Latino Empowerment:

A Health Promotion Intervention for Latinos with Type Two Diabetes

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Mission Statement

The Latino Empowerment Type Two Diabetes Prevention Program works to improve diet, increase physical activity, and reduce HbA1c levels in the Latino population in the J.J. Harris neighborhood in Athens, Georgia. The program will employ education seminars and focus groups to educate about risk factors and empower the community to reduce the prevalence of diabetes in the community.

PROGRAM GOALS AND OBJECTIVES

Goal 1: Increase participants' education and change attitudes about modifying type two diabetes risk factors.

- Objective 1A: By the end of the 6-month period, all participants should have an increased knowledge by 80% of risk factors that cause type two diabetes.
- Objective 1B: At the end of the 6-month period, 80% of participants should report positive attitudes about modifying type two diabetes risk factors in their own lives.
- Objective 1C: At the end of the 6-month period, participants should be able to score a 75% on an examination testing on type two diabetes risk factors.

Goal 2: Increase participants' knowledge about diet and its relation to type two diabetes.

- Objective 2A: 80% of participants should report understanding of United States 2015 Dietary Guidelines by the end of the 6-month period.
- Objective 2B: By the end of the 6-month period, participants should be able to prepare healthy meals 5-7 times a week to exhibit healthy eating habits and reduce saturated fat and trans fats in food.
- Objective 3C: 80% of participants should report understanding of diet and its relation to type two diabetes by the end of the 6-month period.

Goal 3: Increase participants' knowledge about physical activity and its relation to type two diabetes.

- Objective 3A: 80% of participants should report understanding of the United States 2008 Physical Activity Guidelines for their age group and an understanding of BMI by the end of the 6-month program.
- Objective 3B: By the end of the 6-month period, participants should be able to execute positive exercise habits in their daily lives 3-5 times a week.
- Objective 3C: 80% of participants should report understanding of physical activity and its' relation to type two diabetes by the end of the 6-month period.

Goal 4: Reduce prevalence of type two diabetes and type two diabetes risk factors in the Latino population of J.J. Harris neighborhood.

- Objective 4A: 50% of participants should have reduced HbA1c levels by the end of the 6-month period.
- Objective 4B: 50% of participants should lose 5-20 pounds by the end of the 6-month period.

- Objective 4C: By the end of the 6-month period, 50% of participants should report feeling healthier and having an improved quality of life because of their reduction in type two diabetes side effects.

Program Logic Model: Latino Empowerment

Situation: The prevalence of type two diabetes is higher among Latino males over the age of 45 than the general population

Inputs

What resources do we need?

I. Time

II. Transportation

III. Spanish speaking or bilingual undergraduate volunteers from UGA

IV. Staff: certified health education specialist, dietitian, physical activity consultant, nurse, project personnel

V.Equipment (scales, blood tests)

VI. Funding

Activities

What are the main things we will do?

I. Increase knowledge about type two diabetes risk factors

II. Empower participants and improve attitudes through focus groups and educational seminars

III. Reduce risk factors associated with type two diabetes (HbA1c levels, weight/BMI, physical activity levels)

IV. Train staff and volunteers

V. Develop and distribute pre- and post- program survey

VI. Provide participants with resources in the community

Outputs

What results will be achieved?

I. Focus groups – 6 sessions, 1 session per month

II. Educational seminar – 6 sessions, 1 session per month

III. Snacks provided at focus groups and educational seminars

IV.Training session for staff and volunteers

V. Pre- and post-program survey for evaluation and assessment

VI. Handouts with type two diabetes information and resources

Outcomes

Short-Term

What will be the direct result of our outputs? (Knowledge, attitudes, skills)

I. Increased attitudes about improving diet and physical activity

II. Increased awareness of type two diabetes risk factors

III. Increased perceived knowledge about type two diabetes

Mid-Term

What results will follow our initial outcomes? (Behavior change, policies, practice)

I. Meeting the physical activity guidelines

II. Increased intake of fruits and vegetables

III. Increased education about diabetes prevention and risk factors

IV. Policy changes – safer areas to exercise in Athens neighborhoods, access to health insurance, decrease in food deserts

Long-Term

What results will follow our initial outcomes? (Changes in broader conditions)

I. Reduction of prevalence of type two diabetes

II. Expansion of program to more areas in Georgia

III. Maintenance of weight loss, physical activity level, and dietary changes learned during the program

IV. Maintenance of self-efficacy and self-management skills related to type two diabetes

External and Environmental Factors

I. SES of neighborhood
II. Language barriers
III. Culture
IV. Family influence
V. Transportation
VI. Social Support
VII. Genetic conditions
VIII. Funding

Assumptions

I. Willingness to learn and reduce prevalence of diabetes
II. Community leaders and stake holders will be involved and support the program
III. Churches, schools and community centers will support recruitment of the program

NEEDS ASSESSMENT

Purpose and Need

Diabetes is the seventh leading cause of death in the United States and nine out of ten people with diabetes have type two (Center For Disease Control and Prevention, 2017). Type two diabetes is caused by cells' inability to respond normally to the hormone insulin, which is made in the pancreas. The pancreas then tries to make more insulin to get cells to respond but it is not able to keep up, which causes glucose to accumulate in the blood (Center For Disease Control and Prevention, 2017). In comparison to type two diabetes, type one diabetes is when the pancreas fails to make enough or any insulin. This program plan will focus on type two diabetes because affects it 90% to 95% of people with diabetes, but it is important to recognize the different types (Center For Disease Control and Prevention, 2017). This is an important conversation for our country's outcomes because type two diabetes can be prevented by healthy lifestyle changes and treating pre-existing medical conditions.

