

Southern California CSU DNP Consortium

California State University, Fullerton
California State University, Long Beach
California State University, Los Angeles

A CHANGE TOOL FOR LIFESTYLE MODIFICATIONS IN OBESE AND
OVERWEIGHT WOMEN

A DOCTORAL PROJECT

Submitted in Partial Fulfillment of the Requirements

For the degree of

DOCTOR OF NURSING PRACTICE

By

Patricia Aguinaldo

Doctoral Project Committee Approval:

Paula Vuckovich, PhD, RN, PMHCNS-BC, Project Chair
Donna Scemons, PhD, RN, FNP-BC, Committee Member

May 2016

Copyright Patricia Aguinaldo 2016 ©

ABSTRACT

The quality improvement project, “A Change Tool for Lifestyle Modifications in Obese and Overweight Women” by a certified family practice nurse practitioner, utilizes a group of interventions as a “tool bundle” to influence change in obese and overweight women. It is well known that obesity is a risk factor for many health problems and that overweight patients arrive to care settings in various stages of readiness for change (Transtheoretical Model). The tools included a cost-benefit decisional balance analysis form to assess for initial stage of change (for patients) along with motivational interviewing prompts for each stage of change (for practitioners). Also in the bundle were lists of community and Internet resources focused on both exercise and diet and tailored to each stage of change. There was also a planning form to be used by patients.

The tool bundle was piloted on 17 obese/overweight Hispanic women in a single clinic setting. Women received monthly calls to assess their behaviors related to weight loss. Initially, most women (71%) were in contemplation phase of weight loss. Over two to six months, 14 women’s reported behaviors indicated that they had progressed one level in their readiness to change.

Nurse practitioners wish to help their clients lose weight but have limited time for interventions. This paper describes a pilot project that successfully tested a theoretically-based (Transtheoretical Model) and evidence-based (motivational interviewing) intervention suitable for a busy outpatient practice.

TABLE OF CONTENTS

ABSTRACT.....	iii
LIST OF TABLES	vi
LIST OF FIGURES	vii
ACKNOWLEDGMENTS	viii
BACKGROUND	1
Problem Statement.....	2
Purpose Statement and Projective Objectives	3
Supporting Framework	5
Project Application of Conceptual Framework	10
REVIEW OF LITERATURE	12
Transtheoretical Model and Healthy Lifestyle Modifications.....	13
Motivational Interviewing	15
METHODS	17
Sample and Setting	17
Project Procedure.....	18
Data Collection	21
Data Analysis and Evaluation.....	22
Ethical Considerations	22
RESULTS	23
Stages of Change	23
Post-Test Questionnaire.....	25
Journal Entries	25
DISCUSSION	27
Implementation	27
Limitations	29

Implications for Practice	29
Future Research	30
REFERENCES	31
APPENDIX A: PUBLISHABLE MANUSCRIPT	34
APPENDIX B: PROJECT FORMS AND TOOLS.....	54
Post-test Questionnaire	54
Post-test Questionnaire in Spanish	55
Poster Box Flyer	56
Poster Box Flyer in Spanish	57
Stage-Based Motivational Interviewing Prompts	58
Decisional Balance “Pros/Cons” Tool.....	59
Decisional Balance “Pros/Cons” Tool in Spanish.....	60
Chart Tracker for Follow-up.....	61
Patient Planner Assistant	62
Patient Planner Assistant in Spanish.....	63
Informed Consent Form.....	64
Informed Consent Form in Spanish.....	65

LIST OF TABLES

<u>Table</u>	<u>Page</u>
1. Demographics of sample	23
2. Results of post-test questionnaire	25

LIST OF FIGURES

<u>Figure</u>	<u>Page</u>
1. Change Tool model.....	11
2. Stage of change at follow-up visits.....	24

ACKNOWLEDGMENTS

I would like to acknowledge my parents for their continued support in my goals, especially to my dad who always “has my back.” I would also like to thank my grandparents who have taught me so much in this process. I would also like to acknowledge my siblings, family, and friends who have given me constant support through this project. To my classmates and sister group, I would have not lasted a day without you all. I want to thank Dr. Scemons for the support in the completion of this project. Lastly but not least, I want to thank Dr. Vuckovich for teaching me so much and supporting me through the past few years.

BACKGROUND

In underserved areas, the volume of patients seen by a practitioner is high. There is a lot of pressure to be efficient and make the most of the valuable and short periods of time to spend with patients. Many patients come in repeatedly asking the same questions about lifestyle changes to lose weight, showing that they are in the constant stage of contemplation (Prochaska, Norcross, & DiClemente, 1994). For weight loss, many patients are thinking about changing their behaviors, but actually need help moving to the next stage of change, which is planning for lifestyle modification.

One of our world's growing health problems is obesity. Obesity is defined "as excessive or abnormal fat accumulation" and body mass index (BMI) of greater than 30; the category of overweight is defined by a BMI of greater than 25 (World Health Organization [WHO], 2015a). This problem affects more than 1.9 billion adults of the world's population (WHO, 2015a). Being obese and overweight is a preventable major risk factor for noncommunicable diseases, which are mainly cardiovascular diseases, diabetes, cancers, and musculoskeletal disorders (WHO, 2015b). Premature mortality rates from these diseases are on the rise as each year passes (WHO, 2015b). One of the target aims of the WHO is to stop the rise of obesity globally (WHO, 2015c).

Nationally, the United States Office of Disease Prevention and Health Promotion (ODPHP) has updated its data and objectives for "Healthy People 2020" (ODPHP, 2014). One of the main focuses, extending from the Department of Health and Human Services' Healthy People 2010 is to address the challenge of obesity and overweight (Centers for Disease Control and Prevention [CDC], 2011). In a final review of results from Healthy People 2010, no improvement was seen in the health disparities by race and ethnicity, and

they continue to persist across the United States (CDC, 2013). Comparing the results of Healthy People 2010 and the current goals of Healthy People 2020, physical activity and nutrition continue to be emphasized in the national initiatives.

In a southeast Los Angeles community, the challenge of decreasing obesity and related non-communicable diseases is distressing. Health disparities weigh heavily in a total population of 58,879 in a land area of 3.01 square miles (United States Census Bureau, 2014). In this largely Hispanic population, the struggle with obesity and weight management is seen through the lifespan from infants to older adults. In addition, more women than men are affected by obesity in the national population (ODPHP, 2014).

In a local family practice clinic in this area, four out of five female patients are overweight or obese, with a BMI greater than 25. With the Affordable Care Act in place in California, the influx of the patients has increased in the already busy family practice. New patients accessing health care are already affected by this preexisting health risk.

Problem Statement

In a population of overweight and obese women, there is a need for lasting change in lifestyle behaviors towards weight loss with the implementation of feasible interventions by practitioners in a fast-paced, high volume clinic. These feasible interventions are needed during short visits to assist patients in making lasting lifestyle modifications. Currently, the practitioners in the project clinic have had limited success in assisting their patients with their weight loss goals due to limited time for interventions in one visit.

Purpose Statement and Project Objectives

The purpose of this project is to aid practitioners initiate lasting change in lifestyle behaviors towards weight loss with the implementation of a tool bundle of feasible interventions in a population of obese and overweight women served by a fast paced clinic.

Project Objectives

The objectives for the project were to develop a tool bundle with feasible interventions for a fast-paced, high volume clinic. This tool bundle includes provision of a resource list tailored to each stage of change, according to lifestyle behavior change, to be available for patients. The tool bundle included counseling using motivational interviewing for patients towards progression through stages of change. Lastly, the objective of this project was to evaluate the usefulness of the tool bundle.

The goal of the project is to help practitioners in high volume clinics assist overweight and obese patients change from contemplating weight loss to preparing to engage in activities for weight loss through use of a tool bundle. For this project, use of the term “tool bundle” refers to a group of interventions that works together towards a common goal for improved patient outcomes (Institute for Health Care Improvement, 2015). The conceptual framework for the project is the Transtheoretical Model (TTM) developed in 1977. This model is applicable due its relationship with behavioral change and focus on self-efficacy. According to this model, there are five stages of change, which include the following: Precontemplation, Contemplation, Preparation, Action, and Maintenance (Prochaska et al., 1994). Each stage includes stage applicable interventions. In addition to the interventions proposed by the TTM, a major intervention

in this tool bundle to help clients make needed changes is motivational interviewing, a psychologically developed counseling approach, used to initiate changes in behavior (Hamera, 2014).

Significance of the Project

The significance of the project is that practitioners need help to initiate lasting change in a short visit, and if the tool bundle is successful in assisting providers to help clients to change behaviors, the changes will lead to better patient outcomes in weight loss. There was no tool bundle currently in the literature combining these interventions for weight loss in time-limited visits to simply adopt so there was a need to develop one.

There is moderate evidence on motivational interviewing being effective in change initiatives, such as smoking cessation and substance abuse (Lindson-Hawley, Thompson, & Begh, 2015; Lundahl et al., 2013). With this evidence, it was predicted that the principles from both framework and intervention would also be useful for lifestyle modifications. The project emphasizes the importance of lifestyle modifications through healthy dietary changes and increased physical activity to address obesity in women.

In an analysis of three randomized control studies of 4178 adults, TTM-tailored dietary interventions proved to be an adequate predictor of dietary behavioral changes over time (Greene et al., 2013). Stage-based consultations for physical activity using the TTM and motivational interviewing (MI) show increased levels of physical activity (Jackson, Asimakopoulou, & Scammell, 2007).

Although the literature is limited regarding the use of these combined methods specifically in overweight and obese women needing short interventions in a busy

primary care clinic current evidence suggests that such a combination could be very beneficial for this population. One study shows how a home-based, stage-based multiple behavior intervention can improve physical activity, healthy eating, and management of emotional distress in overweight and obese adults (Johnson et al., 2008). Another study led by Prochaska confirms that using motivational interviewing and an online-based TTM feedback model for employees can produce desired results in physical activity and stress reduction (Prochaska et al, 2008). This project builds a tool to combine these best evidenced-based practices to aid obese and overweight women through lasting change in lifestyle modifications for weight loss. If successful in making these modifications the women will have an opportunity for ongoing health improvement.

Supporting Framework

In a clinical project, utilizing an appropriate theory or conceptual framework acts as a guide for the change. Framing project ideas with a studied theory assists in organization (Bonnell & Smith, 2014). As stated by Bonnell and Smith (2014), this framework should provide useful structural boundaries, conceptual definitions, and consistent and efficient instruments. Choosing the appropriate framework gives direction to the clinical project (Bonnell & Smith, 2014). The theoretical framework applicable to this practice change project is the “Transtheoretical Model of Change” (Prochaska, Norcross, & Diclemente, 1994), with use of the principles in “Motivational Interviewing (Miller & Rollnick, 2002).”

Transtheoretical Model of Change

James Prochaska and Carlo Diclemente began development of the Transtheoretical Model (TTM) of Change in 1977 and continued to refine it through the

1980s (Hamera, 2014). The psychologists' original work was involved in the way people change behaviors on their own, sans psychotherapy (Prochaska, Norcross, & Diclemente, 1994). The transtheoretical approach is appropriately named as it combines the significant techniques and primary processes of change used by principal psychotherapy theories (Prochaska et al., 1994). The "stages of change" model focuses on the tools self-starting people use consistently during periods of change (Prochaska et al., 1994).

According to this model, the five main stages people progress through are:

Precontemplation, Contemplation, Preparation, Action, and Maintenance (Prochaska, et al., 1994).

Precontemplation. The first stage in the TTM is "precontemplation." In this stage people are not thinking about change. Precontemplators, as they are referred to in the theory, resist change at all costs (Prochaska et al., 1994). They do not want to change; however, they may want to change others or the environment around them. They likely do not want to think or talk about the problem behavior at hand. During this stage of the TTM, the practitioner may decide to implement a decisional balance exercise to aid in initiating conversation about the problem behavior (Prochaska et al., 1994). A decisional balance exercise weighs out "pros" and "cons" for the change in the problem behavior and is carried into the next stage.

Contemplation. Contemplation is the next stage of the model. People are thinking or "contemplating" change. In this stage, most people are aware there is a problem behavior that requires a solution and have "indefinite plans to take action within the next six months or so" (Prochaska et al., 1994, p. 42). They may even say they want to alter their behavior, but they also have difficulty understanding their problems and the

possible solutions. According to the model, people who stay in this stage are referred to as “chronic contemplators” (Prochaska et al., 1994, p. 43).

Preparation. The third stage of the TTM is Preparation. People in this stage are planning to take action in the next month (Prochaska et al., 1994). There is usually a statement of intended change with a goal date (Prochaska et al., 1994). During this stage the commitment to action is made. Best use by the individual of the time in this stage is planning for action.

