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Obesity and Diabetes: Evaluating the Impact of *Promotores* as a Prevention and Intervention strategy in the Latino Community

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Abstract

This paper aims to examine obesity and diabetes among the Latino population as a health problem. As the largest minority racial group in the U.S, Latino rates of obesity and diabetes are greatly higher than whites. The prevalence of obesity in Latinos is 45% compared to that of whites at 34.5% (CDC, 2015). The disproportionate rates at which Latinos are affected by obesity and diabetes have prompted numerous programs to combat this health problem. *Promotores* or Latino community health workers have been able to provide the important piece of culturally and linguistically appropriate education for the population. Evidence shows *Promotores* dramatically improve intervention outcomes. Evidence also points to the cost effectiveness of using community health workers for a program related to lifestyle modification for Latinos with type 2 diabetes. The program was cost effective, yielding results of lower A1C levels by generous amounts (Brown et al., 2012). As a result, conducting my fieldwork at an agency that uses *Promotores* was key in order to examine the positive impact *Promotores* have on the local Latino community. The program evaluation consisted of forty-two client satisfaction surveys as well as four in-depth interviews with *Promotores*. Overall the results were positive, many clients indicated a better understanding of services available in their community and many continue to use those services after a year or more of being part of the program. The in-depth interviews also illustrated some of the challenges that come with being a *Promotor/a* but also indicated an overall high job satisfaction rate. These results illustrated the positive impact *Promotores* have on the Latino population however, it is evident more research is needed in this area. Specifically, more research can influence policy changes that can then yield more funding in addressing the barriers Latinos face when it comes to healthcare in the U.S.

I. Introduction

Obesity is a major public health problem in the United States (U.S). Being “overweight” or “obese” means having excess body fat and carrying too much weight for your height. This is usually measured by your body mass index or most commonly known as BMI, a ratio of height and weight. It is defined as the weight in kilograms divided by the square of the height in meters. Those adults with a BMI of 18.5 fall within the underweight range, those with a BMI of 30.0 or higher are considered within the obese range (WHO, 2000). More than one-third or almost 37% of U.S adults are obese, which would mean about one in three Americans is obese (Centers for Disease Control (CDC), 2015). Additionally, the number of obese Americans has risen from 15% to 33% percent in the past thirty years (Wang et. al, 2012). Each year, an estimated 300,000 U.S adults die of causes related to obesity and obesity is the sixth leading cause of death (Allison et. al, 1999). The obesity rates have changed dramatically by state. In 1985 no state had an obesity rate higher than 14% compared with 2006 where no state had an obesity rate of less than 20% (Wang et. al, 2012). As a result, physicians, public health professionals, and health policy experts are increasingly using the term “epidemic” to describe the prevalence of obesity in the U.S. Not surprising, this epidemic has created a slew of issues related to health care costs further pushing experts to understand how to prevent and combat the epidemic.

Consequently, obesity related conditions like heart disease, stroke, type two diabetes, and certain types of cancer occur at alarming rates. Diabetes is perhaps one of the most alarming obesity related conditions. Most adults with diabetes have at least one comorbid chronic disease and as many as 40% have at least three (Piette & Kerr, 2006). As a result, these comorbidities affect an individual’s quality of life and reduces their life expectancy. It is estimated 30.3 million people of all ages of the U.S population had diabetes in 2015. More specifically, about 7.2% of the population had diagnosed diabetes and in 2015 there was about 1.5 million new cases

identified. Most importantly to note, 87.5% of adults diagnosed with diabetes were overweight or obese (CDC, 2015). The correlation between being overweight or obese and then developing diabetes is difficult to reject. In recent years, these numbers have prompted public health professionals and clinicians to alter how primary care is conducted in order to combat the obesity and diabetes health problem.

Unfortunately, certain populations are disproportionately affected by obesity and diabetes. As the largest minority racial group in the U.S, Latino rates of obesity and diabetes are greatly higher than whites. The prevalence of obesity in Latinos is 45% compared to that of whites at 34.5% (CDC, 2015). More than 38.9% of Latino children are overweight or obese, compared with 28.5% of white children. As a result, diabetes also affects Latinos at disproportionate rates. Latinos are 50% more likely to die from diabetes than whites (CDC, 2015). In addition, the prevalence of diabetes varies in Latino American populations based on their country of origin. South Americans have the lowest prevalence rates with 10.1% in men and 9.8% in women. Cubans come second with a prevalence of 13.2% for men and 13% for women. Those of Mexican, Puerto Rican, Central American, and Dominican descent have the highest rates of diabetes among the Latino groups (Schneiderman et al., 2014).