Risk Factors and Target Population

There are many different risk factors for diabetes, some of which are modifiable through lifestyle changes. Risk factors that individuals can control are having prediabetes, being classified as overweight, or being physically active less than three times a week (Center For Disease Control and Prevention, 2017). Losing weight, eating healthier, and being more physically active can influence these factors and reduce ones' risk of developing type two diabetes. Other factors that people cannot control, but increase their risk of developing type two diabetes, are being over 45 years old, having a parent, brother, or sister with type two diabetes, having gestational diabetes, giving birth to a baby who weighed over nine pounds, or being African American, Hispanic/Latino American, American Indian, or Alaskan Native (Center For Disease Control and Prevention, 2017).

There are often more factors that influence ones' risk of developing type two diabetes, especially for minority populations in the United States. For example, socioeconomic status (SES) is a main contributor to lifestyle choices persons make. It influences food choices, access to and knowledge of exercise, access to healthcare, mental health status, and so much more. Minorities often have lower SES and experience racial disparities that White Americans do not experience, which puts them at an increased risk for both developing and adequately managing type two diabetes (Castro, Shaibi, & Boehm-Smith, 2009).

Non-modifiable risk factors like race, age, and gender can indicate what populations are at an increased risk for developing type two diabetes. Latinos are disproportionally affected by type two diabetes when compared to the United States population. When looking at White Americans and Latinos, Latinos experience a 50-100% higher burden of illness and mortality due to diabetes than their counterparts (Feathers et al., 2005; Sutherland, Weiler, Bond, Simonson, & Reis, 2012). In conjunction with race, people over the age of 45 are also at an increased risk for developing type two diabetes. In 2012, adults from the ages 45 to 64 had the most diagnoses of type two diabetes at 892,000 new cases in comparison to the age groups 20 to 44 with 371,000 new cases and over 65 with 400,000 new cases (Center For Disease Control and Prevention, 2017). Lastly, gender is another predictor of having the disease. As of 2015 in Georgia, 10.2% of

females and 11.2% of men had type two diabetes (Center For Disease Control and Prevention, 2017). Latino men over the age of 45 are the focus of this program because this subgroup of the population is at an increased risk for type two diabetes.

There is evidence of interventions addressing type two diabetes and literature posits that the most important part of interventions for this population is making sure that they are culturally competent. Studies that held focus groups to identify what the needs were in the population, used translators, and promoted healthy lifestyle changes were most successful in reducing the prevalence of type two diabetes (Cruz, Hernandez-lane, Cohello, & Bautista, 2013; Hall, Lattie, McCalla, & Saab, 2016; Hawkins et al., 2015).

Although programs have been completed previously, there is still a large public health need for interventions that target minorities with type two diabetes. Thus, in this context, this program will focus on improving HbA1c levels, reducing body mass index (BMI), and improving healthy lifestyle habits like physical activity and nutrition in a culturally competent manor. J.J. Harris is a neighborhood in Athens that has a higher percentage of Hispanic/Latino populations than Athens Clarke County as a whole. Because diabetes is prevalent in this area it can mean they lack resources such as healthy food and access to medical care, which increases their prevalence and mortality from diabetes. This neighborhood could be exclusively targeted, but in order to create behavior change in more individuals, Athens, Georgia as a whole will be included in this program. It is important to identify the culture of this population because it can influence the variables and risk factors related to type two diabetes in this population. Cultural variables for the Latino population can include level of acculturation, familism, and traditionalism. The culture of this population influences what is needed and the type of program that will be implemented in this area.