Action. During the action stage the plan is implemented. This is when most of the behavioral modifications occur. The plans made during the preparation stage are put into place and completed. In the TTM, the obvious work happens in this busy stage and the problem behavior ceases (Prochaska et al., 1994). A premise of the TTM is that the work in all prior stages is integral in progression to the Action stage.

Maintenance. The maintenance stage is where people must continue to work to prevent relapse of problem behavior. This stage continues for at least six months but may extend for an indefinite period of time (Prochaska et al., 1994). According to the TTM, lasting change is possible with progression through the stages of change and a commitment to maintenance.

Motivational Interviewing

As emphasized by Diclemente and Velasquez (2008) in the second edition of the Miller and Rollnick’s book, the principles of the TTM and MI “grew up together” in the 1980s (p. 202). William R. Miller and Stephen Rollnick developed this technique to assist in patient attempts in “getting ready for change” (Hamera, 2014, p. 299). To assist others to change themselves, motivation to do so is required; therefore, it is a beneficial

tool to employ during the initial stages of the TTM when moving towards commitment to change. Motivational interviewing is a counseling technique based on the philosophy of patient or self-centered change. This technique differs from the traditional patient education that is directed and reinforcing. Motivational Interviewing principles are based on the motivation for change elicited in the patient by the practitioner (Armstrong et al., 2011).

Guiding principles and phases of change process. The principles of motivational interviewing follow a “collaborative” and “evocative” spirit that “honors patient autonomy” (Rollnick, Miller, & Butler, 2008, p. 6). The principles in older versions of the technique are named the following: expressing empathy, developing discrepancy, rolling with resistance, and supporting self-efficacy (Miller & Rollnick, 2002). Each of these principles should be maintained through the motivational interview. In the latest version, Miller and Rollnick added compassion and evocation (Miller & Rollnick, 2013, as cited in Hamera, 2014). In alignment with the TTM approach, the MI technique evolved to incorporate phases of change to include the following: engagement, focusing, evoking, and planning (Hamera, 2014).

Engagement. The initial phase of change using MI is vital to changing behavior. During the engagement phase, the practitioner establishes rapport and builds a trusting and helping relationship with the patient. Expressions of empathy and compassion encompass the importance of the practitioner understanding and accepting the patient (Hamera, 2014).

Focusing. The phase of focusing uses interviewing to identify direction towards a target of change. “Developing discrepancy” incorporates the practitioner in guiding the

patient when assessing “pros” and “cons” of a problem behavior or need for change (Hamera, 2014). During this phase, there is an emphasis on autonomy and self-efficacy in progression to change.

Evoking. This phase of the process is to elicit change talk and evoke motivation. “Rolling with resistance” deals with allowing the patient to be autonomous in committing to change, and diffusing ambivalence is accomplished by providing continuous empathy for the patient (Hamera, 2014). Rollnick and Miller (2002) also discuss how to listen for commitment during this phase. In this phase, the practitioner helps “develop discrepancy” through continuing to ask the patient about the positives of changing behavior (Hamera, 2014). Evoking hope and self-efficacy must be also maintained to facilitate commitment to change.

Planning. In this phase of the MI change process, the practitioner assists the patient in a plan for change as they reinforce their commitment to change. “Supporting self-efficacy” and patient autonomy in planning is stressed during this phase (Miller & Rollnick, 2002). The plans should come from the patient and be encouraged by the practitioner.

Communication techniques. Miller and Rollnick use the acronym “OARS” in their latest edition of the counseling technique; it represents the following: “asking Open questions, Affirming, Reflection, and Summarizing” (Hamera, 2014). Each phase of change using motivational interviewing benefits from using this acronym and are aligned with its main principles of expressing empathy, self-efficacy, developing discrepancy, and rolling with resistance (Hamera, 2014).

Additional communication techniques specific to health care include the acronym “RULE,” which delineates the following: Resist, Understand, Listen, and Empower (Miller & Rollnick, 2002). Practitioners should be resisting the urge to the “righting reflex,” which is the idea that practitioners have the right to correct their patients (Miller & Rollnick, 2002, p. 7). Understanding the patient’s motivations and reasons for change should drive the plans for change. In motivational interviewing, good listening is vital to the process. Empowerment of the patient occurs with the principle of self-efficacy and autonomy for change (Rollnick et al., 2008).

Project Application of Conceptual Framework

In the literature, there are empirical studies that evaluate both TTM and MI techniques for lifestyle modifications towards weight loss. Green et al. (2013) evaluated a TTM stage-based consultation on physical activity by a dietician using TTM and MI. Study outcomes demonstrated that the TTM structured consultation increased levels of physical activity. Prochaska et al. (2008) compared online TTM-tailored communication versus a MI-based health coach; the findings concluded that both produced desired results for stress management and exercise. In a systematic review and meta-analysis of randomized controlled trials, MI improved weight loss in obese and overweight patients (Armstrong et al., 2011).

The process of integrating the dual conceptual framework applies to this clinical project in the objective of initiating lasting change in patients, who return to the clinic repeatedly, stating they want help with weight loss. The objectives of changing behaviors in lifestyle for weight loss can be attained with guidance from the change theory and counseling technique. Because both the model and technique have initially

proven effective in addressing other behaviors, it is feasible that it should also work for lifestyle modifications for the population of this project.

For the obese and overweight population of women in the primary care clinic, the integrative approach of using the TTM with motivational interviewing technique should produce favorable outcomes in changing behaviors. The dual conceptual framework guided the building of a stage-based tool bundle that includes practitioner and patient resources for each TTM stage. Initial assessments of the patients' current TTM stage were conducted; the practitioner then chose the appropriate tool according to their stage. Each stage-based tool had prompts for motivational interviewing incorporating the OARS communication skills. Figure 1 is a map of the project concepts towards the goal stages of change. Since the stages of change move in progression, motivational interviewing was used to assist patients from contemplation to preparation, or preparation to action.

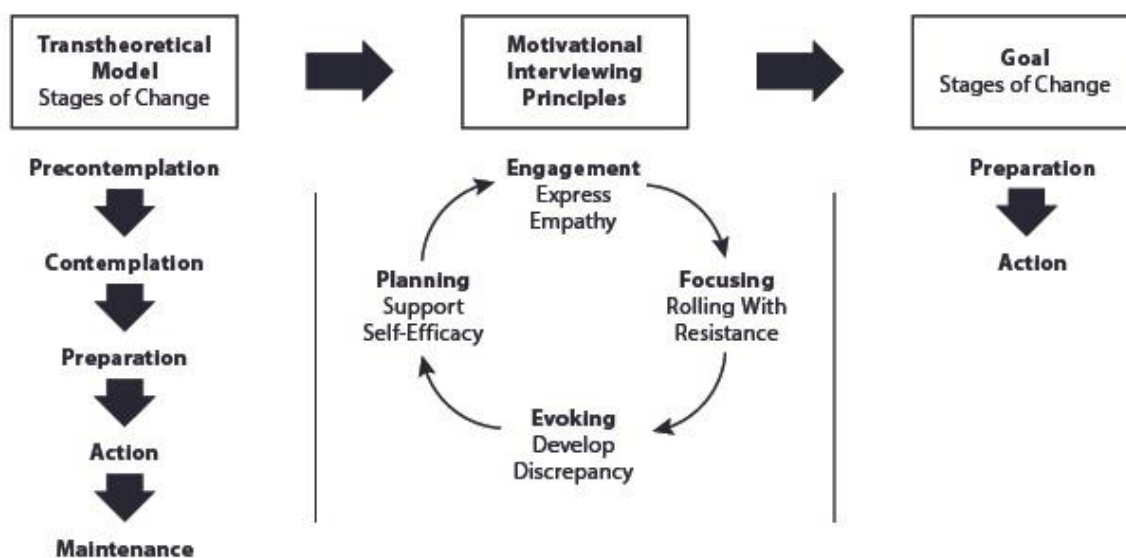


Figure 1. Change tool model. An integrative model of the Transtheoretical Model of Change and Motivational Interviewing technique with the objective of TTM stage progression.

REVIEW OF LITERATURE

A comprehensive review of literature was performed using the following as main key search words: “motivational interviewing” and “transtheoretical model” or “stages of change.” The respective terms were linked with the Boolean term, “AND,” with following search terms: obesity, lifestyle modifications, weight management, diet, and exercise. Accessed through the library of California State University, Fullerton, the databases searched were the following: CINAHL (Cumulative Index of Nursing and Allied Health Literature) using EBSCO host, Cochrane Library, and Pub Med. Only peer-reviewed journals are included as search criterion. The following dates are used as a search criterion, October 2006 through 2015. In addition to research databases, a manual hand search was conducted in the reference lists of articles and textbooks.

With the initial CINAHL search, the terms “transtheoretical model” “AND” “obesity” were used. From the CINAHL database, only one article out of 42 articles contained both terms “transtheoretical model” and “motivational interviewing” that used an intervention and was applicable to this literature review. The systematic reviews of studies on MI were found with the manual hand search from Hamera (2014). A search was conducted on CINAHL with terms “perceived barriers,” “women,” and “healthy eating.” The Cochrane Library database was searched for systematic reviews with search terms “transtheoretical model” and “motivational interviewing.” Lastly, a literature review search was conducted in the PubMed database; the search phrase was “barriers to healthy eating women.”

Transtheoretical Model and Healthy Lifestyle Modifications

The principles of the TTM indicate that people who are successful at behavioral change are focused on five stages of change (Prochaska et al., 1994). Multiple studies have shown that using the TTM stage-based interventions can be effective in promoting healthy lifestyle behaviors (Greene et al., 2013; Johnson et al., 2008). The findings of a randomized controlled (RCT) study were that home-based, stage-based interventions can improve physical activity, healthy eating, and management of emotional distress in overweight and obese adults (Johnson et al., 2008). In an analysis of three RCTs of 4178 adults, TTM-tailored dietary interventions proved to be an adequate predictor of dietary behavioral changes over time (Greene et al., 2013). However, the only systematic review to evaluate the RCTs on the TTM in weight loss management concluded there is a need for better-designed RCTs on the effect of this framework on lifestyle modifications in obesity/overweight populations (Mastellos, Gunn, Felix, Car, & Majeed, 2014).

Decisional Balance

One property of the transtheoretical model is the decisional balance for patients to weigh “pros” and “cons” of behavioral change (Prochaska et al., 1994). In a meta-analytic review of 27 cross-sectional studies on the stages of change and dietary behaviors, the increase in “pros” was greater than decrease in “cons” from precontemplation to action stages (Di Noia & Prochaska, 2010). Decisional balance can be structured by “health benefits, general barriers, convenience issues, planning issues, and preparation issues and external motivations/barriers, health concerns, inconvenience factors, weight control, and purchase/preparation concerns” (Di Noia & Prochaska, 2010). For exercise, the structure of a decisional balance tool has shown good internal

and external validity, with the exception of the “cons” scale (Blaney et al., 2012). The pros and cons scale are closely related to barriers and benefits to weight loss.

Perceived Barriers, Benefits, and Motivators

Qualitative studies have identified the perceived barriers and benefits to healthy eating, exercise, and weight loss (Baruth, Sharpe, Parra-Medina, & Wilcox, 2014; Lambert et al., 2005; Reyes, Klotz, & Herring, 2013). For low-income African American, overweight mothers, common perceived motivators were that being healthy would result in having a healthier baby, and unhealthy eating could exacerbate physical symptoms (Reyes, Klotz, & Herring, 2013). For obese and overweight women using the WIC (Women, Infant, and Children) Program, benefits to losing weight identified were “higher self-esteem, the ability to be more physically active, better health, and less societal prejudices toward them” (Lambert et al., 2005, p. 20). In low-income urban populations, strong predictors of healthy eating are being a woman and high self-efficacy in reading nutrition labels (Robles, Smith, Ponce, & Kuo, 2014).

Common barriers to lifestyle modifications involve individual, social, and environmental factors (Baruth et al., 2014). From focus group assessments, barriers for African-American women were the following: “tastes and costs of healthy food; limited access to healthy food, easy access to unhealthy food; monthly fluctuation of food supply; lack of meal schedule; fatigue and sleepiness preventing cooking; misunderstanding of “healthy”; not wanting to deprive baby in pregnant mothers; pressure to eat during pregnancy” (Lambert et al., 2005, p. 21; Reyes, Klotz, & Herring, 2013, p. 1178-1179). For Mexican American women, identified barriers to a healthy lifestyle are the following in their respective order: “stress, lack of self-control, effort,

control by others now and in the past, and culture influences” (Hoke, Timmerman, & Robbins, 2006, p. 143). The most common barrier to healthy eating for both Hispanic and African American women is the cost of healthy food (Acheampong & Haldeman, 2013). Personal effort, lack of social support, inadequate finances, and low self-esteem were identified barriers for women in disadvantaged neighborhoods (Baruth et al., 2014).

