Simran Doshi, Abigail Cooper,

Camille Gallardo-Russell, &

Gissell Salazar

Professor Toni Espinoza

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Evaluation Study Design

Purpose of the Evaluation

Never Skip a Beat's objective is to reduce the risk of developing heart disease among adults aged 20-35. The Evaluation Plan type is Individual Behavior Change. The Outcome Data Collection will include a variety of pre- and post-program participant tests involving diet and exercise, 8-week tracking measures of diet and exercise, and track TAY intern meeting participation and knowledge gains. The data collected will provide evidence of participants' changes in diet and exercise and will be used to modify future program design in order to better aid future participants in reducing their risk for developing heart disease.

Study Design

A non-experimental evaluation design will be used for this project because no other comparison group will be utilized to compare participants who went through the program and those who did not. A limitation of using a non-experimental evaluation design is that it does not establish a cause-and-effect relationship because of the lack of variable manipulation (lack of control group). Although a non-experimental design will not allow researchers to establish a causal relationship, the design protects from potential threats to internal validity.

The non-experimental design will help establish the association between program implementation and an overall decreased risk in developing heart disease by monitoring participants' diet and exercise levels for one year. Additionally, this design was chosen to not only intervene by increasing participants' diet and exercise during their participation in the program, but to maintain these healthy habits after program completion. Never Skip a Beat's program design also makes it easy for any adult aged 20-35 in the community to join our intervention activities.

Operationalization of Concepts

Objective 1: By December 2022, 20% of the participants will reduce their body fat content by 5%.

The first objective will collect quantitative data. The impact of implementation will be collected on a total of twenty (20) pre/post-tests from participants to analyze their knowledge gained after educational sessions on healthy alternatives. In addition, the pre/post-test will allow participants to compare their knowledge from before and after the program on understanding the benefits of various food groups and their benefits. The pre/post-tests will include multiple-choice and true/false questions.

Using Excel, a tracking sheet will monitor changes in participants' diet, track participants' food choices based on the U.S. FDA's MyPlate guide, and track the exercise for every eight (8) weeks until completion. Demographics will be collected such as age, ethnicity, and gender. Additionally, the survey will include attitudinal questions in an ordinal level of measurement to measure the level of knowledge and feelings among diet change and overall satisfaction on the process of switching to healthier food alternatives. Using multiple choices, questions that will be inputted on the survey to comprehend the level of feelings are "1) Very Happy 2) Happy 3) Somewhat Happy 4) Unhappy 5) Very Unhappy. Determining levels of feelings will allow us to comprehend satisfaction levels among the content presented and changes, allowing us to understand if adjustments need to be made to accommodate them.

To make program improvements that will allow our participants to enjoy from, qualitative data will be collected. Qualitative data is open-ended questions in a nominal level of measurement that would enable the participants to express in an open-text format. A couple of questions that will be asked in the survey is, " 1) What can we do to improve the program? 2) To accommodate your needs, share with us what has interfered with your learning and participation process?". Additionally, the survey will allow participants to share satisfaction and dissatisfaction with the educational presentations and suggest training feedback. This survey will allow participants to express their feelings and understanding of the program, allowing us to gain valuable information to make changes for a better outcome to help them become successful in the "Never Skip a Beat " program.

Objective 2: By December 2022, recruit and retain at least five multi-ethnic, transition-age youth (TAY) interns from 16 to 25 years old, and train them in Cardiovascular Disease education and prevention skills.

The second objective will collect quantitative data, including an impact data collection by assessing five multi-ethnic recruited interns from 16 to 25 years old. The data classified as quantitative is annual tracking recruitment of interns using Excel. The interns will

collect data on educational visits, public speaking, and signature petitions. Learning Management Systems (LMS) will track training, engagement results/skills on preventing Cardiovascular disease, and completion dates. Additionally, tracking sheets will be used to record attended community events and recruited/trained TAY interns who continue to stay affiliated with the program for three (3) years. Post-tests will assist in monitoring presentation meeting days along with the total number of minutes/hours performed. The survey will consider language appropriateness and preferences, visual accessibility, information clarity and will be collected from 4 to 5 interns. The post-tests will consist of knowledge questions because interns will obtain implicit knowledge by adding True/False and multiple-choice questions on a nominal scale.

Pilot Testing Procedures

In terms of pilot testing our evaluation study design, we will use our volunteers, interns, and program coordinators to plan the activities. Once we are able to implement our activities among our staff, we can create a report sheet about the mock results and verify it with the experts in our field. These experts would be cardiologists, cardiothoracic surgeons, and other public health officials who have an educational emphasis on cardiovascular health. Information will be elicited electronically via email and surveys will also be completed via services like Qualtrics. From the community, we would like to know their attitudes and beliefs towards the proposed lifestyle changes in the scope of work.

Process Evaluation – Monitoring of Program Implementation.

Rationale for Choice of Statistical Techniques

Objective 1: By December 2022, 20% of the participants will reduce their body fat content by 5%.