PROGRAM THEORY

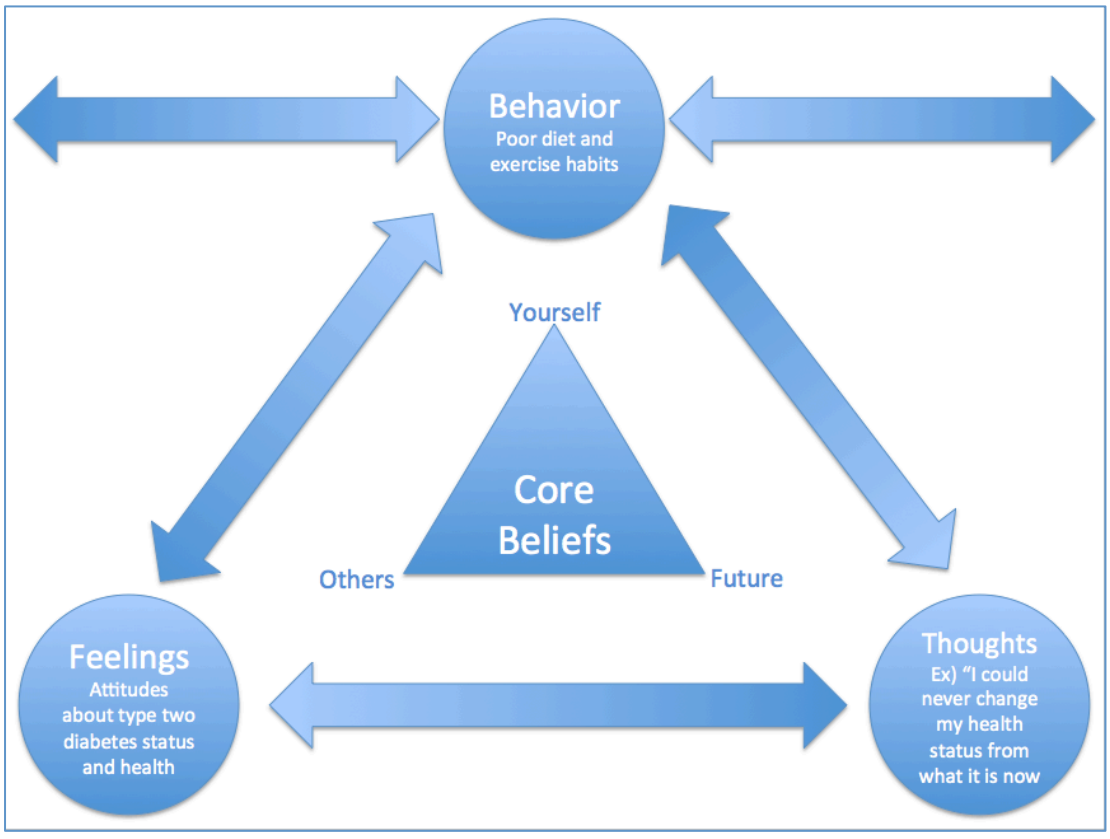
The goals and objectives of the Latino Empowerment Type Two Diabetes Prevention Program are aimed at increasing knowledge about type two diabetes risk factors, diet, and physical activity and reducing the prevalence of the disease and its risk factors. Cognitive-Behavioral Theory will be used as the program framework, because it is focused on thoughts and beliefs that influence a behavior. In the Latino culture, thoughts and beliefs of the male population hold significant value in the community through the ‘machismo’ (Philip, Shelton, Erwin, & Jandorf, 2012). The traditional gender roles and patriarchal authority in this culture give men a lot of influence and can play a role in the prevalence of type two diabetes in the Latino population as a whole.

There are three basic assumptions of Cognitive-Behavioral Theory (González-Prendes & Resko, 2012). The first is that cognitive processes and content are accessible and can be known. The second assumption is that what we think relates to how we respond to environmental cues. Lastly, cognitive thoughts can be intentionally targeted, modified, and changed.

Cognitive-Behavioral Theory is an adequate fit for this program because it puts the power of health-related behavior change in the thoughts and cognition of the participants. Cognitive-

Behavioral Theory combines cognitive interventions that focus on how we think and behavioral interventions that focus on how we behave (González-Prendes & Resko, 2012). This program aims to improve and change knowledge of participants' type two diabetes health status and risk factors in addition to actually having them develop behavioral skills to improve that status. Implementation of this theory will guide the program staff by helping them focus on changing attitudes, beliefs, and knowledge and developing behavioral skills of participants through the educational seminars and focus groups. Specifically during the focus groups, the health educator will focus on making participants aware of irrational beliefs and triggers that enable and reinforce unhealthy behaviors. Some examples of irrational beliefs that could be held by this population are "I could never change my health status from what it is now" or "Nothing ever turns out the way I want" or "If it was true then, it is true now; the past always repeats itself". Use of this Cognitive-Behavioral Theory framework throughout this intervention will help develop skills to combat their type two diabetes.

Figure 1: Cognitive-Behavioral Theory for Latino Empowerment Program



PROGRAM DESCRIPTION

The duration of this program will be 6 months from start to finish and the main components will be monthly education seminars (6 total) and monthly focus groups (6 total). The educational seminars will each focus on a different type two diabetes related topic and the monthly focus groups will address the participants' thoughts and feelings about what they have learned each

month. The education seminars will have specific curriculum and handouts distributed during each session, found in table 1.