Motivational Interviewing

Behavioral Change

Prominently and initially used in the psychological realm, a systematic review of RCTs on motivational interviewing and smoking cessation concluded that the patient-focused counseling intervention is effective for changing behavior (Lindson-Hawley, Thompson, & Begh, 2015). Motivational interviewing has recently been studied in medical care settings and shown efficacious when delivered in brief consultations (Lundahl et al., 2013). Multiple systematic reviews and meta-analysis found it is an effective counseling intervention in the improvement of body weight and sedentary behavior (Armstrong et al., 2011; Lundahl et al., 2013). In obese and overweight patients, motivational interviewing improves weight loss (Armstrong et al, 2011). The delivery and participant factors were found to influence results of motivational interviewing counseling efforts to include health-related behaviors of diet, exercise, and safe sex (Lundahl et al., 2010).

Transtheoretical Model Combined with Motivational Interviewing

There are few studies on the effectiveness of using both TTM and MI counseling intervention. Prochaska et al. (2008) confirms that using motivational interviewing and an online-based TTM feedback model for employees can produce desired results in

physical activity and stress reduction. Stage-based consultations for physical activity using the TTM and motivational interviewing (MI) show increases in levels of physical activity (Jackson, Asimakopoulou, & Scammell, 2007).

METHODS

This project was a quality improvement project that was designed to test whether the proposed tool bundle would be effective in the author's clinic to improve the services being provided. At the conclusion of the project the project was written up as a manuscript (Appendix A) in order that the outcomes might be shared with other nurse practitioners in busy clinics.

Sample and Setting

The setting for the project is an ambulatory family practice clinic in a small South East Los Angeles community in California. The clinic has a small 21-seat waiting room. It consists of two patient examination rooms and one intake room. The clinic is staffed with an office manager, one front office medical assistant, and two back office medical assistants. There is always one nurse practitioner or physician's assistant on duty at a time. Approximately 35 to 45 patients are seen in the clinic daily. About one half of the patients served in this clinic are Spanish-speaking only; more than half of the adult patients are adult women.

Purposive sampling was used to examine the adult female subgroup in the clinic population, which will be further described in the procedure section. The subgroup focus for the project is obese and overweight women. The inclusion criteria for participation in the project are the following: female, 18 years or older, having a BMI of greater than 25, and thinking about change. All women who fit the inclusion criteria were eligible for recruitment and participation. Pregnant women were excluded from this participation in this project.

Project Procedure

The initial phase of the project required developing all of the elements of the tool kit and client resources for the intervention as well as all of the necessary evaluation tools to determine the usefulness of the tool kit. Using information from the literature the elements of the tool kit were developed. The practitioner tools included:

1. As a time saving technique, a cost-benefit decisional balance analysis form to be completed by patient in the waiting room to assess for initial stage of change.
2. Motivational interviewing prompts for each stage of change to be provided to the practitioners.

Then the resource lists tailored to each stage of change, according to lifestyle behavior change for the clients, were compiled including:

1. Exercise: Community exercise classes, list of local parks, and online resources, ie. Youtube videos
2. Diet: Nutritionist referrals, lists of nutritious foods, easy recipes
3. Planning form for individual patients.

Finally, the recruitment flyer, the consents, and pretest and post test questions were developed for the research elements of the project. All of the documents for the project that were to be read by clients including resource lists were translated into Spanish.

The project utilized a quantitative investigation and non-experimental pilot design (Polit & Beck, 2012). The single group pre-test, post-test design was used to examine baseline measures with post-intervention measures (Polit & Beck, 2012). The rationale

for using this design was to determine whether the tool bundle intervention would change the outcome measures over a period of four months.

Intervention Procedure

In the rapid outpatient setting, a questionnaire incorporating the pretest and cost-benefit analysis tool was available to the patients in the waiting room. This utilized convenience sampling. Upon check in, the front office medical assistant directed patients to the poster while they wait. This poster box is titled “Thinking of losing weight?” in English and Spanish (Appendix B) and if they were interested, the front office medical assistant handed them the decisional balance tool to complete while they wait. According to the TTM, patients who are in the contemplation stage would ask about the project.

After completion of the questionnaire, the patient moved through the intake process. The vital signs and patient’s height and weight were taken by the medical assistant. The completed questionnaire was placed on the patient’s chart. Prior to entering the room, the practitioner routinely reviewed the chart, which now included the questionnaire in preparation for the motivational interview.

The answers on the questionnaire should have assisted the practitioner to review appropriate motivational interviewing prompts for that specific stage of change for lifestyle modification. The motivational interviewing prompts (Appendix B) are tailored to the stage of change for use in the counseling session. Patients were encouraged to take notes of their goals and plans, using their Patient Planner Assistant, shown in Appendix B. Counseling was also included through follow-up appointments or calls to the patients at four-week intervals by the practitioner or medical assistant to emphasize self-efficacy.

After three to four months, the patients were called in for follow-up to complete the post-test questionnaire.

In addition to the formal tools, the investigator kept research notes of impressions of the interventions and client comments during follow-up calls to supplement the quantitative data. Since the sample size was anticipated to be small, statistical methods alone did not provide sufficient evidence of the utility of the tool kit.

Resources and Materials

The materials for the practitioner were the cost-benefit analysis form, motivational interviewing prompts form, resource packets, and patient planning form. The materials available for the participants were resource packets for planning. For dietary lifestyle modification, there is a list of nutritious foods and easy recipes; nutritionist referral is also available when the patient is ready. For physical activity lifestyle modification, the list includes community exercise classes, list of local parks, online resources, sample exercises, and healthy diet recipes. The motivational interviewing prompts form was placed in the chart for the practitioner to make note of patient's stated progress. The patient's intended start date was noted on this prompt form.

The materials were placed in an accordion folder for easy access in one place on the practitioner's desk. All forms, questionnaires, and resource packets for patient use were available in Spanish and English, at the 5th grade reading level. Translation of English to Spanish was completed through a certified translation service.

Data Collection

Demographics

The patient demographics were collected as part of the pre-test, post-test questionnaire, as shown in Appendix B. This information includes age and race/ethnicity. Other significant measures to be collected from the patient's chart were height and weight. BMI was calculated and noted on the pretest and post-test forms. Patient information was also collected at pretest and post-test. The patients were categorized into obese (BMI ≥ 30) and overweight (BMI ≥ 25). Initial and medical record number, shown in Appendix B, coded patients on the chart tracker form. Upon evaluation of the tool, all codes and the form and the patient identifiers were destroyed. All data was de-identified before extraction for analysis.

Pre-test/Cost-Benefit Analysis Tool

The cost-benefit analysis is the pretest that utilizes the decisional balance principle found in the TTM. This tool, as seen in Appendix A, was developed from qualitative evidence in the current literature, for both dietary and physical activity changes and the focus population. The patient weighs their "pros" and "cons," according to their importance. This tool was printed on duplicate paper; therefore, the de-identified data was easily extracted upon conclusion of the study.

Post-test Questionnaire

The pretest and posttest assessed the stage of change in the patients. The measures collected are stages of change for healthy lifestyle changes towards weight loss through physical activity and diet. The post-test questionnaire, shown in Appendix B, contains questions assessing the helpfulness of the tool bundle (motivational

interviewing/counseling, and project developed cost-benefit analysis tool). This post-test questionnaire will be given to the patient by medical assistants and a box was provided at the clinic to insert the questionnaire upon completion of the project to provide anonymity for the participant.

Data Analysis and Evaluation

Data analysis was completed using SPSS statistical software package. The de-identified chart tracker provided a bulk of the data. The pre-test and post-test also provided data for extraction. The independent variable of the project is the tool bundle. The dependent variables are stages of change for lifestyle modifications and BMI. Descriptive statistics were analyzed for patient demographics, BMI, and stages of change.

Ethical Considerations

Approval for the project was obtained from the family practice clinic executive. Human subject approval was sought from the California State University, Los Angeles Institutional Review Board which determined the project was quality improvement rather than research. The project participants were provided informed consent at the beginning of the procedure, in Spanish and English (Appendix B). To control for any biases, the patient information was de-identified for reporting purposes. Informed consents and data were stored in a locked box in a closed office. All data will be destroyed after a maximum of three years.

RESULTS

The final report of this project is a manuscript for submission to the following journals: *Journal of the American Association of Nurse Practitioners* or *Journal for Nurse Practitioners* (see Appendix A).

There were 21 female participants who enrolled to participate in this pilot study, after seeing the posted flyers in the clinic. Four of the 21 female participants did not return for follow up and were omitted from the data results. A total of 17 eligible participants were recruited for the study. Table 1 represents the demographic data of the group. The mean age of the sample of 17 was 36.65 years old with 100% of the sample being Hispanic or Latino. According to their BMI, Approximately 65% of the participants were obese, with the remainder categorized as overweight.

Table 1

Demographics of Sample

n	17	Range
Age (years)	36.65 (9.66)*	27 - 63
Height (inches)	61.94 (3.12)*	56 - 68
Weight (pounds)	183.38 (34.27)*	147 - 266
Race		
Hispanic or Latino	17 (100)**	
Body Mass Index	33.54 (5.36)*	
Overweight	6 (35.1)**	25.69 - 29.99
Obese	11 (64.9)**	31.37 - 47.87

*reported as $M(SD)$ or **n(valid %).

Stages of Change

Figure 2 shows the number of participants at their stage of change during the specified follow-up time. The assessment of the participants' stage of change was based on their reports of activity towards changing their lifestyle with either exercise or diet.

They are staged based on their current actions during each follow-up. As seen in figure 2, a majority of the sample progressed from contemplation to either planning or action. Initially twelve out of 17 participants were in the contemplation stage. With the use of the change tool and motivational interviewing, 14 out of 17 participants progressed to the next stages of change, preparation or action. Because of the lag between enrolling the first participant and the last participant six participants did not have all of the follow-up visits by the end of the project's reporting period; the results show the progression of the stages for the 11 that had at least two follow-ups. Not all participants made it to the fourth follow-up visit.

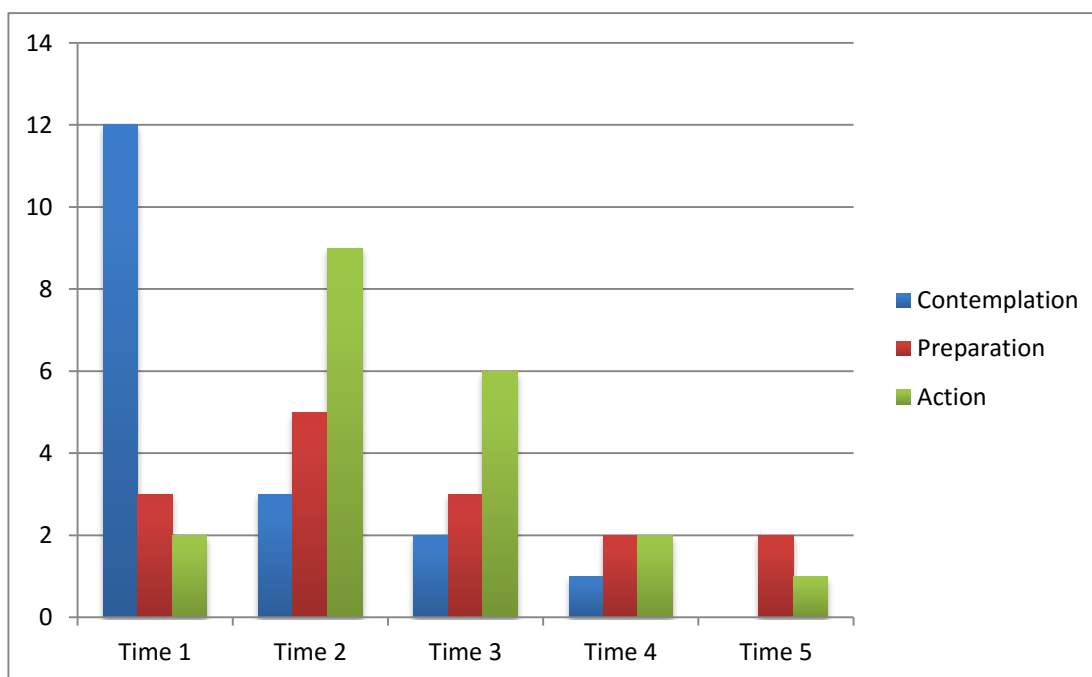


Figure 2. Stage of Change at Follow-up Visits. Progression through the stages for number of study participants at timed follow-up visits.

