Mexican Americans: Obesity

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Introduction

The Mexican- American population is the largest ethnic/ racial group in the United States of American, and are expected to grow one- fourth of the population by the year 2050 (Delva, O'Malley & Johnson, 2007). The health demands for this rapid population growth are in more demand than ever. With the Mexican- American heritage becoming a large part of our culture they have adopted our health practices and incorporated them into their new lifestyle changes. Living in the United States, many of them lack education, finical support, healthcare, and raise families in low socioeconomic environments. In addition, Mexican- Americans face several health disparities, with one being obesity as a result of living in the United States. With the heart disease and diabetes being in the top five causes of death among the Mexican American population, we want to target the leading risk factor for these diseases and many others; obesity.

Methods

We used three of the eight stages of the PRECEDE-PROCEED planning framework as a guide. First in the social assessment we researched our target population's quality of life, determinants/social determinants of health. Second we identified the problems and leading risk factors of our population in the epidemiological assessment. Lastly we identified the predisposing, enabling, reinforcing factors of our target population. We gathered our information through both primary and secondary sources such as, scholarly articles, Centers for Disease Control, Medline, PubMed etc. and interviews with peers of this culture. Keywords such as: Mexican American, obesity, health education, morbidity, mortality were used throughout our research. Below is our finding for the Mexican American Obese population:

Social Assessment

Mexican Americans are among one of the largest minority in the United States, according to the Centers for Disease control (CDC) the Hispanic population is expected to grow to 31% by 2060 (CDC, 2014). Mexican American are 64% which makes them the largest Hispanic subgroup in the United States (CDC, 2014). Many Mexican Americans come to the U.S. with hopes for a better life and many more opportunities than the ones given in their home country. When they come over to the states they usually are lacking sums of money, which put them at the bottom of the SES chain. These types of problem contribute to the downhill of a community (Ramirez, Villarejo, 2012).

Low SES can cause many problems in a family or community, one major problem being obesity. According to the CDC (2014) by 20 years old 69% of Mexican Americans are suffering from being overweight or obese. Some of the biggest social factors aiding in obesity are, low SES, unemployment, poor geographic location, lack of transportation and single parent homes. Money can be a key risk factor for suffering from a health problem like obesity. Obesity is without a doubt a problem for Mexican Americans overall health because both heart disease and diabetes are among the top five causes of death in Mexican Americans (CDC, 2014). Many Mexican Americans struggle with asking for help, because they are too prideful to do so. Health promotion can give them the information they need to pursue a venture for help.

Often people in low income areas often suffer from these types of health problems due to being overweight or obese because the lack of proper nutrition (Olson, 1999). Buying cheap foods that are high in saturated fats and sodium is a normal thing for most people in urban poor areas of the United States. Most people admit to knowing these foods can cause health problems

like the ones mentioned earlier; yet they consistently buy the cheap, unhealthy, quick and easy foods. Buying these cheap non nutritious foods isn't always a choice, some urban areas suffer from food insecurity which is a major leading cause of many health problems (Olsen, 1999).

Many of Mexican Americans lack health insurance. According to the CDC, 29% of Mexican Americans in the U.S. do not currently have insurance. A reason for the lack of insurance could be the cost or simply because insurance is something completely foreign to them. In Mexico people would only go to the hospital if you're dying, having pregnancy complications, etc. In America individuals go for much less than that. These types of concepts puzzle most Mexican Americans. Low socioeconomic status is highly associated with high mortality rates among Mexican Americans in the U.S. (Olsen, 1999). The mortality rate for Mexican Americans (251.8 per 100,000)(CDC, 2014) compared to the average American mortality rate (807.3 per 100,000) (CDC,2012). Mexican Americans seem to have a lower mortality rate at first, but they are a majority being compared everyone else in the United States.