Table 1: Session Curriculum Breakdown

Month	Topic	Handouts
1	Attitudes and Beliefs about Type Two Diabetes	*(Pre-Intervention Survey distributed)* Definitions of type two diabetes and other important terms to know
2	Type Two Diabetes Overview and Risk Factors	Type two diabetes overview, Risk factors of type two diabetes, what you can do to overcome risk factors
3	Diet	2015 Dietary Guidelines, Meal Plan for type two diabetes
4	Physical Activity	2008 Physical Activity Guidelines, exercise plan with photos and descriptions, ways to exercise during the workday
5	How to Apply Type Two Diabetes, Diet, and Exercise Knowledge to everyday life	Combating type two diabetes in real life
6	Wrap Up, Q&A session	*(Post-Intervention Survey distributed)* Final things to remember about type two diabetes

Educational Seminar Description

During the first educational seminar, the health educator will lead discussion and educate participants about both attitudes and beliefs surrounding type two diabetes. Participants will be able to discuss some of their feelings about the disease briefly during this time; most of the participants' discussion will be held in the focus group the following week. The health educator will teach participants how attitudes and beliefs influence health behaviors related to type two

diabetes during this seminar. Cognitive-Behavioral Theory will be the framework used to design this session. A PowerPoint will be shown in English and Spanish for easier understanding.

The second session will be focused on educating participants about type two diabetes and risk factors that can influence the disease. The health educator will give an engaging lecture about everything that the participants will need to know about type two diabetes, including diagnostic criteria, pathophysiology, and prevalence rates for this population. The handout given this week will be very descriptive and will be referred back to throughout the program, so participants will be advised to bring it to every session from this point forward. The lecture will be given in the language that the majority participants indicated that they preferred in the pre-intervention survey, and the handout will be available in English and Spanish.

The third session will focus on diet and nutrition. A dietitian will team up with the health educator to teach participants about what a healthy diet entails and how they can make changes to their diet. There will be a demonstration on how to cook an easy, healthy meal for a family by the dietitian during this seminar and the handout will contain a meal plan with recipes for a week.

The fourth session will focus on physical activity and exercise and a physical activity consultant will help the health educator in leading the seminar. The participants will learn how much they should be exercising and how to include it in their day-to-day life. The health educator will demonstrate and prompt the group to practice certain exercises that they can implement in during their workday, including dancing to ethnic music and taking the stairs instead of the elevator (Valen, Narayan, & Wedeking, 2012).

The fifth session will summarize everything the previous seminars have covered but focus on making the information relatable and empowering the participants to make changes within their daily lives. This session will be led by the health educator and will summarize attitude changes and challenges towards living with type two diabetes. Finally, the last seminar will wrap up the program and include a Q&A session with the physical activity consultant, dietitian, and health educator. This will give participants an opportunity to voice their opinions and provide feedback about their experience in the educational seminars.

Focus Groups

Focus groups will be held the week after every educational seminar. The focus groups will discuss the topic covered at the previous session and allow the participants to openly discuss their reservations, thoughts, and feelings about what they have learned. For example, after the educational seminar about diet, the discussion will prompt participants to describe if their diet has changed since the seminar, how they felt after the seminar, and if their attitude towards food is different or the same. These sessions will be led in the language that the majority participants indicated that they preferred in the pre-intervention survey, but bilingual undergraduate team members will also be present to assist with any language barriers