Post-Test Questionnaire

Seven participants completed the post-test questionnaire. The results of the four question test are shown in table 2. One participant did not answer question 1. As seen in Table 2, participants answered that the decisional balance tool and motivational interviewing were “very much” helpful in attempting to meet their weight loss goals.

Table 2

Results of Post-test Questionnaire (n=7)

	Not at all	Not really	Neutral/ Undecided	Somewhat	Very much
1. Was the decisional balance tool helpful in your weight loss goals?				2 (28.6%)	4 (75.1%)
2. How do you feel your eating has changed from the beginning to the end of this project?			1 (14.3%)	4 (57.1%)	2 (28.6%)
3. How do you feel your exercise habits have changed from the beginning to the end of this project?				5 (71.4%)	2 (28.6%)
4. How helpful was the motivational interviewing and counseling in your weight loss goals?				1 (14.3%)	6 (85.7%)

*reported as n(valid %).

Journal Entries

The pilot study also included journaling by the author who recorded the details of implementing the study and the comments from the follow-up calls and visits. It highlights the author’s project work as well as individual participants’ progression and/or barriers of lifestyle modification. The sample entry below is a combination of typical entries:

One patient described her clothes being looser, but has not weighed herself. She was a younger patient, and I found some difficulty getting her to talk, despite

using open-ended questions. I find it more difficult to make follow-up calls on Mondays, due to the volume of patients, but I make time during my breaks. I attempt to call all the patients who have not come in to get their updates and reassess at least where they fall in the spectrum of stage of change. In a motivational interview today, I also made references to my own weight loss challenges. I encouraged her and built rapport by describing my personal struggle with high caloric foods that taste good. I had our marketer call the patients today to remind them about coming to see me for follow-up. Upon discussion of one client's weight loss planning, she stated that she had visitors and had difficulty following her plans and reported she would try to get back to the discussed diet when they leave. During the motivational interview, she described the exercise she participates in, mostly exercise she can incorporate into her daily routine, like taking stairs rather than elevator or parking further from the market and destination. One patient reported that she was already in the action stage and has been going to Zumba and exercises every day; she reportedly already lost 30 pounds over the course of the year and has been trying other exercises to increase weight loss. The barriers she found were cooking for her family, which makes it difficult to decrease rice and carbohydrates. Another patient also reports being in the planning stage; as she just gave birth a few months ago (Aguinaldo, 2015).

DISCUSSION

The results of this project showed that this tool bundle can be effective in initiating lifestyle change in this specific population of obese and overweight women. Hopefully the knowledge the members of this matriarchal population who participated gained about changing their lifestyle behaviors, they will be able to pass on to their families and children to improve their lives as well. The results coincide with the study of a home-based, stage-based behavior intervention that improved physical activity and healthy eating (Johnson et al., 2008). In clinical pilot projects it is impossible to get samples large enough to produce statistical significance (to produce a 0.5 significance for the effect size of this project the author would have needed a sample of 385 participants) (Polit & Beck, 2012).

The goal of this pilot project was not a rapid weight loss but an actual change in behaviors. The most significant results of this project were that participants reported changes in their behaviors or lifestyle. Fourteen out of 17 participants reported modifications in their thinking from just “contemplating” changes in their lifestyle to actually planning and changing their behaviors for weight loss through physical activity or diet. Four out of 17 participants progressed sufficiently to actually lose weight. When looking at the data for these patients who lost weight, there was a match in the progression of their stage of change.

Implementation

This pilot project was implemented simultaneously while conducting routine business in a busy primary care practice. As a family nurse practitioner, daily work includes well women examinations and encouraging patients’ to change their lifestyle for weight loss and other obvious health benefits; therefore, a big change in this work was not

required to integrate the tool bundle into daily business. The part of the tool bundle that took up most of the time was the follow-up calls to patients; however, when necessary, this task was easily reassigned to the marketer who was able to make calls for the nurse practitioner.

Decisional Balance Tool

The decisional balance tool given to the participants while in the waiting room was effective as a time-saving technique. When patients inquired about the study after seeing the poster flyer in the examination rooms, there was some time to complete the tool while waiting for the nurse practitioner. When assessing their personal “pros and cons” for changing their lifestyle, about half of the participants seemed to complete the tool with more thought and more appropriately. One possibility for this finding could be the difference between patients in contemplation and patients who are almost ready for preparation; their stage of change exhibits that they may be thinking of their barriers, “pros” and “cons” more thoroughly when closer to the preparation stage.

Motivational Interviewing

Studies show that motivational interviewing is effective in changing behaviors in medical care settings and shown efficacious when delivered in brief consultations (Lundahl et al., 2013). During the duration of this project, motivational interviewing as a technique showed helpful as it did assist the participants in progressing to the next stage of the TTM. Adding to the motivational interviewing, the motivational interviewing prompts utilizing the OARS communication skill contributed to the integration of this part of the tool bundle. The acronym “OARS” that represents “asking Open questions, Affirming, Reflection, and Summarizing” is not difficult to remember when applying this

counseling technique (Hamera, 2014). With such strong evidence for the efficacy of this counseling technique, it is recommended that clinicians should familiarize themselves with this skill.

Limitations

There are evident limitations to the generalizability of this project. This is pilot project in a single clinic. There were significant time constraints for the project, as it was completed in a four month period. Given that all of the participants were Hispanic women, the author can only say that this tool bundle works for this population in this clinic.

Implications for Practice

The implications for practice focus on the feasibility of implementing this tool for other practitioners to use in a high volume, fast-paced primary care clinic. Follow-up calls were the most important factor in retention of the patients and contributed to their motivation in their goals towards lifestyle change. In a fairly busy primary care practice, a medical assistant or marketer could be in charge of making follow-up calls to make the implementation of this tool more time efficient, and if needing further consultation, the telephone call could be transferred. As discussed above, this tool bundle can be integrated into a similar family practice.

Although there was no formal control group, the author still has patients who come repeatedly saying they wish they could lose weight, but have not made any changes to their lifestyle. In the interest of time, the motivational interviewing focus was on the patients who volunteered for the project. In the future, without the request to sign up for a project, more patients may use to decide to use the decisional balance tool. For future

studies, this decisional balance tool may need some adjustment; an assessment of the individual's reading may be required prior to distribution of this part of the tool bundle.

The pilot project shows that benefits occur when there is an increased investment by the practitioner, and patient changes in lifestyle were made with their equal investment. Although the sample of this pilot project was small, the participants reported significant changes in their stage of change according to the TTM. Any change in lifestyle is a progressive cycle that requires planning and can be initiated through this tool bundle process.

Future Research

As previously discussed, a single group for the study was a limitation and limitations may be addressed through implementation of a control group in future research. Future studies should include a longitudinal design to assess for lasting change with the use of the tool bundle. The author plans to continue with this project and expand it for use of other practitioners in the clinic. In the future, the author plans to look at the weight and comorbidities, such as hypertension, diabetes mellitus, and dyslipidemia in relation to lifestyle change.

REFERENCES

- Acheampong, I., & Haldeman, L. (2013). Are nutrition knowledge, attitudes, and beliefs associated with obesity among low-income Hispanic and African American women caretakers? *Journal of Obesity*, 2013(2013), 1-8. doi:10.1155/2013/123901
- Armstrong, M. J., Mottershead, T. A., Ronksley, P. E., Sigal, R. J., Campbell, T. S., & Hemmelgarn, B. R. (2011). Motivational interviewing to improve weight loss in overweight and/or obese patients: A systematic review and meta-analysis of randomized controlled trials. *International Association for the Study of Obesity*, 12, 709-723. doi:10.1111/j.1467-789x.2011.00892.x
- Baruth, M., Sharpe, P.A., Parra-Medina, D., & Wilcox, S. (2014). Perceived barriers to exercise and healthy eating among women for disadvantaged neighborhoods: Results from a focus groups assessment. *Women & Health*, 54(4), 336-353. doi: 10.1080/03630242.2014.896443
- Blaney, C. L., Robbins, M. L., Paiva, A. L., Redding, C. A., Rossi, J. S., Blissmer, B., . . . & Oatley, K. (2012). Validation of the measures of the transtheoretical model for exercise in an adult African-American sample. *American Journal of Health Promotion*, 26(5), 317-326. doi:10.4278/ajhp.091214-QUAN-393
- Bonnel, W., & Smith, K. V. (2014). *Proposal writing for nursing capstones and clinical projects*. New York, NY: Springer Publishing Company.
- Centers for Disease Control and Prevention. (2011, October 14). *Healthy people 2020*. Retrieved from http://www.cdc.gov/nchs/healthy_people/hp2020.htm
- Centers for Disease Control and Prevention. (2013, April 11). *Healthy people 2010 Final Review*. Retrieved from http://www.cdc.gov/nchs/healthy_people/hp2010/hp2010_final_review.htm
- Diclemente, C., & Velasquez, M. M. (2002). Motivational interviewing and stages of change. In W. R. Miller & S. Rollnick (Eds.), *Motivational interviewing: Preparing people for change* (pp. 201-216). New York, NY: The Guildford Press.
- Di Noia, J., & Prochaska, J. O. (2010). Dietary stages of change and stages of change: A meta-analytic review. *American Journal of Health Behavior*, 34(5):618-632. doi:10.5993/AJHB.34.5.11
- Greene, G. W., Redding, C. A., Prochaska, J. O., Paiva, A. L., Rossi, J. S., Velicer, W. F., Blissmer, B., & Robbins, M. L. (2013). Baseline transtheoretical and dietary behavioral predictors of dietary fat moderation over 12 and 24 months. *Eating Behaviors*, 14(3), 255-262. doi:10.1016/j.eatbeh.2013.01.014

- Hamera, E. (2014). Motivational interviewing. In K. Wheeler (2nd ed.), *Psychotherapy for the advanced practice psychiatric nurse: A how-to guide for evidence-based practice* (pp. 299-312). New York, NY: Springer. 10.1016/j.jand.2013.05.014
- Institute for Health Care Improvement. (2015). *Improvement stories: What is a bundle?* Retrieved from <http://www.ihc.org/resources/Pages/ImprovementStories/WhatisaBundle.aspx>
- Jackson, R., Asimakopoulou, K., & Scammell, A. (2007). Assessment of the transtheoretical model as used by dietitians in promoting physical activity in people with type 2 diabetes. *Journal of Human Nutrition & Dietetics*, 20(1), 27-36. doi:10.1111/j.1365-277X.2007.00746.x
- Johnson, S. S., Paiva, A. L., Cummins, C. O., Johnson, J. L., Dymont, S. J., Wright, J. A., . . . Sherman, K. (2008). Transtheoretical model-based multiple behavior intervention for weight management: Effectiveness on a population basis. *Preventive Medicine*, 46(3), 238-246. doi: 10.1016/j.ypmed.2007.09.010
- Lambert, L., Raidal, M., Safaii, S., Conner, C., Geary, E.J., & Ault, S. (2005). Perceived benefits and barriers related to postpartum weight loss of overweight/obese postpartum WIC participants. *Topics in Clinical Nutrition*, 20(1), 16-27. doi:10.1097/00008486-200501000-00003
- Lindson-Hawley, N., Thompson, T.P., & Begh, R. (2015). Motivational interviewing for smoking cessation. *Cochrane Database of Systematic Reviews*, 3(2015). doi:10.1002/14651858.CD006936.pub3
- Lundahl, B., Kunz, C., Brownell, C., Tollefson, D., & Burke, B. L. (2010). A meta-analysis of motivational interviewing: Twenty-five years of empirical studies. *Research on Social Work Practice*, 20(2), 137-160. doi:10.1177/1049731509347850
- Lundahl, B., Moleni, T., Burke, B. L., Butters, R., Tollefson, D., Butler, C., & Rollnick, S. (2013). Motivational interviewing in medical care settings: A systematic review and meta-analysis of randomized controlled trials. *Patient Education and Counseling*, 93(2013), 157-68. doi:10.1177/1049731509347850
- Mastellos, N., Gunn, L.H., Felix, L.M., Car, J., & Majeed, A. (2014). Transtheoretical model stages of change for dietary and physical exercise modification in weight loss management for overweight and obese adults. *Cochrane Database of Systematic Reviews* 2(2014). doi:10.1002/14651858.CD008066.pub3.
- Miller, W. R., & Rollnick, S. (2002). *Motivational interviewing: Preparing people for change*. New York, NY: The Guildford Press.