Multiple factors contribute to individuals becoming overweight or obese and in some cases developing diabetes. Health behaviors include a healthy diet and regular exercise, which ward off obesity and diabetes in most cases. Economic issues and living environment are also contribute to an individual's overall health status. Nearly one in four Latino household is considered food insecure, compared with 11% of white households (Coleman-Jensen, Nord, Singh, 2013). Consequently, when Latino families do not have the means to eat full and nutritious meals, there is an increased risk of obesity, especially for the children of the household

(national Council of La Raza, 2010). Unfortunately, there is a link between income and food choices, often the most affordable foods are the less nutritious and families are forced to purchase these foods in order to stretch budgets as much as possible. Low-income Latino families tend to purchase food that is calorie dense, low in fiber, and high in fat, sodium and carbohydrates (Cortes, 2011). One could also argue Latinos may be a target for food marketers, particularly due to their increasing population size in the U.S. As a result, low-income Latino neighborhoods have up to nine times more outdoor advertising for fast food and sugary drinks as high-income white neighborhoods, thus contributing to the consumption of unhealthy foods (Bridging the Gap and Salud America!, 2013).

The disproportionate rates at which Latinos are affected by obesity and diabetes have prompted numerous programs to combat this health problem. The Supplemental Nutrition Assistance Program (SNAP) and Women, Infants, and Children (WIC) program have been created to increase the access to healthy food and provide education about how to eat healthier food on a limited budget. It is estimated 17% of SNAP beneficiaries are Latino (Nevarez, 2013). In addition, Latinos comprise about 40% of WIC's participants (Connor, 2008). Moreover, Salud America! is a research network that aims to prevent obesity among Latino children. The research network focuses on six key areas to reduce obesity in the least amount of time: sugary drinks, healthier marketing, active play, active spaces, better food in the neighborhood and healthier school snacks. The network also wants to empower the Latino community itself. They launched a Growing Healthy Change Initiative where they bring together policies, success stories, and resources which are provided on their website to help individuals and communities develop capacity to create healthy policy changes surrounding the six key areas.

These programs show promise and a step forward towards the prevention of obesity and diabetes among the Latino population. However, it is evident there continues to be many challenges, some which require further attention. For example, there continues to be a lack of culturally and linguistically appropriate obesity and diabetes prevention strategies for the population. That is, information delivered by providers and health care workers that is included in the native language as well as the availability of appropriate interpreter services when needed. In addition, while providing health education health care professionals should keep in mind other cultural factors like the type of food the individuals eats and family dynamics as well. This type of health care delivery will ensure the population is getting education that makes sense to them as well as ensuring the individual will adhere to any recommendations or treatment plan.

As a result, *Promotores* or Latino community health workers have been able to provide the important piece of culturally and linguistically appropriate education for the population. *Promotores* typically share the ethnicity, language, socioeconomic status and life experience of the community members they serve. Evidence shows *Promotores* dramatically improve intervention outcomes. Evidence also points to the cost effectiveness of using community health workers for a program related to lifestyle modification for Latinos with type two diabetes. The program was cost effective, yielding results of lower A1C levels by generous amounts (Brown et al., 2012). In Addition, other studies have proved the vital role *Promotores* play while educating Latinos on key health issues. For example, the program *Salud Para Su Corazon* aimed to engage Latinos in education centered on hypertension. The data showed using the *Promotores* promoted an overall increase in understanding of hypertension and disease management (Sanchez, 2014). These studies further solidify the notion *Promotores* are the bridge between the Latino

community and overall health care services. They are and will continue to be vital in fighting the epidemic of obesity and diabetes in the Latino population.