Epidemiological Assessment

One of the primary reason Mexicans move to the U.S is to have a better economic and educational status. Men will come to America to work and send money to their family. Most Mexican-Americans are unable to afford necessary health care and healthy food. It takes a toll on their health status and their population suffers from a lot more diseases that other U.S citizens. For instance, Mexican-Americans have a higher rate of syphilis, 4x the incidence of gonorrhea, 3x the incidence of chlamydia, and an increased incidence of HIV infection, TB and hepatitis B than the rate of other Americans ("Mexican Americans," n.d). Due to the fact that Mexican-

Americans feel discriminated against, they do not seek medical help. They have developed a lack of trust for people on health care systems and programs imposed by the U.S. government.

The Mexican- American population in the United States is rapidly growing each year. According to the Census released in 2010 the Mexican- American population ringing in at a staggering 54 million people (Ennis, Rios- Vargas,& Albert, 2010). Between the years 2000 and 2010 the total population in the United States was due to the increase in the Hispanic population (2010). In recent decades the population was due to mass migrations of Mexican- Americans to the United States. However, since then Hispanic population is now rising from births in the United States. The Mexican- American population is distributed all over the United States, however, several states are more populated than other. California, Texas, and Florida are the top three states that over half of the Hispanic population resides in. California accounted for 14 million Hispanics and 4 million of them lived in Los Angeles. Texas being the next they account for 9.5 million and Florida with 4.2 million (Ennis, Rios- Vargas,& Albert, 2010). Throughout research I found that South Carolina was shown to be the fastest growing state populated with Mexican- Americans (Ennis, Rios- Vargas,& Albert, 2010). South Carolina increased from 95,000 in 2000 to 236,000 in 2010 (Ennis, Rios- Vargas,& Albert, 2010). The dramatic increase of Mexican - American is due to several key factors. The United States is labeled as "Land of the Free- and Home of the Brave" and Americans are known for "Living the Dream". Our employment opportunities, living quarters, government programs, and medical services are a few characteristics of why American is ideal place for a family. It is expected that the Hispanic population will double by 2050. Mexican American is the fastest and largest growing ethnic minority group in the States. While ethnic and racial minority group are very similar; it is important to understand the difference. Ethnic minority is based off of cultural traditions while

racial is based off physical appearance such as skin color. Mexican- Americans ethnic traditions are very adaptable and should explain why they are the largest growing.

Identifying the Risk Factors Linked to the Health Problem

The Mexican-Americans can be obese because of three reasons, their genetics, their environmental factors and their behavioral factors. Research has been conducted on what risk factors there are for developing obesity in the Mexican-American population. According to Jan Sundquist and Marilyn Winkleby from the Journal of Epidemiology (2000), there are differences in the prevalence of obesity within the Mexican-American population, indicating a heterogeneity that will be examined further (p.471). For example, The San Antonio Heart Study (Mitchell, 1996) showed that Mexican-American women living in the most socioeconomically disadvantaged neighborhoods had a mean Body Mass Index (BMI) of 28.3. Corresponding BMI levels for Mexican-Americans men in these areas were 26.9 and 27.8, respectively. The average BMI of Mexico is 27-29 (Soria, 2013). It is suggested that migrating to a new country can play a role in the variations of obesity. Moving to a new country means changing a diet, exercise, and change in stress levels may lead to weight gain (Pampel, Krueger & Denney, 2010). The United States offers a variety of fast foods that are appealing to the Mexican-Americans because that food tastes good, it's inexpensive and they are unaware of how bad it is for them.

Some of the environmental risk factors Mexican-Americans may face include language barriers, racial discrimination, poor education and unable to afford proper health and nutrition. The Mexican-Americans who are born in the United States can have better opportunities at being healthier than those who migrated here. Because, the Mexican-Americans who were born here are citizens and have more opportunities in finding a job, receiving education and understanding