- Office of Disease Prevention and Health Promotion. (2014). *2020 Topics and objectives*. Retrieved from <https://www.healthypeople.gov/2020/topics-objectives/2020-Topics-and-Objectives-Objectives-A-Z>
- Polit, D. & Beck, C. (2012). *Nursing research: Generating and assessing evidence for nursing practice (9th ed.)*. Philadelphia, PA: Lippincott Williams & Wilkins.
- Prochaska, J. O., Butterworth, S., Redding, C. A., Burden, V., Perrin, N., Leo, M., . . . Prochaska, J. M. (2008). Initial efficacy of MI, TTM tailoring and HRI's with multiple behaviors for employee health promotion. *Preventive Medicine, 46*(3), 226-231. doi:10.1016/j.ypmed.2007.11.007
- Prochaska, J. O., Norcross, J. C., & Diclemente, C. C. (1994). *Changing for good: A revolutionary six-stage program for overcoming bad habits and moving your life positively forward*. New York, NY: Avon Books.
- Reyes, N. R., Klotz, A. A., & Herring, S. J. (2013). A qualitative study of motivators and barriers to healthy eating in pregnancy for low-income, overweight, African-American women. *Journal of the Academy of Nutrition and Dietetics, 113*(9), 1175-1189. doi:10.1016/j.jand.2013.05.014
- Robles, B., Smith, L.V., Ponce, M., & Kuo, T. (2014). The influence of gender and self-efficacy on healthy eating in low-income urban population affected by structural changes to the food environment. *Journal of Obesity, 2014*(2014), 1-12. doi:10.1155/2014/908391
- Rollnick, S., Miller, W. R., & Butler, C. C. (2008). *Motivational interviewing in health care: Helping patients change behavior*. New York, NY: The Guildford Press.
- United States Census Bureau. (2014, December 4). *State and county quickfacts: Huntington Park, California*. Retrieved from <http://quickfacts.census.gov/qfd/states/06/0636056.html>
- World Health Organization. (2015a, January). *Obesity and overweight fact sheet*. Retrieved from <http://www.who.int/mediacentre/factsheets/fs311/en/>
- World Health Organization. (2015b, January). *Noncommunicable diseases*. Retrieved from <http://www.who.int/mediacentre/factsheets/fs355/en/>
- World Health Organization. (2015c). *Target 7: Halt the rise in obesity*. Retrieved from <http://www.who.int/nmh/ncd-tools/target7/en/>

APPENDIX A
PUBLISHABLE MANUSCRIPT

Abstract

The quality improvement project, “A Change Tool for Lifestyle Modifications in Obese and Overweight Women” by a certified family practice nurse practitioner, utilizes a group of interventions as a “tool bundle” to influence change in obese and overweight women. It is well known that obesity is a risk factor for many health problems and that overweight patients arrive to care settings in various stages of readiness for change (Transtheoretical Model). The tools included a cost-benefit decisional balance analysis form to assess for initial stage of change (for patients) along with motivational interviewing prompts for each stage of change (for practitioners). Also in the bundle were lists of community and Internet resources focused on both exercise and diet and tailored to each stage of change. There was also a planning form to be used by patients.

The tool bundle was piloted on 17 obese/overweight Hispanic women in a single clinic setting. Women received monthly calls to assess their behaviors related to weight loss. Initially, most women (71%) were in contemplation phase of weight loss. Over two to six months, 14 women’s reported behaviors indicated that they had progressed one level in their readiness to change.

Nurse practitioners wish to help their clients lose weight but have limited time for interventions. This paper describes a pilot project that successfully tested a theoretically-based (Transtheoretical Model) and evidence-based (motivational interviewing) intervention suitable for a busy outpatient practice.

Change Tool for Lifestyle Modifications in Obese and Overweight Women: Pilot Study

This paper describes a pilot project that successfully tested a nurse practitioner intervention suitable for a busy outpatient practice. In a population of overweight and obese women, there is a need for lasting change in lifestyle behaviors towards weight loss with the implementation of feasible interventions by practitioners in a fast-paced, high volume clinic. Currently, the practitioner in the project clinic has had limited success in assisting their patients with their weight loss goals due to limited time for interventions in one visit. Using Motivational Interviewing and the Transtheoretical Model, 17 patients were assisted to move from pre-contemplation to later stages of change.

Review of Literature

Transtheoretical Model of Change

James Prochaska and Carlo Diclemente began development of the Transtheoretical Model (TTM) of Change in 1977 and continued to refine it through the 1980s (Hamera, 2014). The psychologists' original work was involved in the way people change behaviors on their own, sans psychotherapy (Prochaska, Norcross, & Diclemente, 1994). The transtheoretical approach is appropriately named as it combines the significant techniques and primary processes of change used by principal psychotherapy theories (Prochaska et al., 1994). The "stages of change" model focuses on the tools self-starting people use consistently during periods of change (Prochaska et al., 1994).

According to this model, the five main stages people progress through are:

Precontemplation, Contemplation, Preparation, Action, and Maintenance (Prochaska, et al., 1994).

The Transtheoretical model of change was traditionally used in psychotherapy to initiate behavioral change in substance abuse, smoking, and alcohol cessation (Hamera, 2014). However, studies show the effectiveness of the TTM as a predictor for favorable outcomes in physical activity and dietary behavior. One study validates previous TTM construct measures for exercise (Blaney et al., 2012). In this study, the results concluded there was good internal and external validity in the TTM exercise measures that are tailored to increase physical activity in African-American adults (Blaney et al., 2012). In a meta-analytic review of 27 cross-sectional studies on the stages of change and dietary behaviors, the increase in “pros” was greater than decrease in “cons” from precontemplation to action stages (Di Noia & Prochaska, 2010). Stage-based consultations for physical activity using the TTM and motivational interviewing (MI) show increases in levels of physical activity (Jackson, Asimakopoulou, & Scammell, 2007). The TTM framework can guide interventions aimed at maintaining and increasing changes in behavior for weight loss.

Motivational Interviewing

William R. Miller and Stephen Rollnick developed this technique to assist in patient attempts in “getting ready for change” (Hamera, 2014, p. 299). To assist others to change themselves, motivation to do so is required; therefore, it is a beneficial tool to employ during the initial stages of the TTM when moving towards commitment to change. Motivational interviewing is a counseling technique based on the philosophy of patient or self-centered change. Additional communication techniques specific to health care include the acronym “RULE,” which delineates the following: Resist, Understand, Listen, and Empower (Miller & Rollnick, 2002). Practitioners should be resisting the

urge to the “righting reflex,” which is the idea that practitioners have the right to correct their patients (Miller & Rollnick, 2002, p. 7). Understanding the patient’s motivations and reasons for change should drive the plans for change. In motivational interviewing, good listening is vital to the process. Empowerment of the patient occurs with the principle of self-efficacy and autonomy for change (Rollnick et al., 2008). Motivational Interviewing principles are based on the motivation for change elicited in the patient by the practitioner (Armstrong et al., 2011).

Motivational interviewing has been widely studied since the 1980s and has proven beneficial in counseling efforts (Lundahl et al., 2010). The number of studies, showing the effectiveness of motivational interviewing for weight loss in overweight and obese women, is growing. In a 2013 systematic review and meta-analysis of randomized controlled trials looking at motivational interviewing in the medical care settings, MI had a statistically significant modest advantage ($p < 0.001$) in behavioral change “in areas as HIV viral load, dental outcomes, death rate, body weight, alcohol and tobacco use, sedentary behavior, self-monitoring, confidence in change, and approach to treatment” (Lundahl et al., 2013, p. 157).

Tools

The materials for the practitioner were the cost-benefit analysis form, motivational interviewing prompts form, resource packets, patient planning form, and chart tracker for follow-up. The resource lists are tailored to each stage of change, according to lifestyle behavior change as reported by the clients. For dietary lifestyle modification, there was a list of nutritious foods and easy recipes; nutritionist referral is also available when the patient is ready. For physical activity lifestyle modification, the

list includes community exercise classes, list of local parks, online resources, sample exercises, and healthy diet recipes. All forms, questionnaires, and resource packets for patient use were available in Spanish and English, at the 5th grade reading level and placed in an accordion folder for easy access in one place on the practitioner's desk. Translation of English to Spanish was completed through a certified translation service.

Motivational Interviewing

The motivational interviewing prompts form (shown in Appendix) was placed in the chart for the practitioner to make note of patient's stated progress. The prompts are focused and tailored for each stage of change for use in the counseling session. The patient's intended start date was noted on this prompt form.

Decisional Balance/Cost-Benefit Analysis Tool

The cost-benefit analysis is the pretest that utilizes the decisional balance principle found in the TTM. This tool (seen in Appendix) was developed from qualitative evidence in the current literature, for both dietary and physical activity changes and the focus population. Qualitative studies have identified the perceived barriers and benefits to healthy eating, exercise, and weight loss (Baruth, Sharpe, Parra-Medina, & Wilcox, 2014; Lambert et al., 2005; Reyes, Klotz, & Herring, 2013). The patient weighs their "pros" and "cons," according to their importance. The initial participant demographics were collected as part this pre-test. This information includes age, race/ethnicity, height and weight, and calculated body mass index (BMI). This tool was printed on duplicate paper; therefore, the de-identified data was easily extracted upon conclusion of the study.

Post-test Questionnaire

The pretest and posttest assessed the stage of change in the patients. The measures collected are stages of change for healthy lifestyle changes towards weight loss through physical activity and diet. The post-test questionnaire contained questions assessing the helpfulness of the tool bundle (motivational interviewing/counseling, and project developed cost-benefit analysis tool).

Methods

Sample and Setting

The setting is an ambulatory family practice clinic in a small South East Los Angeles community in California. The clinic has a small 21-seat waiting room. It consists of two patient examination rooms and one intake room. There is always one nurse practitioner or physician's assistant on duty at a time. Approximately 35 to 45 patients are seen in the clinic daily. About one half of the patients served in this clinic are Spanish-speaking only; more than half of the adult patients are adult women.

Purposive sampling was used to examine the adult female subgroup in the clinic population, which will be further described in the procedure section. The subgroup focus for the project is obese and overweight women. The inclusion criteria for participation in the project are the following: female, 18 years or older, having a BMI of greater than 25, and thinking about change. All women who fit the inclusion criteria were eligible for recruitment and participation. Pregnant women were excluded from this participation in this project.

Procedure

The recruitment flyer, the consents, and pretest and post test questions were developed for the research elements of the project. The project utilized a quantitative investigation and non-experimental pilot design (Polit & Beck, 2012). The single group pre-test, post-test design was used to examine baseline measures with post-intervention measures (Polit & Beck, 2012).

In the rapid outpatient setting, a questionnaire incorporating the pretest and cost-benefit analysis tool was available to the patients in the waiting room. Upon check in, the front office medical assistant directed patients to the poster while they wait. This poster flyer was titled “Thinking of losing weight?” in English and Spanish, and if they were interested, the front office medical assistant handed them the decisional balance tool to complete while they wait. According to the TTM, patients who are in the contemplation stage would ask about the project after seeing the poster flyer.

After completion of the questionnaire, the patient moved through the intake process. The vital signs and patient’s height and weight were taken by the medical assistant. The completed questionnaire was placed on the patient’s chart. Prior to entering the room, the practitioner routinely reviewed the chart, which now included the questionnaire in preparation for the motivational interview.

The answers on the questionnaire assisted the practitioner to review the appropriate motivational interviewing prompts (see Appendix) for that specific stage of change for lifestyle modification. Patients were encouraged to take notes of their goals and plans, using their Patient Planner calendar provided in their packet. Counseling was also included through follow-up appointments and/or calls to the patients at four-week

intervals by the practitioner or medical assistant to emphasize self-efficacy; at the timed follow-ups, assessment of their current stage of change and current weight were documented for reporting purposes. After three to four months, the patients were called in for follow-up to complete the post-test questionnaire. This post-test questionnaire was given to the patient by medical assistants and a box was provided return the questionnaire upon completion to provide anonymity for the participant.

Data Analysis and Evaluation

Data analysis was completed using SPSS statistical software package. Initial and medical record number coded patients on the chart tracker form. The de-identified chart tracker provided a bulk of the data for analysis. The pre-test and post-test also provided data for extraction. Descriptive statistics were analyzed for patient demographics, BMI, and stages of change. Upon evaluation of the tool, all codes and form and the patient identifiers were destroyed. All data was de-identified before extraction for analysis.

Ethical Considerations

Approval for the project was obtained from the family practice clinic executive. Human subject approval was sought from the California State University, Los Angeles Institutional Review Board which determined the project was quality improvement rather than research. The project participants were provided informed consent at the beginning of the procedure, in Spanish and English (Appendix B). To control for any biases, the patient information was de-identified for reporting purposes. Informed consents and data were stored in a locked box in a closed office. All data will be destroyed after a maximum of three years.