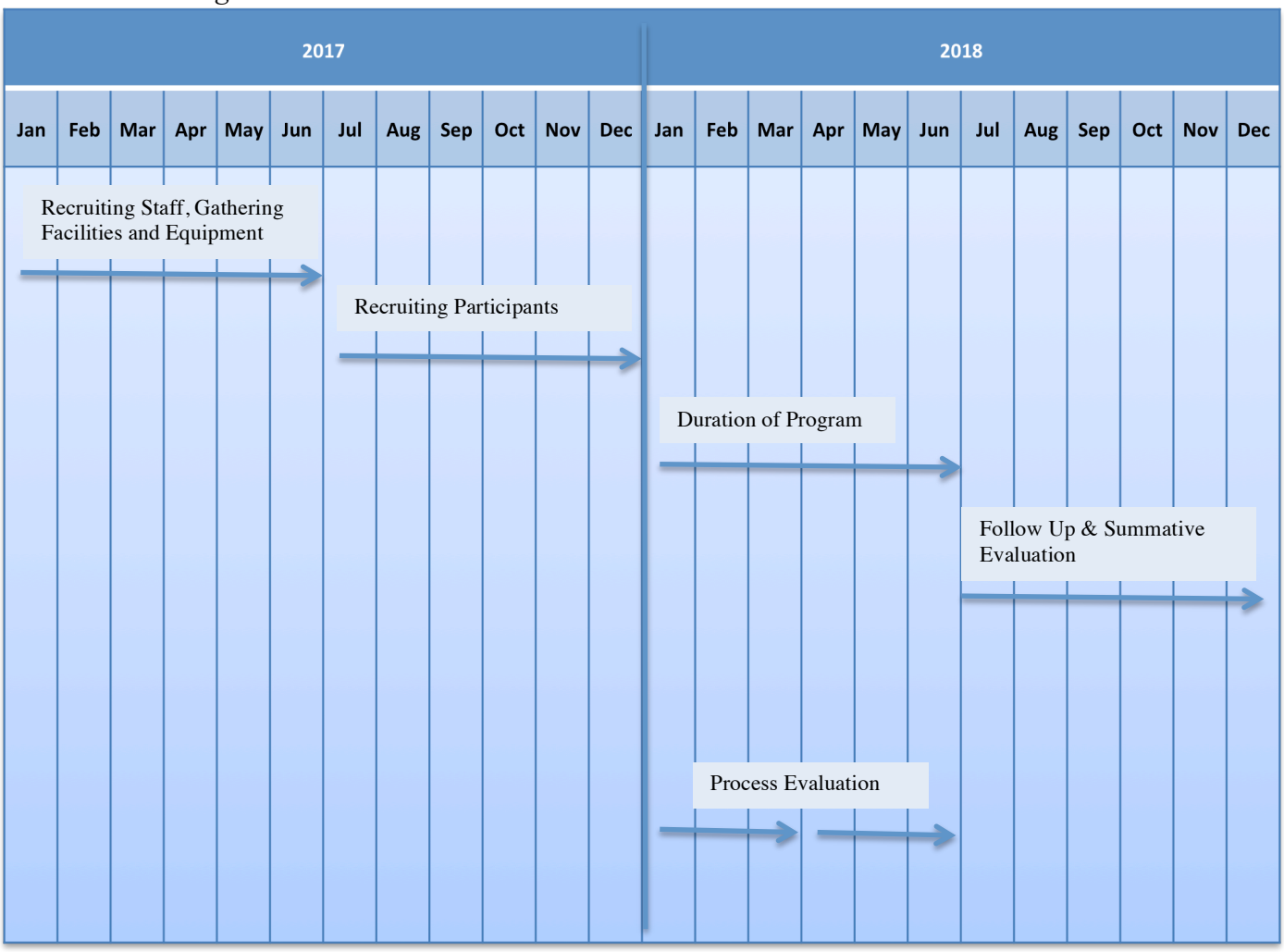
Biomarker and Anthropometric Data Collection

During the first and last focus group a nurse will be present and will take the weight of every participant and also draw his or her blood. The blood sample will be used for an HbA1c test for each person to compare if there will be a reduction or not at the end of the program. The weigh-ins will also be used to see if there will be any weight loss at the end of the program.

Pre- and Post- Intervention Surveys

A pre-intervention survey will be given at the first educational seminar and a post-intervention survey will be given at the last focus group seminar. Evidence has shown that pre- and post-intervention surveys are useful for participants and team members throughout a program (Haltiwanger, 2012). These surveys will contain similar questions in order to measure behavior, attitude, and belief changes about type two diabetes statuses of the participants over the course of the program. Six months after the program is over another post-intervention survey will be mailed out to participants for further evaluation of how they are doing after the program has finished.

Table 2: Program Timeline



EVALUATION PLAN

Evaluation is a crucial aspect that influences the success of a program. The outcome measures of the Latino Empowerment program will be evaluated throughout and after the 6-month period. The health educator, undergraduate team members, and program coordinator will have the primary responsibilities during the evaluation process.

Evaluation Questions

- Did participants lose weight/reduce their BMI?
- Did participants reduce their HbA1c levels?
- Did participants increase their knowledge of type two diabetes self-management practices and diabetes risk factors?
- Did participants increase their self-efficacy of controlling their type two diabetes health status?
- How many sessions did participants attend?

Formative Evaluation

The main barriers to interventions for the Latino populations in the United States have been identified through pilot studies, focus groups, and surveys found in the literature. For an intervention to be successful it must be culturally competent and community-based (Barrera, Toobert, Strycker, & Osuna, 2012; Millard et al., 2011). Language is a major barrier for this population, so when participants sign up for the study an initial survey will be given to determine if provided resources and conducted sessions will need to be in English, Spanish or both. In addition to language, other aspects of culture such as religion, diet and physical activity habits, and family dynamics will be taken into consideration when designing the program. The initial survey given to participants will also show the researchers what variables related to culture are the most important to them and how they feel about the program. This survey is different from the pre- and post- intervention surveys. This survey will be distributed when participants register for the program during the 6-month period before it begins. Its purpose is to ensure that the program design aligns with what participants need and want over the duration.

Community involvement is also very important to this population and will be focused on throughout the program (Castejón et al., 2013; Millard et al., 2011). During recruitment, community centers such as churches and schools will be targeted to spark participation of community members. The use of Spanish-speaking undergraduate team members will also create a sense of community for participants. Past research has shown a great deal of evidence towards supporting involvement of community health workers in similar programs (Carrasquillo et al., 2017; Prezio et al., 2013; Valen et al., 2012). Thus, the dietitian, health educator, and other staff will come from the Latino community in Athens in order to create a sense of belongingness for participants.

