of New Project materials for this project. The Regis University Human Subjects IRB has APPROVED your submission as an Expedited Review based on applicable federal regulations. This approval is based on an appropriate risk/benefit ratio and a project design wherein the risks have been minimized. All research must be conducted in accordance with this approved submission.

This study is approved with minor revisions. Primarily, the author needs to clarify the purpose of the project. Clearly articulating the research questions would improve the focus of the research. The author also needs to:

∘ Include the interview instrument to be used with participants. ∘ Edit all documents for grammatical errors throughout.

If you need to make any changes to your study, or need to submit a Closure Report

marking the end of the study, you may use instructions available by clicking on the "Forms and Templates" button in IRBNet and following the "IRBNet Instructions: Subsequent Packages (Versions)" download. Students may also contact their Faculty Advisor and anybody can reach out to irb@regis.edu for assistance.

Please note that any revision to previously approved materials must be approved by this committee prior to initiation using the appropriate revision forms for this procedure.

Unanticipated problems, serious and unexpected adverse events, and non-compliance issues or complaints must be promptly reported to irb@regis.edu and contacting the IRB Chair and/or Vice-Chair.

This project has been determined to be a Minimal Risk project. Based on the risks, this project requires continuing review by this committee on an annual basis. Please use the appropriate forms for this procedure. Your documentation for continuing review must be received with sufficient time for review and continued approval before the expiration date of October 8, 2019.

Please note that all research records must be retained for a minimum of three years after the completion of the project.

_____

If you have any questions, please contact the Institutional Review Board at irb@regis.edu. Please include your project title and reference number in all correspondence with this committee.

This letter has been electronically signed in accordance with all applicable regulations, and a copy is retained within Regis University Human Subjects IRB's records.

_____

Appendix F

Informed Consent

Informed Consent to Participate in Research

Volunteerism Study

You are asked to participate in a research study conducted by Emma Elliott a Doctor of Nursing Practice student from the Loretto Heights School of Nursing at Regis University. Your participation in this study is entirely voluntary. Please read the information below and ask questions about anything you do not understand before deciding whether or not to participate. If you decide to participate, you will be asked to sign this form, and it will serve as a record of your agreement to participate.

PURPOSE OF THE STUDY
The purpose of this study is to determine your experiences in caring for the obese, Hispanic patient population.

PROCEDURES
If you volunteer to participate in this study, you will be asked to do the following things:
You will be asked to participate in a forty-five minute to one-hour interview that will be recorded and used for this study. No personal identification will be used during the interviews.

POTENTIAL RISKS AND DISCOMFORTS
There are no anticipated risks to you from your participation in this study. We believe that the risk from participation is no greater than that encountered in everyday life. However, in case you do experience any mild distress from the experiment, a debriefing process will be provided at the end of the interview session.

POTENTIAL BENEFITS TO SUBJECTS AND/OR TO SOCIETY
Potential benefits to this study is to provide more culturally competent care to this particular patient population by exploring the experiences of health care providers. Potential healthcare savings could also benefit from this study as obesity has many health determents.

PAYMENT FOR PARTICIPATION
There is no compensation for your participation.

CONFIDENTIALITY
No personal identification will be used for this study. Interviews will be recorded and placed in a lock box for the next three years after the study has been completed.
This research is being conducted by a student at Regis University. Therefore, records that identify you and the consent form signed by you may be looked at by others. They are:
        • Regis IRB that protects research subjects like you

> • Officials at Regis University who are in charge of human subject research
> • Any faculty members who are advising on this project

PARTICIPATION AND WITHDRAWAL
You can choose whether or not to be in this study. If you volunteer to be in this study, you may withdraw at any time without consequences of any kind. You may also refuse to answer any questions you do not want to answer.

IDENTIFICATION OF INVESTIGATORS
If you have any questions or concerns about this research, please contact:

Name: Emma Elliott
Mail: 95 Emerson St. Apt. 702
          Denver, Co 80218
Phone: (303) 518-8184
Email: Ellio726@regi.edu

Faculty Advisor
Name: Cathy Witt
Mail: 3333 Regis Boulevard
         Carroll Hall 307
         Denver, CO 80221
Phone: 303-964-6073
Email: cwitt@regis.edu

RIGHTS OF RESEARCH SUBJECTS
If you have any questions about your rights as a research subject, you may contact the Regis University
Institutional Review Board (IRB) which is concerned with the protection of volunteers in research projects. You may contact them by any of the methods below:

>   Mail: Regis University
>   Center for Scholarship and Research, B-12
>   3333 Regis Boulevard
>   Denver, CO 80221
>
>   Phone: (303) 458-4188
>
>   Email: IRB at IRB@regis.edu.

You will be given the opportunity to discuss any questions about your rights as a research subject with a member of the IRB. The IRB is an independent committee composed of members of the University community, as well as lay members of the community not connected with Regis. The IRB has reviewed and approved this study.

_____
I understand the procedures described above. My questions have been answered to my satisfaction, and I agree to participate in this study. I have been given a copy of this form.

_____
Printed Name of Subject

_____   _____
Signature of Subject   Date

_____   _____
Signature of Investigator   Date

Appendix G

Agency Letter of Support

Hi Dr. Athena,

I am currently in School at Regis University getting my doctorate. I am trying to work on my final project and wanted to interview around 10-20 healthcare providers within the MCPN Company regarding perceptions on patient care and obesity.

This is an official qualitative study that I will be applying for IRB approval with the support of Regis. I just wanted to seek approval from MCPN before I begin this process.

I want to interview nurse practitioners, physician assistants and medical doctors that work in community health and their perceptions on caring for culturally diverse patients, specifically Hispanics and dealing with the epidemic of obesity. My study will not include MCPN specific data, policies, or information and the interviews will be done on my own time. This will be completely voluntarily for their participation and formal IRB process will be maintained prior to any interviews.

Does MCPN have an IRB that I will need to go through and what is the process for me to get approval to complete interviews?

Thank you for the help,
Emma Elliott

Hi Emma,

My apologies for the long delay in communication, I have been in the middle of a very busy selection season for my training program. MCPN does not have an IRB process. As long as you have the support of Regis and go through proper channels with IRB, I give you permission to complete interviews within MCPN.

Good luck let me know if you need anything else.

Dr. Athena Y. Baca-Chieza
Associate Director of Behavioral Health
Director of Psychology Training Program
Metro Community Provider Network
720-393-0669

Acknowledgements

Special thanks to my DNP mentor, Dr. Natalaia Pawlowski who I work closely with at Metro Community Provider Network and my DNP project Chair, Dr. Cathy Witt who has advised me and helped me make this study a reality.