Results

There were 21 female participants who enrolled to participate in this pilot study, after seeing the posted flyers in the clinic. Four of the 21 female participants did not return for follow up and were omitted from the data results. A total of 17 eligible participants were recruited for the study. Table 1 represents the demographic data of the group. The mean age of the sample of 17 was 36.65 years old with 100% of the sample being Hispanic or Latino. According to their BMI, Approximately 65% of the participants were obese, with the remainder categorized as overweight.

Table 1

Demographics of Sample

n	17	Range
Age (years)	36.65 (9.66)*	27 - 63
Height (inches)	61.94 (3.12)*	56 – 68
Weight (pounds)	183.38 (34.27)*	147 – 266
Race		
Hispanic or Latino	17 (100)**	
Body Mass Index	33.54 (5.36)*	
Overweight	6 (35.1)**	25.69 - 29.99
Obese	11 (64.9)**	31.37 - 47.87

*reported as $M(SD)$ or **n(valid %).

Stages of Change

Figure 2 shows the number of participants at their stage of change during the specified follow-up time. The assessment of the participants' stage of change was based on their reports of activity towards changing their lifestyle with either exercise or diet. They are staged based on their current actions during each follow-up. As seen in figure 2, a majority of the sample progressed from contemplation to either planning or action. Initially twelve out of 17 participants were in the contemplation stage. With the use of the change tool and motivational interviewing, 14 out of 17 participants progressed to the

next stages of change, preparation or action. Because of the lag between enrolling the first participant and the last participant six participants did not have all of the follow-up visits by the end of the project's reporting period; the results show the progression of the stages for the 11 that had at least two follow-ups. Not all participants made it to the fourth follow-up visit.

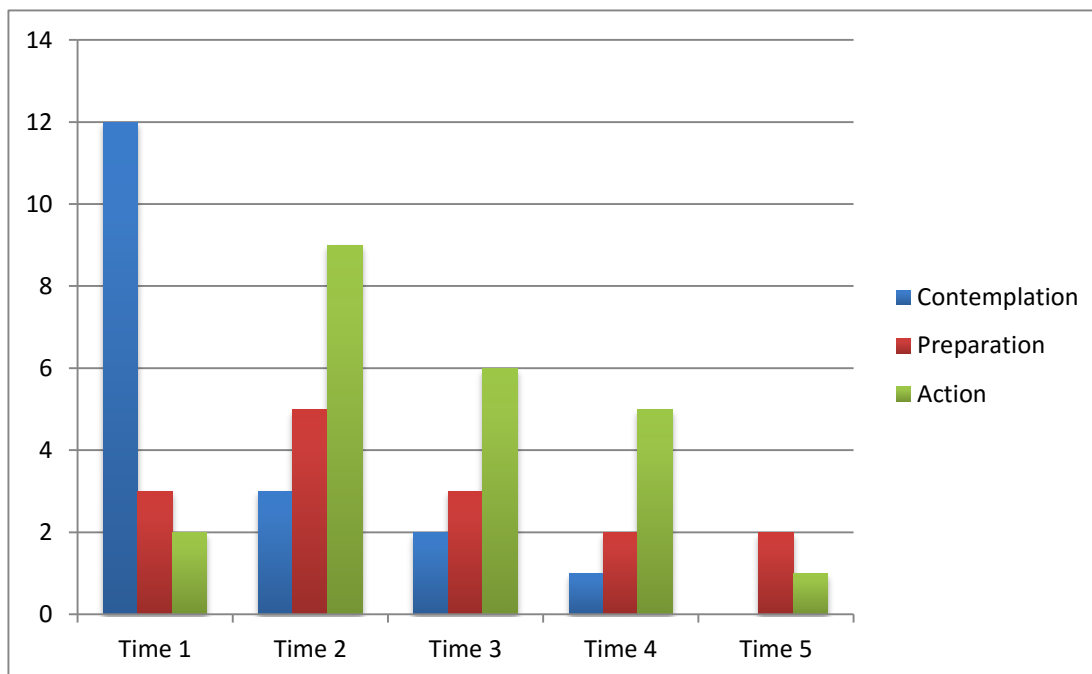


Figure 2. Stage of Change at Follow-up Visits. Progression through the stages for number of study participants at timed follow-up visits.

Post-Test Questionnaire

Seven participants completed the post-test questionnaire. The results of the four question test are shown in table 2. One participant did not answer question 1. As seen in Table 2, participants answered that the decisional balance tool and motivational interviewing were “very much” helpful in attempting to meet their weight loss goals.

Table 2

Results of Post-test Questionnaire (n=7)

	Not at all	Not really	Neutral/ Undecided	Somewhat	Very much
1. Was the decisional balance tool helpful in your weight loss goals?				2 (28.6%)	4 (75.1%)
2. How do you feel your eating has changed from the beginning to the end of this project?			1 (14.3%)	4 (57.1%)	2 (28.6%)
3. How do you feel your exercise habits have changed from the beginning to the end of this project?				5 (71.4%)	2 (28.6%)
4. How helpful was the motivational interviewing and counseling in your weight loss goals?				1 (14.3%)	6 (85.7%)

*reported as n(valid %).

Journal Entries

The pilot study also included journaling by the author who recorded the details of implementing the study and the comments from the follow-up calls and visits. It highlights the author's project work as well as individual participants' progression and/or barriers of lifestyle modification.

Implications for Practice

The results of this project showed that this tool bundle can be effective in initiating lifestyle change in this specific population of obese and overweight women. Hopefully the knowledge the members of this matriarchal population who participated gained about changing their lifestyle behaviors, they will be able to pass on to their families and children to improve their lives as well. The results coincide with the study of a home-based, stage-based behavior intervention that improved physical activity and healthy eating (Johnson et al., 2008). In clinical pilot projects it is impossible to get samples large enough to produce statistical significance (to produce a 0.5 significance for the effect size of this project the

author would have needed a sample of 385 participants) (Polit & Beck, 2012). The goal of this pilot project was not a rapid weight loss but an actual change in behaviors. The most significant results of this project were that participants reported changes in their behaviors or lifestyle. Fourteen out of 17 participants reported modifications in their thinking from just “contemplating” changes in their lifestyle to actually planning and changing their behaviors for weight loss through physical activity or diet. Four out of 17 participants progressed sufficiently to actually lose weight. When looking at the data for these patients who lost weight, there was a match in the progression of their stage of change.

Implementation

This pilot project was implemented simultaneously while conducting routine business in a busy primary care practice. As a family nurse practitioner, daily work includes well women examinations and encouraging patients’ to change their lifestyle for weight loss and other obvious health benefits; therefore, a big change in this work was not required to integrate the tool bundle into daily business. The part of the tool bundle that took up most of the time was the follow-up calls to patients, however when necessary this task was easily reassigned to the marketer who was able to make calls for the nurse practitioner.

Decisional Balance Tool

The decisional balance tool given to the participants while in the waiting room was effective as a time-saving technique. When patients inquired about the study after seeing the poster flyer in the examination rooms, there was some time to complete the tool while waiting for the nurse practitioner. When assessing their personal “pros and cons” for changing their lifestyle, about half of the participants seemed to complete the tool with

more thought and more appropriately. One possibility for this finding could be the difference between patients in contemplation and patients who are almost ready for preparation; their stage of change exhibits that they may be thinking of their barriers, “pros” and “cons” more thoroughly when closer to the preparation stage.

Motivational Interviewing

Studies show that motivational interviewing is effective in changing behaviors in medical care settings and shown efficacious when delivered in brief consultations (Lundahl et al., 2013). During the duration of this project, motivational interviewing as a technique showed helpful as it did assist the participants in progressing to the next stage of the TTM. Adding to the motivational interviewing, the motivational interviewing prompts utilizing the OARS communication skill contributed to the integration of this part of the tool bundle. The acronym “OARS” that represents “asking Open questions, Affirming, Reflection, and Summarizing” is not difficult to remember when applying this counseling technique (Hamera, 2014). With such strong evidence for the efficacy of this counseling technique, it is recommended that clinicians should familiarize themselves with this skill.

Limitations

There are evident limitations to the generalizability of this project. This is pilot project in a single clinic. There were significant time constraints for the project, as it was completed in a four month period. Given that all of the participants were Hispanic women, the author can only say that this tool bundle works for this population in this clinic.

Implications for Practice

The implications for practice focus on the feasibility of implementing this tool for other practitioners to use in a high volume, fast-paced primary care clinic. Follow-up calls were the most important factor in retention of the patients and contributed to their motivation in their goals towards lifestyle change. In a fairly busy primary care practice, a medical assistant or marketer could be in charge of making follow-up calls to make the implementation of this tool more time efficient, and if needing further consultation, the telephone call could be transferred. As discussed above, this tool bundle can be integrated into a similar family practice.

Although there was no formal control group, the author still has patients who come repeatedly saying they wish they could lose weight, but have not made any changes to their lifestyle. In the interest of time, the motivational interviewing focus was on the patients who volunteered for the project. In the future, without the request to sign up for a project, more patients may use to decide to use the decisional balance tool. For future studies, this decisional balance tool may need some adjustment; an assessment of the individual's reading may be required prior to distribution of this part of the tool bundle.

The pilot project shows that benefits occur when there is an increased investment by the practitioner, and patient changes in lifestyle were made with their equal investment. Although the sample of this pilot project was small, the participants reported significant changes in their stage of change according to the TTM. Any change in lifestyle is a progressive cycle that requires planning and can be initiated through this tool bundle process.

Future Research

As previously discussed, a single group for the study was a limitation and limitations may be addressed through implementation of a control group in future research. Future studies should include a longitudinal design to assess for lasting change with the use of the tool bundle. The author plans to continue with this project and expand it for use of other practitioners in the clinic. In the future, the author plans to look at the weight and comorbidities, such as hypertension, diabetes mellitus, and dyslipidemia in relation to lifestyle change.

References

- Armstrong, M. J., Mottershead, T. A., Ronksley, P. E., Sigal, R. J., Campbell, T. S., & Hemmelgarn, B. R. (2011). Motivational interviewing to improve weight loss in overweight and/or obese patients: A systematic review and meta-analysis of randomized controlled trials. *International Association for the Study of Obesity, 12*, 709-723. doi:10.1111/j.1467-789x.2011.00892.x
- Baruth, M., Sharpe, P.A., Parra-Medina, D., & Wilcox, S. (2014). Perceived barriers to exercise and healthy eating among women for disadvantaged neighborhoods: Results from a focus groups assessment. *Women & Health, 54*(4), 336-353. doi: 10.1080/03630242.2014.896443
- Blaney, C. L., Robbins, M. L., Paiva, A. L., Redding, C. A., Rossi, J. S., Blissmer, B., . . . & Oatley, K. (2012). Validation of the measures of the transtheoretical model for exercise in an adult African-American sample. *American Journal of Health Promotion, 26*(5), 317-326. doi:10.4278/ajhp.091214-QUAN-393
- Di Noia, J, & Prochaska, J. O. (2010). Dietary stages of change and stages of change: A meta-analytic review. *American Journal of Health Behavior, 34*(5):618-632. doi:10.5993/AJHB.34.5.11
- Hamera, E. (2014). Motivational interviewing. In K. Wheeler (2nd ed.), *Psychotherapy for the advanced practice psychiatric nurse: A how-to guide for evidence-based practice* (pp. 299-312). New York, NY: Springer.
- Jackson, R., Asimakopoulou, K., & Scammell, A. (2007). Assessment of the transtheoretical model as used by dietitians in promoting physical activity in people with type 2 diabetes. *Journal of Human Nutrition & Dietetics, 20*(1), 27-36. doi:10.1111/j.1365-277X.2007.00746.x

- Lambert, L., Raidal, M., Safaii, S., Conner, C., Geary, E.J., & Ault, S. (2005). Perceived benefits and barriers related to postpartum weight loss of overweight/obese postpartum WIC participants. *Topics in Clinical Nutrition, 20*(1), 16-27.
doi:10.1097/00008486-200501000-00003
- Lundahl, B., Kunz, C., Brownell, C., Tollefson, D., & Burke, B. L. (2010). A meta-analysis of motivational interviewing: Twenty-five years of empirical studies. *Research on Social Work Practice, 20*(2), 137-160.
doi:10.1177/1049731509347850
- Lundahl, B., Moleni, T., Burke, B. L., Butters, R., Tollefson, D., Butler, C., & Rollnick, S. (2013). Motivational interviewing in medical care settings: A systematic review and meta-analysis of randomized controlled trials. *Patient Education and Counseling, 93*(2013), 157-68. doi:10.1177/1049731509347850
- Miller, W. R., & Rollnick, S. (2002). *Motivational interviewing: Preparing people for change*. New York, NY: The Guildford Press.
- Polit, D. & Beck, C. (2012). *Nursing research: Generating and assessing evidence for nursing practice* (9th ed.). Philadelphia, PA: Lippincott Williams & Wilkins.
- Prochaska, J. O., Norcross, J. C., & Diclemente, C. C. (1994). *Changing for good: A revolutionary six-stage program for overcoming bad habits and moving your life positively forward*. New York, NY: Avon Books.
- Reyes, N. R., Klotz, A. A., & Herring, S. J. (2013). A qualitative study of motivators and barriers to healthy eating in pregnancy for low-income, overweight, African-American women. *Journal of the Academy of Nutrition and Dietetics, 113*(9), 1175-1189. doi:10.1016/j.jand.2013.05.014

Rollnick, S., Miller, W. R., & Butler, C. C. (2008). *Motivational interviewing in health care: Helping patients change behavior*. New York, NY: The Guildford Press.