the health risks of eating poorly and not exercising. Compared to Mexican-Americans that migrated here can experience racial discrimination and language barriers that can lead to an unhealthy lifestyle (Kaplan, 2004). However, when the Mexican immigrants first arrive to the United States, they tend to be healthier than the U.S. born citizen but this tends to diminish due to adapting to a new and different culture (Kaplan, 2004). If the Mexican-Americans feel discriminated against they may not want to seek medical help. Their inability to understand the need to have a healthy diet and the importance of exercising daily can lead to obesity. Also it can be difficult for the Mexican Americans to find a decent job in the United States, especially if they are not a citizen. This results in their inability to afford healthy food, and proper health care. If they are unable to afford a nice home in a safe neighborhood, the lack of exercise increases. It is important to be active every day and going outside and participating in activities is a great way to do so but living in an unsafe environment can be a barrier. Another important environmental factor is food deserts. If there are no farmer markets or local grocery stores near their homes, they tend to maintain an unhealthy diet. It is convenient to buy what is affordable and close by rather than drive miles away for something expensive. This results in an unhealthy diet and a greater risk at developing obesity (Kaplan, 2004).

One of the problems that obesity can lead to is Coronary Heart Disease (CHD). The San Antonio Family Heart Study researched risk factors leading to CHD. The San Antonio Family Heart Study researched risk factors leading to CHD; results from the San Antonio Family Heart Study determined genetics influence a large panel of cardiovascular risk factors including serum levels of lipids, lipoproteins, glucose, hormones, adiposity, and blood pressure (Mitchell, 1996).

Educational and Ecological Assessment

Genetic, behavior, and environmental risk factors are barriers for any population. Regard to obesity trends in the Mexican- American population these three risk factors are responsible for increase obesity within this population (Maes, Neale & Eaves, 1997). Genetics is a predisposing factor that starts a foundation in determining a healthy lifestyle. As mentioned before, this population's obesity trend is considered a harmful epidemic that will affect about a fourth of the overall population. For examples, Mexican- Americans suffer from more age- adjusted years of potential life lost per 100,000 population due to obesity- related diseases such as diabetes, heart disease, and stroke (Delva, O'Malley & Johnson, 2007). Often these risk factors are carried in genetics which can affect future life, these factors can also be limited with behavioral changes.

Enabling factors concerns how accessible health resources are and the availability of these resources. With the Mexican- American population living in low socioeconomic status availability to health resources are scarce (Wang & Zhang, 2006). Transportation is a barrier for many lower income families this affects transportation to local grocery stores with fruits and vegetables (Wang & Zhang, 2006). In addition, no transportation will results in missed doctor appointments and other health related visits. Finally, reinforcing factors for obesity include noticing results of losing weight, changes in mood, increase in self- confidence, and engaging in healthy behaviors more frequently (Wooley, 1995). An example, of a reinforcing factor would be sensing a pride of achievement within oneself after adopting a new behavior change (Wooley, 1995). For a person who is changing eating habits and increasing daily physical activity noticing their pants are being loose would be a positive reinforcing factor.

With the lack of health care and benefits in the Mexican- American population their lack of knowledge of healthy living is damaging to their populations as a whole. Health promotion programs are readily available to this population as needed. From experience Bannia Rodriguez has seen health education first hand through employment for government funded health program. She has worked at WIC the past 3 years assisting new mothers on proper health care to children 5 and under. Health education is provided for mothers of all ethnic groups including Mexican-Americans. Henrico Health Department offered weekly nutritional programs that informed clients about healthy choices when concerning food. Mothers and children on the WIC programs were limited to only purchasing healthy nutritious foods that including low- fat dairy, vegetables, and fruits. "Unlike other program this forced families to choose healthy nutritional choices" Bannia Rodriguez stated.

The average education levels within the Mexican American population are relatively lower than normal. According to Pew Research "Hispanic Trends Project" 10% of Mexican ages 25 and above compared to 13% of all U.S. Hispanics have obtained at least a bachelor's degree (Brown & Patten, 2013). The literacy levels of both youth and adult populations are lower today than they were in 2009. The youth literacy level 15-24 as of 2010 was 98.43 and the adult 15 and above literacy level is stated as 93.07 (UNESCO). In regards to different learning styles, Mexican Americans are proven to be most successful in visual learning (Park, 2002). After a study conducted in California that included 378 Mexican American individuals, 40% of students studied were visual learners (Park, 2002). In addition, this study also indicated that most Mexican American students were field dependent learners (Park, 2002). This indicates that these students perform most effectively in group interaction settings (Park, 2002). In addition, these

students require defined goals and reinforcements, they are more effective by criticism, and attends best to material relevant to their own experience (Park, 2002).

