

# Evaluation Findings of Culturally Competent Nutrition Trainings: A Case Study Using the Success Case Method

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## Abstract

The Success Case Method (SCM) technique is a relatively quick and easy method of verifying implementation success. Using the SCM technique, this study evaluates culturally competent health and nutrition education trainings on diabetes type II control directed to (50) male Latinos/Hispanics living in Atlanta, Georgia, United States. In order to identify the most (and least) successful participants, a brief 5-questions survey was provided four (4) weeks after the completion of the training. Five (5) factors were selected as measures of success: (1) Initiation, (2) Continuity, (3) Self-Assessment, (4) Knowledge Sharing, and (5) Applicability to which participants had to determine on a scale of 1 to 5 their level of success. A random sample of five (5) of most successful and five (5) least successful participants were selected for interviews with the purpose of getting a deeper sense of the participants experience and determine the exact nature and extent of their success. Results revealed that most participants achieved success as a result of the training, with a higher number of "most successful" cases in initiation, continuity, self-assessment, and knowledge sharing. Applicability was not successfully achieved by a large number of participants, for example, how physical activity is important not only for diabetes type II control but also for high blood pressure control. In-depth interviews revealed that language, culture, credentials, clarification and family support are benefits for success, while, lack of time, income, supplies, lack of family support, and education are barriers for success. The results demonstrate the need for topic specific trainings that provide knowledge and skills for this community on chronic disease prevention and health promotion; the importance of social assistance in order to address barriers and the influence of family support in the Latino men health status and decision-making.

**Keywords:** Training evaluation; Success case method; Training transfer; Nutrition; Culturally competent health education; Male Latinos/ Hispanics; Diabetes type II control; Health and nutrition trainings

## Introduction

To identify the effectiveness of a training and provide information for improvement is one of the major concerns in training development and implementation. The Success Case Method (SCM), developed by Robert O. Brinkerhoff, is a quick and simple process to find out how well some organizational initiative is working, which interrelates to the success in transfer of training. The transfer of training occurs when the person applies what they have learned during training in a specific setting [1]. A key factor of the transfer of training is implementation intentions, which some participants will form sooner and at a greater degree after the training. These intentions can be influenced by factors that contributed to training success, including motivation, need for cognition, pre-existing ability, and implicit theories about intelligence [2].

Culture is believed to also influence training transfer success. Although the Latino/ Hispanic population is constantly increasing in the US and its health concerns are being studied, there is little research about the Latino men health status and decision-making, which is thought to be closely related to cultural factors. The importance of a culturally competent health education was key to the development of the training sessions and it is believed to be also of importance when designing the surveys, interviews and other data collection mechanisms used for the evaluation study, as well as for achieving the intended results.

## Literature Review

### The success case method

The Success Case Method (SCM) is designed to confront and leverage

how successful an innovation is, a relatively quick and easy method of verifying what is working and what is not, proving information on both ends which can be used to make changes and/ or improvements in a timely manner [3]. A SCM study is composed of a simple structure in two steps. The first step entails finding potential "success cases" which in this study will be accomplished by administering a survey to the training participants. The second step entails interviewing a few identified "most successful" and a few "least successful" cases to document in detail the nature of the achieved success. The identified "least successful" cases are of great importance to the improvement of the program [3], since those experiences may be the starting point for clear and concise improvement strategies.

### Training transfer

Literature has identified organizations that have been diligently incorporating into their training programs strategies to improve and achieve the transfer of training; as well as activities that can facilitate transfer of training before training begins (pre-training environment), during the actual training program, and after a training program (post-training work environment) [4]. Baldwin and Ford's theoretical framework of training transfer distinguishes between different factors affecting the process of training transfer: (1) training inputs (trainee

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characteristics, training design, and work environment), (2) training outputs (acquisition of knowledge and skills during training), and (3) conditions of transfer (generalization of knowledge and skills acquired in training and the maintenance of that learning over time) [1]. Participants who sooner and to a greater extent implement the knowledge learned from the training activities are said to have formed implementation intentions which facilitate initiation, basically helping people get started. Implementation intentions - a strategic process aimed at automating behavior in the service of goal pursuit, also promotes the initiation of goal-directed action without the necessity of awareness [1].

### Culture and training transfer success

Culture is an important societal factor determining the values, beliefs, and behaviors of an individual or group [5]. Cultural competence is a complex know-act affecting the cognitive, emotional, behavioral, and environmental dimensions of a person; involving knowledge, skills, and that leads to a culturally effective action [6]. Cultural competence is necessary for providing quality care and is an ongoing process that involves accepting and respecting differences, while not letting personal beliefs have undue influence on those whose worldview is different [7]. Individual differences in intrinsic motivation- centered within the person, driven by internal rewards, can positively or negatively play a role in training and transfer [2]. Moreover, goal performance and well-being can be predicted differently for people in individualistic and collectivistic cultures [8]. Culture can potentially influence the pursuit of personal goals; individuals can be autonomous when pursuing goals if taking in consideration others' expectations.