Appendix

Decisional Balance “Pros/Cons” Tool

So you are thinking of losing weight, please fill out the questionnaire and check your reasons for changing or not changing and mark a 1 at your most important. If you do not find your choice, please feel free to fill in the blanks.

<i>What is your age?</i>	
<i>What is your race/ethnicity?</i>	
1 – American Indian or Alaska Native	5 – Native Hawaiian or Other Pacific Islander
2 – Asian	6 – White
3 – Black or African American	7 – Other: _____
4 – Hispanic or Latino	

Benefits of Changing

___ Healthy children
___ Better health/more energy
___ High self-esteem/Confidence
___ Less judgment from being “fat”
___ Decrease stress/anxiety

Benefits of Not Changing

___ Better tasting foods
___ More time with friends/family
___ More money for other activities
___ Less effort to learn about health

Costs of Changing

___ Costs healthy food/less money
___ More effort/more self-control
___ Times taken from other activities
___ Less time with friends/family

Costs of Not Changing

___ Increased weight
___ Increased risk of illness
___ Unhappy with how I look
___ Low self-esteem/Confidence
___ Increased stress/anxiety

For office use only :

Date:		TTM Stage:	
Height:	Weight:	BMI:	

Stage-Based Motivational Interviewing Prompts

MI Phases of Change	OARS Communication Skills and Sample Prompts	Date: Notes
<p><i>Engagement</i> Goal: Establish trust and helping relationship</p> <p><i>TTM Stage:</i> Precontemplation Contemplation Planning</p>	<ul style="list-style-type: none"> • <u>Open questioning</u>: Tell me more about that? What concerns you? • <u>Affirming</u>: It took effort. You made the first step. • <u>Reflecting</u>: <ul style="list-style-type: none"> ○ <i>Patient</i>: I am sick of feeling uncomfortable in my clothes. ○ <i>Practitioner</i>: It sounds like you are getting tired of being unhappy with your body. • <u>Summarizing</u>: You are not alone in your concerns. 	
<p><i>Focusing</i> Goal: Identify direction/target of change</p> <p><i>TTM Stage:</i> Contemplation Planning</p>	<ul style="list-style-type: none"> • <u>Open questioning</u>: Tell me more? What aspect of management is difficult? • <u>Affirming</u>: It is your choice. You did it before. • <u>Reflecting</u>: <ul style="list-style-type: none"> ○ <i>Patient</i>: I am going to walk everyday, so I won't need to purchase a gym pass. ○ <i>Practitioner</i>: You feel walking is the best exercise for you. • <u>Summarizing</u>: You have started to exercise, but you are not sure what else you can do to lose weight. 	
<p><i>Evoking</i> Goal: Bring forth person's motivation to change</p> <p><i>TTM Stage:</i> Precontemplation Contemplation Planning</p>	<ul style="list-style-type: none"> • <u>Open questioning</u>: What are pros and cons? What are barriers? • <u>Affirming</u>: You care about your happiness and your family's health. • <u>Reflecting</u>: <ul style="list-style-type: none"> ○ <i>Patient</i>: I will have less time for friends, but I will feel better in the end. ○ <i>Practitioner</i>: Losing time for other activities is a pitfall, but it is worth it if your health is better. • <u>Summarizing</u>: You have identified that it will be hard for you to exercise after work but you are not sure you can fit it in the morning. 	<u>Patient's stated start date:</u>
<p><i>Planning</i> Goal: Elicit plan that will be followed</p> <p><i>TTM Stage:</i> Planning Action</p>	<ul style="list-style-type: none"> • <u>Open questioning</u>: What will you do this week/month? • <u>Affirming</u>: This is a big step, but you found a way to make it work. • <u>Reflecting</u>: <ul style="list-style-type: none"> ○ <i>Patient</i>: I will stop drinking soda this week and beginning walking for 30 minutes everyday. ○ <i>Practitioner</i>: You have made weekly and daily goals for yourself and your plan to lose weight. • <u>Summarizing</u>: You think that stopping all sugary drinks, starting in one week is the best way for you to work on your diet. 	

Note. MI=Motivational interviewing. TTM=Transtheoretical Model. OARS=Open questions, Affirming, Reflecting, and Summarizing. Adapted from "Motivational Interviewing: Phases of change and OARS communication Skills" by Hamera, 2014, p. 304. Copyright by 2014 by Springer.

APPENDIX B
PROJECT FORMS AND TOOLS

Post-test Questionnaire

Please answer questions below in relation to the project study.

<i>Age:</i>	
<i>Race/Ethnicity:</i>	
1 – American Indian or Alaska Native 2 - Asian 3 – Black or African American 4 - Hispanic or Latino	5 – Native Hawaiian or Other Pacific Islander 6 - White 7 – Other: _____

1. Was the decisional balance tool helpful in your weight loss goals?

1	2	3	4	5
Not at all helpful	Not very helpful	Neutral/ Undecided	Somewhat helpful	Very helpful

2. How do you feel your eating has changed from the beginning to the end of this project?

1	2	3	4	5
Not at all	Not really	Neutral/ Undecided	Somewhat	Very much

3. How do you feel your exercise habits have changed from the beginning to the end of this project?

1	2	3	4	5
Not at all	Not really	Neutral/ Undecided	Somewhat	Very much

4. How helpful was the motivational interviewing and counseling in your weight loss goals?

1	2	3	4	5
Not at all helpful	Not very helpful	Neutral/ Undecided	Somewhat helpful	Very helpful

Post-test Questionnaire in Spanish

Cuestionario posterior a la prueba

Por favor conteste las preguntas a continuación en relación con el proyecto de estudio.

<i>Cuál es su edad?</i>	
<i>¿Cuál es su raza / etnia?</i>	
1 – Indio Americano o Nativo de Alaska	5 – Nativo de Hawái u otras islas del Pacífico
2 - Asiático	6 - Blanco
3 – Negro o afroamericano	7 – Otros:
4 - Hispano o Latino	_____

1. ¿Ha sido útil en sus objetivos de pérdida de peso de la herramienta de balance decisional?

1	2	3	4	5
Para nada útil	Para nada útil	Neutral/ Indeciso	Algo útil	Muy útil

2. ¿Cómo siente que su alimentación ha cambiado desde el principio hasta el final de este proyecto?

1	2	3	4	5
Nada	Realmente no	Neutral/ Indeciso	Algo	Muy

3. Cómo siente que sus hábitos de ejercicio han cambiado desde el principio hasta el final de este proyecto?

1	2	3	4	5
Nada	Realmente no	Neutral/ Indeciso	Algo	Muy

4. ¿Qué tan útil fue la entrevista motivacional y asesoramiento en sus objetivos de pérdida de peso?

1	2	3	4	5
Para nada útil	Para nada útil	Neutral/ Indeciso	Algo útil	Muy útil

Poster Box Flyer

Thinking of losing weight?

-Are you over 18 years old, a woman, and overweight/obese?

-If you answered yes, you may qualify to participate in a lifestyle modification study.

-Fill out this assessment tool and we will try to help you help yourself.

Contact: Patricia Aguinaldo, FNP-C
(323) 583-5887

THIS PROJECT HAS BEEN REVIEWED BY THE CALIFORNIA STATE UNIVERSITY, LOS ANGELES INSTITUTIONAL REVIEW BOARD FOR THE PROTECTION OF HUMAN SUBJECTS IN RESEARCH. ADDITIONAL CONCERNS AND COMPLAINTS, OR QUESTIONS REGARDING YOUR RIGHTS AS A RESEARCH PARTICIPANT, SHOULD BE DIRECTED TO THE ASSOCIATE VICE PRESIDENT FOR RESEARCH AND ACADEMIC PERSONNEL (Phone number: 323-343-3798).

Pensando en la pérdida de peso?

- ¿Es usted una mujer de más de 18 años de edad con sobrepeso / obesidad?

-Si Usted contestó sí, usted puede calificar para participar en un estudio de la modificación del estilo de vida.

-Complete esta herramienta de evaluación y vamos a tratar de ayudarlo a ayudarse a sí misma.

Contacto: Patricia Aguinaldo, FNP-C (323) 583-5887

ESTE PROYECTO HA SIDO REVISADO POR LA JUNTA DE REVISIÓN INSTITUCIONAL PARA LA PROTECCIÓN DE LOS INDIVIDUOS HUMANOS EN LA INVESTIGACIÓN DE LA CALIFORNIA STATE UNIVERSITY, EN LOS ANGELES. LAS PREOCUPACIONES ADICIONALES Y QUEJAS O PREGUNTAS ACERCA DE SUS DERECHOS COMO PARTICIPANTE DE LA INVESTIGACIÓN, DEBEN DIRIGIRSE A LA VICEPRESIDENCIA ASOCIADA DE INVESTIGACIÓN Y PERSONAL ACADÉMICO (Teléfono: 323-343-3798).

Stage-Based Motivational Interviewing Prompts

MI Phases of Change	OARS Communication Skills and Sample Prompts	Date: Notes
<p><i>Engagement</i> Goal: Establish trust and helping relationship</p> <p><i>TTM Stage:</i> Precontemplation Contemplation Planning</p>	<ul style="list-style-type: none"> • <u>Open questioning</u>: Tell me more about that? What concerns you? • <u>Affirming</u>: It took effort. You made the first step. • <u>Reflecting</u>: <ul style="list-style-type: none"> ○ <i>Patient</i>: I am sick of feeling uncomfortable in my clothes. ○ <i>Practitioner</i>: It sounds like you are getting tired of being unhappy with your body. • <u>Summarizing</u>: You are not alone in your concerns. 	
<p><i>Focusing</i> Goal: Identify direction/target of change</p> <p><i>TTM Stage:</i> Contemplation Planning</p>	<ul style="list-style-type: none"> • <u>Open questioning</u>: Tell me more? What aspect of management is difficult? • <u>Affirming</u>: It is your choice. You did it before. • <u>Reflecting</u>: <ul style="list-style-type: none"> ○ <i>Patient</i>: I am going to walk everyday, so I won't need to purchase a gym pass. ○ <i>Practitioner</i>: You feel walking is the best exercise for you. • <u>Summarizing</u>: You have started to exercise, but you are not sure what else you can do to lose weight. 	
<p><i>Evoking</i> Goal: Bring forth person's motivation to change</p> <p><i>TTM Stage:</i> Precontemplation Contemplation Planning</p>	<ul style="list-style-type: none"> • <u>Open questioning</u>: What are pros and cons? What are barriers? • <u>Affirming</u>: You care about your happiness and your family's health. • <u>Reflecting</u>: <ul style="list-style-type: none"> ○ <i>Patient</i>: I will have less time for friends, but I will feel better in the end. ○ <i>Practitioner</i>: Losing time for other activities is a pitfall, but it is worth it if your health is better. • <u>Summarizing</u>: You have identified that it will be hard for you to exercise after work but you are not sure you can fit it in the morning. 	<p><u>Patient's stated start date:</u></p>
<p><i>Planning</i> Goal: Elicit plan that will be followed</p> <p><i>TTM Stage:</i> Planning Action</p>	<ul style="list-style-type: none"> • <u>Open questioning</u>: What will you do this week/month? • <u>Affirming</u>: This is a big step, but you found a way to make it work. • <u>Reflecting</u>: <ul style="list-style-type: none"> ○ <i>Patient</i>: I will stop drinking soda this week and beginning walking for 30 minutes everyday. ○ <i>Practitioner</i>: You have made weekly and daily goals for yourself and your plan to lose weight. • <u>Summarizing</u>: You think that stopping all sugary drinks, starting in one week is the best way for you to work on your diet. 	

