Obesity Among Young Adult Hispanics

Active Latinos

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HSC 405: Health Education Program Evaluation & Measurements

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Background and Significance

Obesity is a common and serious chronic disease. Despite efforts to decrease its rates, they continue to go up, affecting people's lives by contributing to mortality and morbidity. It is the second leading cause of preventable death in the United States, and those with obesity are at higher risk of developing other chronic diseases which may all lead to death. Obesity affects about 39.8% of adults in the United States (Centers for Disease Control and Prevention, n.d.). In the United States, obesity most commonly affects adults with low incomes, and 31.1% of Hispanic women between the ages of 18-44 are obese (America's Health Rankings, n.d.). According to the US Department of Health and Human Services Office of Minority Health, 31.9% Hispanic women 18 years and over were obese, and only 16.8% Hispanic adults 18 and over performed regular leisure physical activity (n.d.).

There are several co-morbidities to obesity, such as heart disease, hypertension, stroke, type 2 diabetes and certain cancers, which are all leading causes of death that are both preventable and premature (CDC, n.d.). One of the biggest repercussions of obesity is diabetes, which can be described by the term "diabesity", and about 50% of diagnosed diabetic patients are obese (Abdelaal et al., 2017). Co-morbidities may not all be chronic diseases but do affect people's qualities of life; there are social affects which include weight stigma and discrimination, and in turn affect mental health. The prevalence of obesity was 35.7% among young adults aged 20 to 39 years, and Hispanics have the highest age-adjusted prevalence of obesity, with a rate of 47% (CDC, n.d.). Obesity rates show persistent ethnic disparities, in which "Latino adults had significantly higher rates of obesity of that in White adults" and more than half of Latina women, with a rate of 50.8%, had obesity compared with 38% of White women" (State of Obesity, n.d.).

This preventable disease is making a dent in our healthcare, and the estimated cost due to obesity ranges from $147 billion to $210 billion per year (State of Obesity, n.d.). Chronic diseases like obesity all cost money, but don't only cost our government and health care system money. The individuals living with this disease encounter costs due to this disease as well. This includes paying for doctor visits, medication, missing work, and etc.

Critical Review of Research

Past programs have utilized several strategies regarding obesity to reach their desired population in attempt at making significant improvements. Of the 10 similar obesity prevention programs that were reviewed, Martinez, et. al. (2017), Cassidy, et. al. (2018), Berger-Jenkins, et. al. (2017), Garcia, et. al. (2019), Cotter, et. al. (2018), Hannon, et. al. (2019), and Hammons, et. al. (2013) all had an intergenerational aspect, in which they were family-based programs that talked to both children, their caregivers, and in a few cases, the grandparents. This gave multiple perspectives on the issue of obesity within families. These intergenerational and family-based programs seemed to be more effective, because of the importance of the familial aspect in Hispanic families. Most of the programs compared conducted their programs in both Spanish and English as needed, which includes Martinez, et. al. (2017), Berger-Jenkins, et. al. (2017), Cotter, et. al., (2018), Hannon, et. al. (2019), and Hammons, et. al. (2013).

A common issue contributing to obesity within Hispanic families was their cultural belief that "chubby is healthy" and a lack of knowledge or resources for healthy diets, including Berger-Jenkins, et. al. (2014), Martinez, et. al. (2017), Garcia, et. al. (2019), Cotter, et. al., (2018), and Hammons, et. al. (2013). Another trend seen within Hispanic families in these programs and a contributing factor to obesity was an excess of sugar foods and drinks, including Berger-Jenkins, et. al. (2014), Martinez, et. al. (2017), and Hannon, et. al. (2019).

A common recruitment method used within the 10 programs was advertising to participants in schools or by partnering with the schools, as seen by Berger-Jenkins, et. al. (2014), Martinez, et. al. (2017), Berger-Jenkins, et. al. (2017), Gatto, et. al. (2017), and Hammons, et. al. (2013). Others did not recruit at schools or were not school based, such as Cassidy, et. al. (2018), which had advertisements and referrals from the community health clinic, or Cotter, et. al. (2018), which advertised in the community where participants live. Incentives were a common recruitment method used, in which Berger-Jenkins, et. al. (2014), Martinez, et. al. (2017), Cassidy, et. al. (2018), Garcia, et. al. (2019), Cotter, et. al. (2018), and Mackey, et. al. (2015) offered incentives for participation in certain activities or in the focus groups. The incentives ranged from $10 to $50 cash, and Mackey, et. al. (2015) offered both a $25 incentive and an entry in a $250 lottery within the participants.

All programs conducted some sort of baseline test to test for any significant changes due to the program over time. In most cases the pre and posttests administered were surveys, including Berger-Jenkins, et. al. (2014), Hammons, et. al. (2013), Gatto, et. al. (2017), and Hannon, et. al. (2019). Cotter, et. al. (2018) specified the use of ANOVA to examine the pre and post differences in things such as vegetable consumptions, perceived stress, perceived knowledge, and social cohesion, which was influenced by the Social Cognitive Theory. Gatto, et. al. (2017) program utilized no specific theoretical framework but focused on Bandura's concept of self-efficacy alone. Mackey, et. al. (2015) program was conducted strictly online, in which it was email/internet based, to test the feasibility of this type of program. It was not as successful as other programs conducted in person.