The Latino / Hispanic community is potentially a complex group due to its significant variations in racial and ethnic heritages. Structural factors such as the lack of culturally and linguistically competent health programs and services have been identified as barriers to Latino/ Hispanic health decision making and healthcare use [9]. Thus, the importance of a culturally competent health education that increases the extent to which individuals are well informed about health care matters such as nutrition, sanitation, and the availability of health care resources [10] integrating cultural safety, considering the perception of the recipient and taking in consideration the outcome of cultural competence. Researchers have explored empowering minorities as to one approach to achieving positive healthcare outcomes [11]. By creating, embracing and maintaining their identity, minorities can keep their culture and beliefs cohesive and consistent which can positively impact decision making and achieving goals.

### Case Study Methodology

#### Description

The case study highlighted in this article was conducted to assess the impact of culturally competent health and nutrition education trainings on diabetes type II control organized by Nutrición y Salud LLC, directed to male Latinos/ Hispanics living in Atlanta, Georgia. United States. The five-week long education trainings were offered weekly to 50 volunteer participants that had been diagnosed with diabetes type II by their primary physician for over a year. Other than receiving diabetes prescription medication, the participants were not engaging in any other specific health activity intended to support diabetes type II control. Three other health factors were taken in consideration: height, weight, and Body Mass Index (BMI), which were measured at the beginning of each session. After each session, the participants were asked to implement the lessons learned at home, individually monitor

blood glucose levels and record results in a tracking sheet provided. Participants were not provided any contingency or financial support during the training period, and/ or evaluation process.

#### Recruitment

Culturally competent flyers were used as advertising targeting Latino/ Hispanic men and distributed in three (3) Catholic churches located in the city of Atlanta, which have Spanish mass services and high Latino/ Hispanic attendance. The advertising also targeted women to recruit their male spouses/partners.

#### Sample characteristics

Although 64 participants volunteered, 50 participants were selected to attend the five-week long education training, based on the following criteria:

1. Male Latino/ Hispanic
2. Age range 40-65
3. Resident of the city of Atlanta
4. Diabetes type II diagnosis by their primary physician for more than one year
5. Receiving diabetes prescription medication
6. Not engaging in any other specific health activity intended to support diabetes type II control (ex. Exercise, diet)

The study sample was composed of 50 Hispanic males, primarily of Mexican descent (62%), living in the city of Atlanta. The majority of the participants were in the 56-60 years old age range (30%) with a high school degree or below (88%) and not proficient in English (94%). Moreover, the large majority of the participants (82%) had an annual household income of \$ 25,000 or less. The demographic characteristics of the study participants are listed below in Table 1.

Variable	Frequency N=50	Percent N=50
<b>Age</b>		
40-45	6	12%
46-50	12	24%
51-55	9	18%
56-60	15	30%
61-65	8	16%
<b>Education</b>		
High School graduation or below	44	88%
Some college, no degree	5	10%
College degree or above	1	2%
<b>Country</b>		
Mexico	31	62%
Guatemala	10	20%
El Salvador	7	14%
Honduras	2	4%
<b>English Proficient</b>		
Yes	3	6%
No	47	94%
<b>Household Income</b>		
<\$25,000	41	82%
\$25,000 - \$49,999	9	18%
>\$49,999	0	0%

**Table 1:** Demographic characteristics of study participants.

## Nutrition training

During the selection process, participants were verbally asked about their knowledge on diabetes type II prevention and control. Those that declared to have no knowledge were selected to participate and to attend a nutrition training every week. Participants were not required to complete a pre-test or training phase test to evaluate their existing knowledge. The sessions took place Saturday mornings and lasted 1 to 2 hours, depending on the topic discussed. Participants were sent reminders via text message of the date and time of the upcoming session.

Latino / Hispanic health professionals with culturally competent skills presented the education-training sessions in Spanish. All handouts and presentation materials were translated to Spanish and the sessions included a formal presentation followed by an interactive activity. As family involvement is a crucial, the participants were allowed to bring their spouses and family members to the sessions as guest participants. Participants were allowed enough time to ask questions and engage in group discussions.

Participants were asked to implement the knowledge learned at home and to measure glucose levels daily. A tracking sheet was provided to enter blood glucose levels after measurement. Participants were to bring the tracking sheet to each session, for staff to enter data into the statistical software.