II. Scope of the Project

One such agency aiming to alleviate issues of access to care for Latinos is The Latino Leadership Council (LLC). It is a non-profit organization aimed at providing vital services to the Latino population in Placer and Sacramento County. The non-profit is dedicated to advancing the wellness and leadership capacity of Latino populations. Specifically, the organization helps struggling low-income Latinos overcome challenges by focusing on the areas of health, education, and youth development. They do this by partnering with community agencies in Placer and Sacramento county while making sure the Latino community is being served in an effective, culturally appropriate manner. Community membership is comprised of individuals who provide services to the under-served Spanish speaking population through agencies, non-profits, faith-organizations, businesses and grass roots individuals. The LLC's model of care is centered on using *Promotores* to bridge the gap between the Latino community and the community agencies.

The LLC is a small agency with fifteen staff members from which about thirteen are *Promotores* who work together on different projects while supporting each other. Three *Promotores* focus on the areas of health including mental health services, these areas provide monetary support to those who need to be seen by a doctor and are uninsurable (usually undocumented immigrants). In addition, *Promotores* attend initial doctor's appointments with clients to serve as their advocate and educate the client on the process. A few of the other *Promotores* focus on the education piece of the program that includes parenting classes and hosting youth groups for youth development purposes. The organization also conducts numerous

health fairs where they administer flu shots, provide general physicals with volunteer nurses who check blood pressure, blood sugar, and identify BMI. More recently the organization has pushed for more mental health services in the community, as a result, they contract licensed therapist where clients get several sessions at no cost based on need.

Conducting my fieldwork project at an agency like the LLC was an important goal for me. I wanted to understand first-hand how effective the LLC *Promotor/a* model is when it comes to educating the Latino community on issues of obesity and diabetes. In addition, another goal of mine was to understand the needs of the Latino community in the local area. Quickly I observed the LLC does an exemplary job at educating local agencies and stakeholders on Latino health issues. For example, they conduct a yearly education forum focused on a specific Latino issue. I was fortunate enough to attend this year's forum. This year the topic of discussion was mental health issues related to access for the Latino population. The presenters included numerous prominent Latino physicians who continuously work to address health care needs for Latinos. The main take away of the presentation was the need to detect mental health issues early on in individuals, preferably in childhood. Thus, this forum aimed to mobilize community agencies to gather resources and address mental health concerns in the population. In addition, through interacting with the *Promotores* and doing my own research I was able to identify other needs for Latinos in this geographic area. For example, many Latinos in this area who are uninsured lack the funds to pay for doctor visits. Even the prices at local community clinics are too high for many in this population. Issues of affordable housing and access to healthy foods are also concerns to this population.

My project aimed to evaluate how effective the program is, not only on issues surrounding diabetes and obesity but also how the *Promotores* connect Latinos to other vital

resources. I chose to conduct a program evaluation which consists of two parts, a satisfaction survey of previous clients and in-depth interviews with four *Promotores*. The Likert scale survey consisted of ten questions with one being an open-ended question. The satisfaction survey was administered to those clients who had received services a year or more ago. The reason for this was to also evaluate progress in the clients. Specifically, to identify if the clients continues to apply what they have learned in terms of accessing the resources in the community they were connected to and improving their health positively. In addition, the survey aimed to understand other services there may be a need for in this population. Lastly, I conducted four in depth interviews with the *Promotores* to better understand the role as well as identify challenges and achievements in their jobs. The interviews were conducted with the goals of getting feedback from the *Promotores* on how to make their job more manageable.

Forty-two satisfaction surveys were completed by phone from those clients who had received services a year or more ago. The demographics included, thirty-two females and ten males and the average age was forty-seven years old. All phone interviews were done in Spanish and the survey was also created in Spanish. The average time for phone interviews was about fifteen minutes. With the older population taking a little longer. Those who were in the younger age bracket were at work or only had a short period of time to complete the survey. Most of the participants I called were willing to complete the survey, those who were busy usually asked me to call back. On my second attempt, many of them were more than willing to complete the survey at that point. Immediately, most of the participants I called remembered the agency as well as the name of the *Promotor/a* who provided them with services. Most expressed their gratitude right away and were more than willing to provide feedback.