Process Evaluation

Throughout the program, it is important to ensure that members are learning what they are supposed to in order to be empowered to reduce their prevalence of type two diabetes risk

factors. Focus groups will be conducted to give researchers feedback about how the program is going and how the participants feel about their success. The program coordinator and health educator will have the responsibility of evaluating how well the participants are responding to the program through observing their behaviors and asking questions during the focus groups. For example, if participants are reporting negative attitudes about the physical activity educational seminar, the team members will take this into account and work to improve their attitudes by giving positive alternatives and explaining the importance of physical activity in more depth. Team members will also ask questions like "Do you feel like you are learning from the educational seminars?" or "How have your actions changed since the previous educational seminar?"

It is also crucial for participants to stay enrolled in the program from start to finish, so we aim for a retention rate of 80%. The focus groups and initial survey will also provide insight for what would cause participants to stay in or withdrawal from the program. Since this initial survey was given when participants registered for the program, questions were included to determine if they intended to complete the program. For example, "Do you understand if you successfully complete this 6-month program you will receive a $25 incentive?" and "Are you committed to attend all educational seminars (6 total) and focus group sessions (6 total) over the course of the 6-month period?" Some participants may not withdraw but may not come to every session, so it will be important for the health educator and project coordinator to ask those participants what prevented them from attending every session. If they miss one session but attend the focus group, it is the team member's responsibility to approach the participant and ask, "Why didn't you attend the previous educational seminar?" and "What barriers made it difficult for you to make to the previous educational seminar?" Even if participants make it to all of the sessions, team members will still ask about the barriers they had to face to make it to the session at every focus group. These answers should be recorded and taken into account for the future of the program.

Summative Evaluation: Impact and Outcome Measures

Goal 1. Increase participants' knowledge and attitudes about modifying type two diabetes risk factors.
The initial survey given to participants before the program begins will measure their attitudes about their ability to modify type two diabetes risk factors through Likert scale questions.

Example Questions:

- I have strong type two diabetes self-managements skills (attending regular doctors appointments, checking blood sugar regularly, taking proper medications).
- I have the resources that I need to exercise regularly.
- I feel happy about my current health status.

Following the initial survey given during the 6-month recruitment and registration period, a pre-intervention survey will be given at the first educational seminar that will measure how much participants know about type two diabetes risk factors and their ability to modify them. The same survey will be given after the program is over at the last focus group session so that team members can evaluate the success of increasing knowledge and attitudes about modifying these risk factors.

Goal 2. Increase participants' knowledge about diet and its relation to type two diabetes.
Diet is a major factor related to type two diabetes, so it will be addressed throughout the program (Kollannoor-Samuel et al., 2016). The 2015 US Dietary Guidelines are the main resource that will be used by the dietitian to educate participants about what they should and should not be consuming. The pre-intervention survey will include questions about diet to measure participants' prior knowledge of how diet is related to type two diabetes. These questions will be given in the post-intervention survey to evaluate whether or not the program was successful in educating participants about diet and how they can modify the foods they consume. During the education seminar about diet, cooking demonstrations will be given and in the following focus group and post-intervention survey program staff will evaluate whether or not participants implemented some of the skills taught in their daily lives.

Example Questions:
- How many servings of fruit should you consume in a day?
- Do you retain more nutrients steaming or boiling your vegetables?
- How many ounces is a serving of meat?
- Do you cut off excess fat when you are preparing meat?
- What does XYZ mean on a food label?

Goal 3. Increase participants' knowledge about physical activity and its relation to type two diabetes.
Similar to diet education, physical activity knowledge will be addressed throughout the program and the 2008 US Physical Activity Guidelines will be the main educational resource for participants. Knowledge will be measured at the beginning and end of the program through the pre- and post-intervention survey. The questions in the survey will determine whether or not participants learned about how their physical activity levels are related to their type two diabetes management practices.

Example Questions:
- How many minutes of aerobic activity should you get each week?
- How many minutes of strength training should you get each week?
- Does exercise improve blood glucose control and lower blood glucose levels?

Goal 4: Reduce prevalence of type two diabetes and type two diabetes risk factors in the Latino population in J.J. Harris neighborhood.
In order to evaluate whether or not there was a reduction in type two diabetes risk factors throughout the program, HbA1c levels, BMI, and level of physical activity will be assessed at the beginning and end of the program. HbA1c levels are measured through a blood test that will be given at the first and last focus group by the program nurse. If there is a reduction in HbA1c levels and BMI and an increase in physical activity, then the program completed its goals and objectives. At the first focus group, physical activity will be briefly assessed through simple skills, such as how many jumping jacks participants can complete and how many push ups they can complete. These will be measured at the end of the program as well in order to determine if their physical activity levels changed or not.

Table 2. Overview of Goal Outcome Evaluation Measurements

Goal 1. Increase participants' knowledge and attitudes about modifying type two diabetes risk factors.
Measures: (1) self efficacy and attitude questionnaire, (2) knowledge-based survey
Goal 2. Increase participants' knowledge about diet and its relation to type two diabetes.
Measures: (1) 2015 Dietary Guidelines knowledge questionnaire, (2) cooking demonstration survey
Goal 3. Increase participants' knowledge about physical activity and its relation to type two diabetes.
Measures: (1) 2008 Physical Activity Guidelines knowledge questionnaire, (2) physical activity in relation to diabetes survey
Goal 4: Reduce prevalence of type two diabetes and type two diabetes risk factors in Latino population in J.J. Harris neighborhood.
Measures: (1) HbA1c blood test, (2) BMI, (3) physical activity test (jumping jacks, push ups, etc.)