## Results

Results of the case study included a stabilization and/or decline in glucose levels for the participants who reported to have continued their prescribed medications and implemented the knowledge learned in the education trainings. Weight loss was also noted for the participants who

were intentionally interested in losing weight because of the program. The results of the study thus conclude that culturally competent health and nutrition education trainings on diabetes type II control can make a significant impact in the health and of male Latino/ Hispanics.

## Evaluation Methodology

### Evaluation forms

Evaluation forms were provided for the participants to complete by the end of each session and participants were asked to rate the sessions 0-10 points based on the professionalism of the presenters, relevancy of the information presented and overall quality of the presentation. A summary of the session topics, description, duration, attendees and rating of the five-week education training is provided below in Table 2.

### Survey

A brief 5-questions survey was provided to all participants to complete four (4) weeks after the completion of the training. The purpose of this survey was to identify the program participants who were the most (and least) successful by determining training transfer: to what extent participants were using the knowledge learned, methods and skills provided during training and assessing their accomplishments.

Participants were provided the survey via email. Reminders were sent periodically via email and phone calls. Five (5) factors were selected as measures to demonstrate success and accomplishment: (1) Initiation, (2) Continuity, (3) Self-Assessment, (4) Knowledge Sharing, and (5) Applicability. These factors were addressed independently by each of the survey questions, to which participants had to determine

Week	Topic	Description	Duration	Attendees	Rating
1	What is Diabetes Type II and How to Measure Blood Sugar at Home	Presentation provided an overview of the condition and encouraged to measure glucose levels as directed by their physician. Examples of blood sugar measuring devices were used for demonstrational purposes.	2 h	47	9.5
2	What is Sugar and How Much Should We Consume	Presentation provided information on the maximum amount of added sugars a person should eat in a day. Spoons of different sizes, and measuring cups were used in the presentation and available for participants to practice measuring sugar.	1 h	50	10
3	How to Read a Food Label	Presentation demonstrated how to read a food label correctly. Enlarged printed FDA food label examples were provided as visual materials. Varieties of products were available for the participants to test and practice their knowledge on reading food labels.	1 h	44	9.8
4	How Choose the Right Ingredients and Prepare Food in a Healthy Way	Presentation demonstrated how to properly choose ingredients and prepare healthy meals. The presentation was followed by a 30 minutes cooking class provided by a professional chef, demonstrating adequate use sugar, salt, fats and appropriate serving size.	2 h	47	10
5	Physical Exercise	Presentation highlighted the importance of physical activity to control Diabetes Type II, followed by a 30 minutes Zumba class delivered by a professional trainer.	1 h	49	10

Table 2: Five-week education training summary and participant rating.

Factor for Success	Definition and Example
Initiation	Immediate application of knowledge gained in training. Example: Participant started measuring blood glucose levels independently at home after learning how to use the blood glucose measuring device.
Continuity	Maintenance of the desired behavior over time. Example: Participant has continued paying close attention and reading food labels when grocery shopping to avoid food products with high sugar content.
Self-Assessment	Determining oneself actions and attitudes, in particular, towards the ability to achieve and maintain the desired outcome. Example: Participant strongly believes in his/her ability to maintain the physical exercise routine and understands the importance of this activity.
Knowledge Sharing	Knowledge and skills acquired are exchanged among friends, family members, others. Example: Participant shares knowledge and skills learned to prepare healthy meals at home with family members and encourages them to interact and learn.
Applicability	Application of the system used to acquire the knowledge and skills in other settings. Example: Participant is able to apply the acquired knowledge about the importance of physical activity not only for diabetes type II control but to other life settings such to control his/ her high blood pressure.

Table 3: Factors for success, definitions and examples.

on a scale of 1 to 5 their level of success. A summary of the factors for success is provided below in Table 3.

The five (5) point numerical / narrative rating scale with ratings, definitions and category assignment for each point value on the scale is provided below in Table 4. After survey data was analyzed, an average score for each participant (on a scale of 1 to 5) was provided. Most successful participants were those with an average score of 3 or above. The survey data analysis also provided the average (on a scale of 1 to 5) for each factor of success in order to determine the factors with the highest level of success.

## Interviews

Survey respondents were sorted into most and least successful after the survey results were quantified. A random sample of five (5) of most successful and five (5) least successful participants were selected for interviews. The interviews were conducted via telephone and lasted 20-30 minutes; with the purpose of getting a deeper sense of the participants experience and determine the exact nature and extent of their success. Interviews were recorded, transcribed and translated to English. Each in-depth interview was analyzed through content analysis. The most common key words and phrases were identified and organized based on significance.