As mentioned above, the Mexican American population as a whole succeed best through visual learning. Unlike other types of learning, visual learning such as videos provides a visual aid for the student which engages and intrigues them to the material (Zane Education). Graphs, charts, images and short clips are beneficial to the Mexican American population because in many cases these individuals cannot read english. Today, vast majority of adults turn to videos, television, and computers to seek information about a hobby or interested topic and this demonstrates the values of visual learning as a very effective tool (Zane Education). With that being said, a health promotion program would be most effective for the Mexican American population if visual learning was included in the program.

A study was conducted to encourage exercise and address the cardiovascular benefit that comes with daily fitness. This study was targeted towards Mexican- American students who lived in low socioeconomic status in Palo Alto, California. A 12 week dancing program was often as an after school program for 3 days a week to encourage students to engage in anaerobic activity. In addition, a health education program was also offered for students twice a week. Dance for Health was an overall successful program for reduction in childhood obesity for this target population. It was shown to be most effective in girls than boys, however, improvement of overall cardiovascular health was reached among all students (Flores, 1995). It was evident in this study that this program was successfully and effective in meeting the programs intentions. The needs of this study where determined by measuring the improvement of resting heart rate, timed- mile run, BMI, and attitude towards physical activity.

Through the CDC I evaluated a study conducted in 2005 to promote healthy dietary habits and increase physical activity to reduce obesity among adolescent female students 11-18 years old. Students include several race/ ethnicity including Latino and Mexican American origin. This specific program was held during the girl's physical education class period time in Minneapolis/ St. Paul metropolitan area of Minnesota. The "New Moves" required girl's participation in physical activity for 4 days a week for 16 weeks which also included a social support/ self- empowerment class once a week. In order to participate female students must be overweight or at risk of becoming overweight due to a sedentary lifestyle. There was no cost identified to the families for students to participate in the program. Results from "New Moves" indicated that girl's self- efficacy for physical activity was greater, self- worth increased, body satisfaction increased, smaller portion controls also increase, and unhealthy eating behaviors also decreased. However, there were no changes in sedentary lifestyle for the students.

Both studies that were assessed above indicate the success of health promotion obesity programs for the Mexican American population. Both were conducted over a period of time that allowed and provided enough evidence that encouraging and/or increase physical activity through enjoyable activities was successful for this population. It is evident that encourage physical activity through fun activities such as dancing has a higher success rate oppose to regular exercise methods such as running or biking for 30 minutes. Participants were surrounded by friends who encouraged and motivated them throughout the study. In addition, this time was also beneficial for participants to socialize while improving their health and decreasing obesity rates in this population. Overall, both programs were victorious in reducing obesity rates.

It is evident the Mexican- American population are struggling with rapid obesity trends in their ethnicity. Due to genetic, behavioral, and environmental factors this population faces it's difficult to reduce obesity. Many Mexican- Americans live under poverty which is a domino effect on other life factors such as access to healthy food, transportation to fresh markets and doctor's appointments, and limitation on access to health care. When conducting a program for this population you must take into consideration all these factors and tailor to their needs in order to promote a successful intervention.

Interventions

Through research my peers and I found that the Mexican American population learns best through visual learning. With that being said, health promotion program will be most successful if health educators incorporate visual aids to inform the risks of obesity within their population. Using ideas such as comic books, graphs, charts, and short video clips are ideal examples for this population. Informing clients about the risk of obesity through a visual aids are beneficial due to the comparisons that are displayed ad being able to show increases or decreases in health behaviors within a population. Also, since many Mexican Americans are not literal in the English language delivering information a visual aid ensures that your point will be reached. In conclusion, we believe providing visual aids will work best with addressing Mexican Americans concerning the obesity epidemic in their population.