Note. MI=Motivational interviewing. TTM=Transtheoretical Model. OARS=Open questions, Affirming, Reflecting, and Summarizing. Adapted from "Motivational Interviewing: Phases of change and OARS communication Skills" by Hamera, 2014, p. 304. Copyright by 2014 by Springer.

Decisional Balance “Pros/Cons” Tool

So you are thinking of losing weight, please fill out the questionnaire and check your reasons for changing or not changing and mark a 1 at your most important. If you do not find your choice, please feel free to fill in the blanks.

<i>What is your age?</i>	
<i>What is your race/ethnicity?</i>	
1 – American Indian or Alaska Native	5 – Native Hawaiian or Other Pacific Islander
2 – Asian	6 – White
3 – Black or African American	7 – Other: _____
4 – Hispanic or Latino	

Benefits of Changing

___ Healthy children
___ Better health/more energy
___ High self-esteem/Confidence
___ Less judgment from being “fat”
___ Decrease stress/anxiety

Benefits of Not Changing

___ Better tasting foods
___ More time with friends/family
___ More money for other activities
___ Less effort to learn about health

Costs of Changing

___ Costs healthy food/less money
___ More effort/more self-control
___ Times taken from other activities
___ Less time with friends/family

Costs of Not Changing

___ Increased weight
___ Increased risk of illness
___ Unhappy with how I look
___ Low self-esteem/Confidence
___ Increased stress/anxiety

For office use only :

Date:	TTM Stage:	
Height:	Weight:	BMI:

Decisional Balance "Pros/Cons" Tool in Spanish

Herramienta de Balance Decisional "Pros/Contras"

Así que usted está pensando en perder peso, por favor llene el siguiente cuestionario y revise sus razones para cambiar o no cambiar. Por favor marque un 1 a su razón más importante. Si usted no encuentra su elección, por favor siéntase libre de llenar los espacios en blanco.

Cuál es su edad?	
¿Cuál es su raza / etnia?	
1 - Indio Americano o Nativo de Alaska	5 - Nativo de Hawái u otras islas del Pacífico
2 - Asiático	6 - Blanco
3 - Negro o afroamericano	7 - Otros: _____
4 - Hispano o Latino	

Beneficios de Cambiar

___ Los niños sanos
___ Una mejor salud / más energía
___ Alta autoestima / confianza
___ Menos señalamiento de ser "gordo"
___ Reducir Estrés / ansiedad
___ _____
___ _____
___ _____

Beneficios de no Cambiar

___ Mejor degustación de los alimentos
___ Más tiempo con amigos/familia
___ Más dinero para otras actividades
___ Menos esfuerzo para aprender acerca de la salud
___ _____
___ _____
___ _____

Los Costos de Cambio

___ Costos de la comida sana/menos dinero
___ Más esfuerzo/más autocontrol
___ Los tiempos tomados de otras actividades
___ Menos tiempo con amigos / familia
___ _____
___ _____
___ _____

Los Costos de no Cambiar

___ El aumento de peso
___ Aumento del riesgo de enfermedad
___ Inconformidad con cómo me veo
___ La baja autoestima/confianza
___ El aumento del estrés / ansiedad
___ _____
___ _____
___ _____

Sólo para uso de oficina :

Fecha:	TTM Etapa:		
Altura:	Peso:	BMI:	

Sele

Chart Tracker for Follow-up

DATE	PT initials	Medical Record Number	Height (inch)	0 MONTH			1 MONTH			2 MONTH			3 MONTH			4 MONTH		
				WT.	BMI	TTM	WT.	BMI	TTM	WT.	BMI	TTM	WT.	BMI	TTM	WT.	BMI	TTM
				S	M		S	M		S	M		S	M		S	M	
				S	M		S	M		S	M		S	M		S	M	
				S	M		S	M		S	M		S	M		S	M	
				S	M		S	M		S	M		S	M		S	M	
				S	M		S	M		S	M		S	M		S	M	
				S	M		S	M		S	M		S	M		S	M	
				S	M		S	M		S	M		S	M		S	M	
				S	M		S	M		S	M		S	M		S	M	
				S	M		S	M		S	M		S	M		S	M	
				S	M		S	M		S	M		S	M		S	M	
				S	M		S	M		S	M		S	M		S	M	
				S	M		S	M		S	M		S	M		S	M	
				S	M		S	M		S	M		S	M		S	M	
				S	M		S	M		S	M		S	M		S	M	
				S	M		S	M		S	M		S	M		S	M	
				S	M		S	M		S	M		S	M		S	M	
				S	M		S	M		S	M		S	M		S	M	
				S	M		S	M		S	M		S	M		S	M	

Note. PT = Patient. WT = Weight. BMI = Calculated Body Mass Index. TTM = Transtheoretical model. S = Stated weight. M = Measured weight. PC = Precontemplation. C = Contemplation. P = Preparation. A = Action. M = Maintenance.

Patient Planner Assistant

Monthly Planner: _____

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday

Plans

Goals

Patient Planner Assistant in Spanish

Asistente de Planeación del Paciente

Planificador mensual: _____

Domingo	Lunes	Martes	Miércoles	Jueves	Viernes	Sábado
Domingo	Lunes	Martes	Miércoles	Jueves	Viernes	Sábado
Domingo	Lunes	Martes	Miércoles	Jueves	Viernes	Sábado
Domingo	Lunes	Martes	Miércoles	Jueves	Viernes	Sábado
Domingo	Lunes	Martes	Miércoles	Jueves	Viernes	Sábado

Planes

Objetivos

Informed Consent Form

A Change Tool For Lifestyle Modifications in Obese and Overweight Women

To Project Participant:

You are invited to take part in a study project conducted by Patricia Aguinaldo, a doctorate of nursing practice student at California State University, Los Angeles. In this study we hope to learn more about helping you change your lifestyle, as in healthy eating and exercise for weight loss. You were selected to participate in this study because you fit the criteria of being a woman, over 18 years old, and overweight or obese; you also chose to fill out the cost-benefit analysis tool form attached to this form. We hope that our study will lead to you losing weight.

In this study, you will be expected to participate for the duration of one to four months. You will be expected participate in activities related to healthy eating and physical activity for the purpose of losing weight. You will also be asked to give us information on weight and activities at each meeting, based on the completion of your cost-benefit analysis tool. You will be expected to follow-up with your provider to assess progression towards your goals. At the end of four months, you will be expected to respond to a survey regarding the study.

The risks involved in this study are minimal, but there may be a potential risk for the loss of confidentiality in any study. You might spend more money in your budget for food. You might be injured participating in an exercise program. Because participation in any particular exercise will be voluntary, any injury sustained will be handled in the same manner, as if you were not a participant of the study. In all cases, in the event of need for emergency medical care outside of the clinic, 911 should be called. Any and all incurred health care costs associated with participation in this research project are the responsibility of the subject.

Reports resulting from this study will not identify you as a participant. All information gathered in this study will remain confidential, and anything with your name, address, telephone number, or other personal information will be not be given to anyone. Only your provider will know who you are. All identified data will stay in your medical record. Any information to be used outside of the clinic will not have your name or medical record number or anything that could connect you to the study. All consent forms will be kept in a separate locked and secured location. These files will be kept at a minimum of three years following completion of the study before being destroyed.

If you have any questions about this study at any time, please call Patricia Aguinaldo at (323) 583-5887 or write her at paguinaldo@csu.fullerton.edu and 6316 Holmes Avenue, Los Angeles, CA 90001.

By signing this consent form you indicate that you have read the form and agree voluntarily to participate in the study. If you choose not to take part there will be no penalty or loss of benefits to which you are entitled. If you agree to take part, you are free to withdraw from it at any time. Likewise, no penalty or loss of benefits to which you are otherwise entitled will occur.

Signature

Date

THIS PROJECT HAS BEEN REVIEWED BY THE CALIFORNIA STATE UNIVERSITY, LOS ANGELES INSTITUTIONAL REVIEW BOARD FOR THE PROTECTION OF HUMAN SUBJECTS IN RESEARCH. ADDITIONAL CONCERNS AND COMPLAINTS, OR QUESTIONS REGARDING YOUR RIGHTS AS A RESEARCH PARTICIPANT, SHOULD BE DIRECTED TO THE ASSOCIATE VICE PRESIDENT FOR RESEARCH AND ACADEMIC PERSONNEL (Phone number: 323-343-3798).

Informed Consent in Spanish

Consentimiento Informado

Una herramienta de cambio para las modificaciones de estilo de vida en mujeres obesas y con sobrepeso

Para el Participante del Proyecto:

Usted está invitado a participar en un proyecto de investigación llevado a cabo por Patricia Aguinaldo, estudiante de doctorado en práctica de enfermería de la California State University en Los Ángeles. En este estudio esperamos aprender más sobre cómo ayudar a cambiar su estilo de vida, en la alimentación saludable y el ejercicio para bajar de peso. Usted fue seleccionado para participar en este estudio porque usted cumple con los criterios de ser una mujer, mayor de 18 años de edad, con sobrepeso u obesidad; también eligió llenar el formulario de la herramienta de análisis de costo-beneficio adjunto a este formulario. Esperamos que nuestra investigación le llevará a usted a la pérdida de peso.

En este estudio, se espera que usted participe durante una duración de uno a cuatro meses. Se espera que participe en actividades relacionadas con la alimentación saludable y la actividad física con el fin de perder peso. También se le pedirá que nos dé información sobre el peso y las actividades en cada reunión, con base en la finalización de su herramienta de análisis de costo-beneficio. Se espera que usted realice el seguimiento con su médico para evaluar el progreso hacia sus metas. Al final de cuatro meses, se espera que usted responda una encuesta sobre el estudio.

Los riesgos involucrados en este estudio son mínimos, pero puede haber un riesgo potencial por la pérdida de confidencialidad en cualquier estudio. Usted puede gastar más dinero de su presupuesto en alimentos. Usted puede resultar lesionado al participar en un programa de ejercicios. Debido a que la participación en cualquier ejercicio particular será voluntaria, cualquier lesión sufrida será manejada de la misma manera, como si no fuera un participante del estudio. En todos los casos, en el caso de necesidad de atención médica de emergencia fuera de la clínica, se debe llamar al 911. Todas y todos los costos de atención de salud efectuados en relación con la participación en este proyecto de investigación son la responsabilidad del individuo.

Los informes resultantes de este estudio no le identificarán como participante. Toda la información recopilada en este estudio será confidencial, y cualquier cosa con su nombre, dirección, número de teléfono u otra información personal no se entregará a cualquier persona. Sólo su proveedor sabrá quién es usted. Todos los datos identificados se quedarán en su expediente médico. Cualquier información que se utilice fuera de la clínica no tendrá su nombre o número de historia clínica o cualquier cosa que podría relacionarle con el estudio. Todos los formularios de consentimiento se mantendrán en un lugar separado bajo llave. Estos archivos se mantienen durante un mínimo de tres años a partir de la finalización del estudio antes de ser destruidos.

Si usted tiene alguna pregunta sobre esta investigación en cualquier momento, por favor llame a Patricia Aguinaldo al (323) 583-5887 o escríbale a paguinaldo@csu.fullerton.edu o a 6316 Holmes Avenue, Los Angeles, CA 90001.

Al firmar este formulario de consentimiento usted indica que ha leído el formulario y acepta voluntariamente participar en el estudio. Si decide no participar, no habrá sanción o pérdida de beneficios a los que tiene derecho. Si usted acepta participar, usted es libre de retirarse del mismo en cualquier momento. Del mismo modo, no se producirá ninguna sanción o pérdida de beneficios a los que tienen derecho.

Estoy de acuerdo en participar en "Una herramienta para el cambio de estilo de vida en mujeres obesas y con sobrepeso" en los términos indicados.

Firma

Fecha

ESTE PROYECTO HA SIDO REVISADO POR LA JUNTA DE REVISIÓN INSTITUCIONAL PARA LA PROTECCIÓN DE LOS INDIVIDUOS HUMANOS EN LA INVESTIGACIÓN DE LA CALIFORNIA STATE UNIVERSITY, EN LOS ANGELES. LAS PREOCUPACIONES ADICIONALES Y QUEJAS O PREGUNTAS ACERCA DE SUS DERECHOS COMO PARTICIPANTE DE LA INVESTIGACIÓN, DEBEN DIRIGIRSE A LA VICEPRESIDENCIA ASOCIADA DE INVESTIGACIÓN Y PERSONAL ACADÉMICO (Teléfono: 323-343-3798).