Table 3. Budget

Project Title: Latino Empowerment Type Two Diabetes Prevention Program
Period of Performance: January 2018 - June 2018

Personnel	Salary	% effort	Calendar Months	Year 1	Year 2	Total
Program Coordinator	50,000	10%	1.2	5,000	5,150	10,150
	benefits @ 50%			2,500	2,575	5,075
Program Director	65,000	10%	1.2	6,500	6,695	13,195
	benefits @ 50%			3,250	3,348	6,598
Dietician	58,000	15%	1.8	8,700	8,961	17,661
	benefits @ 50%			4,350	4,481	8,831
Health Educator	44,000	25%	3.0	11,000	11,330	22,330
	benefits @ 50%			5,500	5,665	11,165
Data Analyst	45,000	10%	1.2	4,500	4,635	9,135
	benefits @ 50%			2,250	2,318	4,568
Nurse	65,000	10%	1.2	6,500	6,695	13,195
	benefits @ 50%			3,250	3,348	6,598
Total Personnel				**63,300**	**65,199**	**128,499**
Travel				**2,664**	**2,664**	**2,664**
Domestic				2,664	2,664	
Supplies				**6,200**	**500**	**6,700**
Printing/Photocopying				500	500	
Utensils/Plates/Napkins for Snacks				1,500		
Scales				200		
HbA1c Blood Test				4,000		
Other Expenses				**19,500**	**10,000**	**29,500**
Marketing (Flyers/Posters)				500		
Initial, Pre- and Post-Intervention Survey				500		
Physical Activity Consultant				7,500		
Community Meetings and Focus Groups (Rent/Snacks)				5,000	5,000	
Additional Expenses (more blood tests, broken equipment)				5,000	5,000	
Incentive				1,000		
Total Direct Costs				**91,664**	**78,363**	**167,363**
Indirect Costs @	30%			27,499	23,509	50,209
Total Costs				**119,163**	**101,872**	**217,572**

BUDGET JUSTIFICATION

Personnel

Program Coordinator – 1.2 calendar months (10% effort) in 6 months
The program coordinator will have a Masters in Public Health and will work with the staff members and the undergraduate team members from the University of Georgia in order to successfully execute the procedure. The program coordinator will have more of a hands-on role with the staff than the program director. They will coordinate where the study will take place and evaluate how well the program is going at its duration.

Program Director – 1.2 calendar months (10% effort) in 6 months
The program director will have a Masters in Public Health and will be the overarching manager of the program. They will be tasked with making sure that everything was running smoothing and is on schedule. Their work will be more behind the scenes and have the responsibility of making sure the budget is being followed and the program is not running behind.

Dietitian – 1.8 calendar months (15% effort) in 6 months
The dietitian will be a Registered Dietitian Nutritionist and will be used to teach the participants about a healthy, wholesome diet that can reduce their HbA1c levels and risk of mortality from type two diabetes. They will teach about how to cook meals in healthier ways and what the United States guidelines are for a healthy diet.

Health Educator – 3.0 calendar months (25% effort) in 6 months
The health educator will have a Masters in Public Health and will work with the dietitian and consult with the physical activity consultant to learn about the different methods that can be used to improve diet and exercise habits. The health educator will play the biggest role in the program because they will be helping to convey the program in a culturally competent manor and attended every session.

Data Analyst – 1.2 calendar months (10% effort) in 6 months
The data analyst will have a Bachelors degree and be used at the beginning and end of the program. They will assist with preparing materials for the Institutional Review Board in the beginning and with creating a pre-intervention survey. They will be given all of the data collected from weight loss, physical activity levels, HbA1c levels, and the post-intervention survey and draw conclusions about the results.

Nurse – 1.2 calendar months (10% effort) in 6 months
The nurse will have a Bachelors of Science in Nursing and will have the task of taking blood and completing the HbA1c test at the beginning and end of the program for all of the participants.

Travel

Domestic – $2,664 per year
We request funds will be given to team members to travel to meetings from the University of Georgia's campus at a rate of $0.54 per mile. This will allow team members to drive about 166 miles a week over the 6-month period.

Supplies

Printing/Photocopying
We request $500 per year to cover printing and photocopying services. This will include printing consent documents, printouts for participants to take home, letters, and other materials for the program. Although the program is only 6 months we will need funds for this over both of the years for follow up letters and more.

Utensils/Plates/Napkins for Snacks
We request $1,500 for the 6-month period for supplies that we will use for providing snacks for the group meetings.

Scales
We request $200 for scales for the 6-month period of the program. Participants will need to be weighed throughout the program.