## Results

Evaluation forms provided for the participants to complete by the end of each session satisfactorily demonstrated the quality of the training sessions with an average score of 9.86. The brief 5-questions survey as successfully completed by 43 of the 50 participants, resulting in a response rate of 86%. Most participants (97.67%) were able to successfully and immediately apply the

knowledge gained in training in their daily activities, 90.69% were able to maintain the desired behavior over time, 93.02% were able self-assess their ability to achieve and maintain the desired outcome. Knowledge sharing was successfully achieved by 86.04% of the participants. Only 55.81% of the participants were able to apply in other health settings, the knowledge and skills acquired; for example, the importance of physical activity not only for diabetes type II control but also for high blood pressure control. The highest total average score was achieved during initiation (4.72), while the lowest as during applicability (2.81). A summary of the results is provided in Table 5.

In-depth interviews were conducted to randomly-selected most and least successful participants with the purpose of getting a deeper sense of their experience and determine the exact nature and extent of their success. Most successful participants recognized the benefits of language, culture, credentials, clarification and family support to their success. The lack of time, income, supplies, lack of family support, and education were among the barriers for success. Tables 6 and 7 below illustrate interviews key benefits and barriers (in order of importance) pertaining to the most and least successful participants with a brief description of each.

## Conclusion

This study evaluates the appropriateness of the training design, the efficiency based on training transfer and how to use the experience from this training to improve the design of future trainings. Evaluation findings revealed that the majority of the study participants were able to successfully achieve the initiation, continuity, self-assessment and knowledge sharing while not successfully achieving the applicability of the knowledge and skills acquired in other health settings; for example,

Scale	Rating	Definition	Category
5	Excellent	Extremely effective performance	Most Successful
4	Very Good	More than adequate for effective performance	
3	Good	adequate for effective performance	
2	Weak	Insufficient for performance requirements	Least Successful
1	Poor	Significantly below performance requirements	

**Table 4:** Five (5) point numerical / narrative rating scale with ratings, definitions and category assignment.

Factor for Success	Most successful			Least Successful			Total Average Score (on a scale of 1 to 5)
	Number N=43	Percent	Average Score (on a scale of 1 to 5)	Number N=43	Percent	Average Score (on a scale of 1 to 5)	
Initiation	42	97.67%	4.79	1	2.33%	2	4.72
Continuity	39	90.69%	4.54	4	9.31%	2	4.3
Self-assessment	40	93.02%	4.4	3	6.98%	2	4.23
Knowledge Sharing	37	86.04%	4.62	6	13.96%	2	4.26
Applicability	24	55.81%	3.46	19	44.19%	2	2.81

**Table 5:** Survey results factors with the highest and lowest levels of success.

Benefit	Description
1. Language	Participant was able to understand the information presented since it was delivered in their native language.
2. Culture	Participant was able to relate to cultural similarities such as food and family traditions.
3. Credentials	Participant was more confident about the information presented since it was delivered by professionals in the field of nutrition and exercise science.
4. Clarification	Participant was able to ask questions during the sessions and follow up with professionals if additional questions.
5. Family support	Participant was confident and received family support throughout the duration of the study and reinforcement from family after.

**Table 6:** Interview key benefits for most successful participants.

Barrier	Description
1. Lack of time	Participants' work schedules (or having multiple jobs) did not allow for adequate continuity of acquired behavior.
2. Income/supplies	Participants' low income did not allow for sufficient supplies and healthy foods to be obtained.
3. Lack of family support	Participants needed family support, someone to be providing reinforcement and reminders in order to maintain the acquired behavior over time.
4. Educational level	Participant did not have sufficient educational background to understand some words and concepts explained in the sessions.
5. Recurrence	Participant would need to attend some of the sessions more than once to fully understand concepts explained.

**Table 7:** Interview key barriers for least successful participants.

how physical activity is important not only for diabetes type II control but also for high blood pressure control. In-depth interviews revealed that language, culture, credentials, clarification and family support are benefits for success, while, lack of time, income, supplies, lack of family support, and education are barriers for success. Periodic monitoring is to be implemented in order to better evaluate the program. These results demonstrate the need for topic specific trainings that provide knowledge and skills for this community on chronic disease prevention and health promotion, and highlight the importance of providing social assistance in order to address barriers.

### Limitations

This evaluation study had limitations that should be acknowledged. The SC Method is a useful tool to help get the information necessary for the evaluation of newly established initiatives. Other evaluation approaches are more comprehensive and could have been used for the purpose of this study.

The study sample was composed of Hispanic males, primarily of Mexican descent, living in the city of Atlanta, which may limit the generalizability of the findings to Hispanics in other regions of the United States. Furthermore, the study sample was predominantly foreign-born, and Spanish-speaking.

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