Variables for each objective will vary depending on the level of measurement. For the first objective, we will use various levels of measurements such as pre- and post-test and tracking sheets. Never Skip a Beat's use of level of measurement through pre- and post-tests helps aid the facilitation of knowledge gain through use of the statistics that we will be using to measure by bar graphs. With bar graphs it gives the ability to facilitate and compare the percentages of knowledge gained within the program from participants. For example, one of the pre-and post- test results measures will be used to assess whether participants gained knowledge on the various food groups, their benefits and food portion sizes. After both the pre-and post-test assessment will be collected, a bar graph will be used to assess the percentages of participants and their knowledge gained about the topic of nutrition for that sector of the program. With a bar graph it allows for the evaluator to assess knowledge gain through visual display of data.

Similar to pre- and post-tests, tracking sheets allow for health educator evaluators to monitor progress, however, tracking sheets allow for closer measurement of these tracking measurements. Tracking sheets allow for measurement and monitoring of participants on a more frequent basis, collecting data more often. For example, tracking sheets used in Objective 1 will be used every 8 weeks, allowing for consistent measurement of progress through this type of tracking measure. Frequency tables can be used to display the nominal data collected from participants every 8 weeks to assess changes in participant's knowledge and behavior throughout the program, measuring program's effectiveness.

Objective 2: By December 2022, recruit and retain at least 5 multi-ethnic, transition age youth (TAY) interns from 16 to 25 years old, and train them in Cardiovascular Disease education and prevention skills.

Similar to Objective 2, levels of measurement for assessing if by December 2022, Never Skip a Beat is able to recruit and retain at least 5 multi-ethnic, transition age youth (TAY) interns from 16 to 25 years old, and train them in Cardiovascular disease education and prevention skills will vary. Never Skip a Beat will report the number of community events attended and tracking sheet results through nominal data. By assessing and evaluating the frequency of community events attended, how many interns were recruited and trained, how many interns would continue with the program and how many are actually present to equate if the target population is receiving the information, can all be measured by frequency tables. Frequency tables will be able to easily display nominal data collected from every 6 months for 3 years in regards to how many TAY interns are recruited and trained, record how many trained TAY interns chose to continue to stay affiliated with the program and are willing to be teachers, and how many participants were attending to equate if the target population is met.

Similar to how frequency tables created easier access to evaluating community events attended by participants to assess if the objective is met, tracking sheets allows for the nominal data that is collected through 5 TAY interns, assessing their performance among data collection, educational visits, public speaking, letter writing and petition signature gathering to be assessed easier through pie charts. With the nominal data collected from tracking sheets allow for easier assessment through visualization.

Objective 1: By December 2022, 20% of the participants will reduce their body fat content by 5%.

The dependent variable that is being measured within our objective is body fat content. The dependent variable of body fat content will be measured through taking participants biometric measurements such as weight, height, BMI, resting heart rate, which can all contribute to participant body fat content before collecting the resources on how to

improve the dependent variable. The participants' post-program completion will be collecting their body fat content to assess if knowledge and resources have caused an improved percentage. The independent variable within the first objective would be the various activities participants complete all in result in an attempt to achieve goals and objectives set. An example of an independent variable within this objective is creating powerpoint presentations on macronutrients (fats, carbohydrates, proteins, etc.), food labels, recommended portion sizes, and benefits of whole foods. The level of measurement that goes along with this is the tracking sheets that starts at the first 8 weeks of the program, and follows every 8 weeks for the participant until program completion to measure and monitor changes in participicant's diet. Chi- square should be appropriate when measuring nominal data. Since program staff and evaluators will be collecting nominal data from frequency tables collected through tracking sheets submitted about participants' biometric measurements and knowledge gained about a healthy diet.

Objective #2: By December 2022, recruit and retain at least 5 multi-ethic, transition age youth (TAY) interns from 16 to 25 years old, and train them in Cardiovascular disease education and prevention skills.

The dependent variable within objective #2 is if Never Skip a Beat can retain at least 5 multi ethnic TAY interns who can then be able to use and apply the prevention skills and education learned. The dependent variable can be measured through tracking sheets that are used to assess the annual recruitment of 5 TAY interns performance among data collection, educational visits, public speaking, letter writing, and petition signature gathering. Although with our choice of non-experimental evaluation design, the independent variable can vary, but within objective #2 It can be seen as the community events, powerpoint presentations and the overall information presented to the interns, where if the information was changed or lacked substance, then the results and the number of interns would differ. Chi-squared tests would be appropriate for measuring the nominal data collected from the community event participation report through the frequencies in the tables.

Reporting Evaluation Findings

The evaluation findings from tracking sheets, pre- and post- test survey results and community events attendance summarized will all be assembled into a report. Outcome and impact data will be collected from program staff and trained TAY interns, to allow for reports to be evaluated by program evaluators and health educators to understand and track the information retained by participants. Impact data will be collected through the pre- and post- survey results collected by program staff to then be submitted for program evaluators to measure if the program objectives were met. Pre- and post- survey results

will be collected at the start and end of the program to measure for progress. For outcome and impact data, program staff will collect nominal data from community events attended by participants every 6 months from the beginning of the program until 3 years after to measure progression of information received, interns recruited and trained and the progress made. Another source of outcome data, will be every 3 months for 3 years, program staff and evaluators will check up on participants to see if they have made significant changes to health behavior, based on the program resources and information received. The report should display the progression that will be evaluated by program evaluators, staff and interns in regards to the nominal data collected about achieving the objectives proposed.