Furthermore, once the surveys were completed I used excel to input the data and analyze the results. Survey data indicated many positive outcomes. For example, 74% stated they agreed they were overall satisfied with services they received. In addition, 69% stated that after receiving services from the LLC, they have a better understanding about the resources available to them and their family in the community. An important finding is 67% of participants stated they have a better understanding about what impacts their health in a positive or negative way. This is crucial since some participants expressed they had no idea they were diabetic. Once they were connected to services they developed a better understanding of the disease and their treatment. Moreover, 69% stated they can handle their health problem and know where to go if they have questions about their treatment. For many this was the first time they had been connected to a doctor in the U.S and for some it was then they realized they were diabetic. Lastly, 69% agreed they would recommend the LLC services with 31% stating they strongly agreeing they would recommend the services.

Moreover, the open-ended question yielded additional information about access to health care for Latinos in Placer county. The question asked what other services the LLC should offer to assist Latinos better in the area. Some of the services identified by many of participants included transportation to and from appointments, tutoring services for school aged children, and immigration services. Many of the women that completed the surveys did not drive and therefore were dependent on their husbands or older children to drive them. In addition, some stated it was difficult to help their children with schoolwork since they do not speak English. Some stated they had less than a high school education. They expressed their concern for their children doing well in school and wanting them to be successful. Culturally appropriate nutrition education was also something participants stated as important. Many expressed they wanted to learn how to eat

healthier but had no idea what foods to eat and what to avoid. Lastly, immigration was a recurrent theme. Many expressed their anxiety about the current administration and what would happen to them and their families. Latinos often times come from mixed status families, meaning some are undocumented while some are not. The level of stress and anxiety over this issue leads many to put health in the backburner, or treating it as less important.

The in-depth interviews also yielded positive results. Overall there was a high level of job satisfaction among the *Promotores*. Most stated their satisfaction came from helping the community and seeing their clients grow. In addition, most expressed their satisfaction with the LLC indicating they feel supported by peers and leadership. Some of the ways they feel supported is through monthly wellness meetings where they receive support from one another and are able to talk about personal challenges or hardships on the job. In addition, the LLC hosts an annual retreat where the *Promotores* spend a weekend together and do team building activities. Leadership is also supportive when it comes to trainings and encourages personal and career development.

The *Promotores* also expressed some of their challenges on the job. The willingness to help the community is there, however sometimes the lack of resources are a barrier. For example, as previously stated, transportation services as well as interpreter services tend to be a barrier. The *Promotores* are not always available to go to every appointment to interpret for the patient. Some clinics do utilize the language line however, survey participants stated it is not always the best service. Also, for those that uninsured and are undocumented health care services are limited. Often times they have to pay out of pocket and for many this is an expense they cannot afford. This limits the *Promotores* on what they can offer this specific population as far as services and resources in general. Other challenges expressed by the *Promotores* is their current

database. It needs to be updated in order to track client information in more detail. Also, they expressed some of the *Promotores* do not update their client information as often as they should, which creates issues when it comes to assisting each other's clients when some of the *Promotores* are off or on vacation. Lastly, the LLC does not offer full benefits which also creates issues for the *Promotores* themselves when it comes to healthcare. They are given a stipend for health insurance costs but for most the amount does not cover what they have to pay monthly. The *Promotores* expressed having insurance through the LLC would give them peace of mind.

As a result, the implications and impact of my findings indicate Latinos benefit highly from programs like these. This program should be replicated in other areas to better assist the Latino population in the area of health care. In addition, there continues to be a deficit in services that are culturally and linguistically appropriate for Latinos. There also continues to be barriers to accessing vital health care resources, especially related to language and transportation. As a result, it would be beneficial to push for the diversification of the health profession, in order to create long standing changes in health care delivery that benefit Latinos. Important to reiterate present findings indicate a high prevalence of diabetes but considerable diversity depending on country of origin. Therefore, country of origin should be kept in mind when educating Latinos about diabetes. The low rates of diabetes awareness, diabetes control, and health insurance in conjunction with the negative associations between diabetes prevalence and both household income and education among Latinos in the U.S. have important implications for public health policies. More policies that allocate funding in this area should be a primary health care goal. These policies should aim to prevent and treat diabetes from a culturally and linguistically appropriate perspective for this population. This is also the reason why there should be more research in this area in order provide appropriate recommendations.

III. Conclusion

This project attempted to display the important role *Promotores* play in addressing health care access issues affecting the Latino population. Latinos face higher rates of obesity and diabetes than the general population. The prevalence of obesity in Latinos is 45% compared to that of whites at 34.5% (CDC, 2015). Latinos are 50% more likely to die from diabetes than whites (CDC, 2015). As a result, this project aimed to illustrate the positive impact *Promotores* have on tackling long term the high rates of diabetes and obesity among the population.