References

Delva, J. O'Malley, P.M., Johnson, L.D. (2007). Health related behaviors and overweight: a study of latino adolescents in the united states of America. *American Journal of Public Health*, 21 (1), 11-20.

Flores, R. (1995). Dance for health: improving fitness in african american and hispanic population. *Public Health Reports*, 110 (20), 189-193.

Center for Disease Control and Prevention. (2013). Obesity prevention and control: school based programs. Retrieved : http://www.cdc.gov/obesity/data/adult.html

B. Rodriguez, personal communication, November 10, 2014

Mitchell, B.D., Kammerer, C.M., Blangero, J., Mahaney, M.C., Rainwater, D.L., Dyke, B. Hixson, J.E., Henkel, R.D., Sharp, R.M.,Comuzzie, A.G., VandeBerg, J.L., Stern, M.P., MacCluer, J.W. (1996). Genetic and Environmental Contributions to Cardiovascular Risk Factors in Mexican Americans: The San Antonio Family Heart Study. *Circulation.* doi: 10.1161/01.CIR.94.9.2159

Kaplan, M.S., Huguet, N., Newsom, J.T., McFarland, B.H. (2004). The Association between Length of Residence and Obesity among Hispanic Immigrants. *American Journal of Preventive Medicine, 27*(4), 323-326. doi:10.1016/j.amepre.2004.07.005

Sundquist, J., Winkleby, M. (2000). Country of Birth, Acculturation Status and Abdominal Obesity in a National Sample of Mexican-American Women and Men. *International*

Journal of Epidemiology, 29 (3), 470-477. doi:10.1093/ije/29.3.470

Remirez, S., Villarejo, D. (2012). Poverty, housing, and the rural slum: Policies and the production of inequities, past and present. *American Journal of Public Health, 102*(9). 1664-1675

Centers for Disease Control (2014). Health of Mexican American population. Retrieved from: http://www.cdc.gov/nchs/fastats/mexican-health.htm

Centers for Disease Control (2014). Hispanic and Latino populations. Retrieved from: http://www.cdc.gov/minorityhealth/populations/REMP/hispanic.html

Soria, C. (2013). Body Mass Index (BMI) by Country. *IndexMundi Blog*. Retrieved from: http://www.indexmundi.com/blog/index.php/2013/04/11/body-mass-index-bmi-by-country/

Pampel, F.C., Krueger, P.M., Denney, J.T. (2010). Socioeconomic Disparities in Health Behaviors. *US National Library of Medicine National Institute of Health,* 36, 349-370. doi: 10.1146/annurev.soc.012809.102529.

Park, C. (2002). CrossCultural differences in learning styles of secondary english learners. *Bilingual Research Journal*, 26 (2), 213- 229.

Wooley, S. (1995). Behavior mapping: a tool for identifying priorities for health education curricula and instructions. *Journal for Health Education*, 26 (4), 200-206.

Maes, H.M., Neale, M.C., Eaves, L.J. (1997). Genetic environmental factors in relative body weight and human adiposity. *Behavior Genetics*, 27 (4), 325- 351.

United Nations Educational, Scientific, and Cultural Organization Institute for Statics. (2012). Adult and Youth Literacy, 1990- 2015 analysis of data for 41 selected countries. *UNESCO Institute for Statistics*.

Wei, M., Et al. (1996). Migration status, socioeconomic status, and mortality rates in Mexican Americans and non-Hispanic whites: the San Antonio heart study. Received from: http://www.ncbi.nlm.nih.gov/pubmed/8876841

Olsen, C. (1999). Nutrition and health outcomes associated with food insecurity and hunger. *American Society for Nutritional Sciences*. 521-524

(n.d.). Mexican Americans. *PBS.* Retrieved from: http://www.pbs.org/opb/historydetectives/feature/mexican-americans/