HbA1c Blood Test
We request $4,000 for the 6-month for the HbA1c test that will be given at the beginning and end of the program.

Other Expenses

Marketing (Flyers/Posters)
We request $500 for the 6-month program period for informational brochures, advertising of the program, and posters to promote the program to the public. Marking costs will cover specialized printing services.

Pre- and Post- Study Survey
We request $500 for the execution of a pre- and post- survey at the beginning and end of the 6-month period.

Physical Activity Consultant
We request $7,500 for a physical activity consultant for the 6-month period of the program. This person will help create ideas about how to include physical activity in participants' daily lives.

Community Meetings and Focus Groups (Rent/Snacks)
We request $5,000 for rent for community meetings and also snacks for the meetings. After the 6-month period, we will still need a place to work on the program so we are requesting rent for the 2-year period.

Additional Expenses
We request $5,000 for additional and unknown expenses that may arise over the 2-year period. This includes additional blood tests, broken equipment, additional snacks, and if follow up meetings are conducted.

Incentive
We request $1,000 for a $25 dollar incentive for 40 participants to receive once they complete the 6-month program.

Indirect Costs

We request $49,710 for indirect costs for the facility that the program will be conducted at a rate of 30% of our program costs.

MARKETING PLAN

Part 1: Inclusion and Exclusion Criteria

The Latino Empowerment Type Two Diabetes Prevention Program aims to intervene in a specific population in Athens, Georgia. The program will contain 40 Latino men over the age of 45 that currently have type two diabetes. The Latino community is disproportionately affected by type two diabetes in both Athens and in the United States overall. The program will only include men, as they tend to develop type two diabetes more often than women and are thus at a higher risk (Center For Disease Control and Prevention, 2017). All people over the age of 45 have a higher risk of developing type two diabetes, which means the tested population is at risk by age, race, and gender. Further, men must reside in Athens, Georgia to participate in this program. Women, individuals under the age of 45, those living outside of the greater Athens area, and people with intellectual and physical disabilities will be excluded from participation.

Part 2: Participant Recruitment and Retention Plan

Recruitment will launch six months before the program begins. An undergraduate team member will distribute flyers to every public school in Athens for children to take home to their parents. These flyers will be printed in English on the front and Spanish on the back to ensure all members of the target population can read and understand it. This can be very successful in recruiting participants, but some children lose papers or forget to give them to their parents. As a result, the research team will also take flyers to three main Latino churches in the community: St. Joseph Catholic Church and School, Athens Latino Mission United Methodist, and Athens Georgia Hispanic Seventh-day Adventist Company. Flyers will then be given out to some of the local doctor's offices in the area: Athens Neighborhood Health Center, Mercy Health Center, Athens Nurses Clinic, and others. Lastly, flyers will be distributed around the University of Georgia's campus and throughout e-mail of major departments for students, faculty, and staff to pass on the information or sign up if they are in the target population.

After flyers have been distributed throughout the community, follow-up calls will be made by Spanish-speaking undergraduate volunteers to the churches and doctor's offices to see if any participants have shown interest in the program. Depending on how many participants have signed up, volunteers may need to also make an in-person visit to those areas to recruit more participants.

The program is six months long, so we will maintain retention rates through this time by offering a $25 cash incentive to participants that successfully complete the program. Throughout the program, one of the tasks of the health educator and research team members conducting the focus groups will be to communicate with the participants about their attitudes toward the program and their progress. If feedback towards the program is negative, this will be taken into account and changes will be made accordingly. A pre- and post- study survey will be given at the beginning and end, but attitudes and feedback will be monitored throughout the program through focus groups and discussion with participants.

Figure 3: Marketing Flyer (front)

DO YOU HAVE TYPE 2 DIABETES?

VOLUNTEERS NEEDED!

Email – **latinoempowermentdpp@yahoo.com** OR
Call – **(706) 123-4567,** if you meet the following requirements:

- Identify as Latino, Hispanic, or Mexican-American
- Live in Athens-Clarke County
- Are over the age of 45
- Identify as male
- Have type two diabetes

$25 CASH INCENTIVE FOR COMPLETION OF 6-MONTH DIABETES PREVENTION PROGRAM

COLLEGE OF PUBLIC HEALTH
The University of Georgia

Figure 3: Marketing flyer (back)

Tiene Ud:

DIABETES, TIPO B?

Se necesitan voluntarios

Correo electrónico – **latinoempowermentdpp@yahoo.com** o
Llamar al teléfono – **(706) 123-4567,** si cumple con los siguientes requisitos:

- Se identifique como Latino, Hispano, or Mexicano-americano
- Vive en el condado de Athens-Clarke
- Mayor de los 45 años
- Se identifique como masculino
- Tiene diabetes, tipo B

INCENTIVO DE $25 EN EFECTIVO POR CUMPLIMIENTO DE SEIS MESES DEL PROGRAMA PREVENTIVO DE DIABETES

COLLEGE OF PUBLIC HEALTH
The University of Georgia

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