The most often used theoretical model in programs being compared was the Social Cognitive Theory, including Berget-Jenkins, et. al. (2017), Cotter, et. al. (2018), and Mackey, et.

al. (2015). Garcia, et. al. (2019) used the PRECEDE-PROCEDE model to shape the questions asked in the focus groups, and Berger-Jenkins, et. al. (2014) used the Social Ecological Model.

Of the programs, most reported a success in seeing significant changes in behavior changes that contributed towards obesity prevention and reduction, relating to diet and physical activity. Examples of those programs that reported this are Berger-Jenkins, et. al. (2014), Garcia, et. al. (2019), Cotter, et. al. (2018), Mackey, et. al. (2015), Hannon, et. al. (2019), and Hammons, et. al. (2013).

Linking Goals and Objectives to their Theoretical Relevance

The theoretical framework this program will be using is the Social Cognitive Theory, as it was successfully applied in several of the programs being compared and brought improvements within the participants of those programs. The Social Cognitive Theory is comprised of 3 main components, which are personal or cognitive factors, environmental factors, and behavioral factors, which all influence each other and affect the likelihood of someone making a behavior change for their health.

This model includes 6 constructs, which includes reciprocal determinism, behavioral capability, expectations, self-efficacy, observational learning, and reinforcements. These are all incorporated into the process of this model to achieve a behavior change. Reciprocal determinism is the interaction between the person, their behavior, and their environment, all contributing to the behavior change. Behavioral capability refers to the knowledge and skills a person has to perform a behavior. Expectations are the anticipated outcomes of said behavior. Self-efficacy is a person's confidence in their ability to make the behavior change and overcome any barriers that come with it. Observational learning is learning a behavior change by modeling a person's own behaviors from another person, such as a role model. Reinforcements, which can

be positive or negative, are the way one responds to another person's behavior to either increase or decrease the chance of the person repeating the behavior.

This program will incorporate these components into the pre and posttests, to assess the participants' views of their own behavioral capability, expectations, and self-efficacy. They will be asked questions such as "it is easy for me to stick to a healthy diet" with a scale from very difficult to very easy. The participant's reciprocal determinism will need to be observed during the process evaluation of the program, to alter the program based on the interaction between the participants, their behavior, and environment, in a way that positively contributes toward a healthy behavior change. This will include making changes to the person's environment that will influence a positive change. An example of how this will be addressed is by offering physical activity classes in the participants' areas to help them avoid living a sedentary lifestyle. The program will utilize observational learning by providing role models and examples of healthy behavior changes, such as those running the program and having a guest speaker like a personal trainer or dietician speak to them about the positives of a healthy lifestyle. Positive reinforcements will be used to reward participants when they make progress throughout the program, and incentives will be offered for their participation, to motivate them to show up, come back, and make healthy behavior changes towards decreasing obesity.

Hypotheses to be Examined

The experimental group will increase their knowledge of easy ways to stay active by 45% as measured by the self-administered posttest questionnaire.

The experimental group will decrease their intake of fast food by 20% as measured by the self-administered posttest questionnaire.

The experimental group will increase the times a week they exercise for at least an hour to 3 times a week, as measured by a 6 month follow up self-administered questionnaire.

Methods

Description of Population and Method of Sample Selection

The priority population of Active Latinos is young adult Hispanics or Latinos in Long Beach, California. A Hispanic or Latino would be a person who comes from a Spanish speaking country, or of Latin American descent. In order for people to be eligible to enroll in this program, they must be residents of the city of Long Beach and be between the ages of 18 and 24. This location was selected due to its high population of Hispanics and Latinos, with a percentage of 43.2% (Data USA, n.d.). Long Beach also has a high adult obesity rate of 24.5% as of 2007 (LA County Department of Public Health, 2011). The immigration status of participant status will be irrelevant to the requirements.

The sample population will be selected based on the requirements listed above using the cluster sampling method to ensure a representative sample. This will be accomplished by identifying organizations that our target population frequents in the city or surrounding cities, such as colleges, grocery stores, and gyms. Those organizations will be contacted to obtain any available lists of those who frequent the area, and with the permission of those organizations, there will be active recruiters speaking to people and advertising the program. The criteria of those needed for the program will be taken from these lists and contacted about the program. Other participants will be recruited through promotional presentations and the distribution of flyers at the local colleges. Incentives will be given to those that participate after each visit and those that attended every activity and meeting will be entered into a raffle for a grand prize incentive given at the end of the program. Examples of incentives will be coupons for healthy

foods at local stores, food vouchers for local Farmer's Markets, exercise clothes and equipment, and vouchers for a session with a personal trainer at a local gym.

In order to calculate the sample size for this program, the significance level will be set at alpha = 0.05 (5%), so that the confidence interval is 95% at post-test analysis. Type I Error will also be set at 0.05 (5%), while Type II Error will be set at 0.80 (80%). The effect size will be set at 10% to calculate smallest possible sample size to ensure resources are not wasted. The sample size goal will consist of a minimum of 120 participants for the experimental and comparison groups each, therefore the total participants will be 240. In order to account for the percentage of dropouts or any attrition in the sample, an extra 20% of the total participants will be added. That will be an additional 48 participants, in which the total will then be split in half between the experimental and comparison group, at 144 participants in each group. The experimental group will be located in Long Beach, while the comparison group will be located in La Mirada; the split of groups will be randomized. Both groups will take the pre and posttests, but only the experimental group will participate in the program's interventions. The total representative sample size of this program will be n = 288.