Literature shows *Promotores* have had a positive impact in addressing Latino health care needs in relationship to diabetes by lowering AIC levels all while doing so in a cost-effective way manner (Brown et al., 2012). In addition, using *Promotores* to educate Latinos on issues of hypertension has resulted in an overall increase in understanding of hypertension and disease management (Sanchez, 2014). Moreover, the literature shows *Promotores* and Community Health workers (CHW) have a significant impact on underserved populations, especially those of color. *Promotores* and CHW's bridge the gap between populations and health care services, increases health literacy among the population, and promotes preventive care and education.

For this project, I began the process of investigating a non-profit who runs a *Promotor/a* model of care program. The project included a program evaluation consisting of forty-two client surveys and four in-depth with the *Promotores* interviews to assess the overall success of the program as well as provide feedback for areas of improvement. The results show an overwhelming satisfaction from clients when receiving services. Most clients continue to use the services they were connected to when participating in the program. The majority also show a wider understanding of what affects their health in a positive or negative way. Many more also show states their health had changed positively since receiving services. The surveys also shed

light on other needs identified by the Latino community. Many of them stated they struggle with transportation or other education related services like nutrition classes. Removing this barrier should be priority for this agency and others alike in order to deliver lifesaving education services to the population.

The public health impact of this project is local in terms of providing feedback to the LLC about the *Promotor/a* program and broad in terms of future research in this field. The results helped to address areas where possible improvements can be made as well as what other services should be offered to Latinos in this area, for example transportation being one of them. In addition, the in-depth interviews shed light on the life of a *Promotor/a* and identified areas of possible improvement to make their jobs more manageable. Some areas included holding their teammates accountable about updating the database as well as having an office where paperwork can be completed. Some positive outcomes of the interviews include an overall high satisfaction of the employees, highlighting they feel their job makes a difference and feeling supported by their colleagues as well as the organization.

Lastly, the projected yielded positive results, however, it is evident more research needs to be done related to *Promotores* in the Latino community. This will yield a higher demand and more funds being allocated on the state level to develop more programs like this one. Some suggestions to aid this process includes a better database to keep track of clients of the agency. The database only holds general information and sometimes is not updated as often as it should. This will result in better evaluations of the clients and better data collecting in order to readily show positive outcomes. Moreover, more funding needs to be allocated to alleviating Latino health disparities especially in the areas of obesity and diabetes. This should include culturally

competent education that *Promotores* can deliver. As a result, more research in the area of *Promotores* will yield policy changes that can then be illustrated into funding.

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Appendix

MPH Program Competency Inventory

Competency	Description of How Each Was Achieved
<p>1. Quantitative and qualitative data collection methods appropriate for a given public health context</p>	<p>I am contributing gathering quantitative data (surveys) as well as qualitative data by conducting focus groups as well as in depth interviews. This is all in relationship to conducting a program evaluation.</p>
<p>2. Assess population needs, assets and capacities that affect communities' health</p>	<p>This project addressed the health needs of the Latino community, specifically in the Sacramento and Placer County region. These include issues of obesity and diabetes. In addition, this project identified the resources in the community where multiple organizations work together to leverage resources to further combat the health problems in the Latino community.</p>
<p>3. Select methods to evaluate public health program</p>	<p>My project is to evaluate how <i>Promotores</i> impact the Latino community. Specifically, it is meant to address the programs achievements as well as areas for improvement especially when it comes to delivering prevention and intervention strategies when it comes to diabetes and obesity.</p>
<p>4. Describe the importance of cultural competence in communicating public health content</p>	<p>This program evaluation aims to bring awareness to the overall importance of culturally competent health education and delivery. It aims to promote the importance of utilizing <i>Promotores</i> when it comes to delivery vital health education to the Latino Population</p>

<p>5. Perform effectively on interprofessional teams</p>	<p>This project allowed me to work with all levels of staff. I was also able to interact with other organization and individuals in different positions who are all working to address the health issues in the Latino community. Working directly with the Executive Director as well as the <i>Promotores</i> in the organization gave me vital insight on their everyday activities including challenges and achievements.</p>
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