

## ABSTRACT

### Culturally Targeted Group Education on Hypertension Among Hispanic Women

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Hypertension is a growing concern among the Hispanic female populations, which is the second largest ethnic group in Texas. Not only are Hispanics less likely to seek care for their chronic illness but they are also at higher risk of a diet consumption high in sodium and fat content. An important aspect of treating hypertension is lifestyle modification, which includes diet, exercise, and medication adherence. A prevalent barrier to self-management of hypertension is the gap in provider - patient communication and a lack of mutual understanding of cultural values and practices. Three project workshops were implemented for 13 participants in a Federal Qualified Health Center clinic with a predominantly Hispanic population. The culturally-targeted education workshops for hypertensive patients were designed to enhance achievement of peer support, utilization of SMART goals, and appropriate follow-up care through mHealth text messaging. Based on the low participant response (1 out of 11) to weekly text messages, no statistically significant conclusion can be reached for follow-up care. The observed peer support during workshop, written feedback by participants after the session, and verbal expression of increased interest in self-management of hypertension, altogether bolster the importance of culturally-targeted group education model for Hispanic women.

*Keywords:* Hispanics, women, Hypertension, cultural competency, SMART goals, mHealth, DASH diet, LEARN, CenteringPregnancy

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CULTURALLY TARGETED GROUP EDUCATION ON HYPERTENSION AMONG  
HISPANIC WOMEN

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By  
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## PREFACE

College has been one of the most formative years of my life. God paved the path for me to grow holistically through the challenges and the rich communities of the Honors College and the College of Nursing. Both divisions have taught me to appreciate the beauty of art and science. In the last four years, I have encountered many Hispanic communities with low-socioeconomic standing both domestically and internationally through medical mission trips and volunteer opportunities. My eyes were opened to see the needs beyond clinical settings and to have compassion for the Hispanic population. Through personal and clinical encounters, I noticed a trend of hypertension among the populations. This ignited my interest to do further research and to write about the possible implications this may have in the field of nursing practice.

The Honors program provided me with an avenue for scholarly research and thesis development, while my nursing education allowed me to have personal encounters with the Hispanic patients — thus encompassing both the science and the art of nursing. The process of thesis was rigorous, time-consuming, and not without many trials and errors. However, God’s perfect timing and provision in have made this procedure enriching and invaluable. My hope is to take this onwards and to grow in appreciation for the art and science of nursing. I would like to conclude with my favorite quote by Frederick Buechner, who inspires me to pursue this journey: “The place God calls you to is the place where your deep gladness and the world’s deep hunger meet.”

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Eui Young M. Moon

## CHAPTER 1

### Introduction

Hypertension is a leading and multifaceted contributor to morbidity and mortality in Hispanic populations, particularly women, in the United States. The purpose of the project was to teach the Dietary Approach to Stop Hypertension (DASH) diet to Hispanic women diagnosed with hypertension and to facilitate lifestyle changes to manage the noncommunicable disease. Nurses play an integral role in educating healthy lifestyle choices to support individuals' decisions on their own well-being. To facilitate effective teaching, which potentiates appropriate action, nurses are responsible to be culturally competent in effective communication and in setting mutual goals with the patients. The target audience is Hispanic women with diagnosed hypertension in Dallas, Texas. Studies show rapid growth of Hispanic populations in the United States, especially Texas (Ura, 2018). Yet, health prognoses of this population is poor compared to other ethnic groups in the nation.

According to the U.S. Census Bureau, the 2017 population of white non-Hispanic Texans remains the largest ethnic group (11,886,381), and the Hispanic population is second to the largest group (11,156,514) (Ura, 2018). In fact, Dallas is the only county in Texas that has had an increase in Hispanic population and *decrease* in the overall non-Hispanic white population from 787,150 in 2010 to 764,200 in 2017 (Ura, 2018). Despite



the rapid growth of Hispanic population, the quality of healthcare available for the ethnicity, as well as health-seeking behavior, is significantly reduced compared to that of non-Hispanic whites. Thus, chronic health issues of the population group have become a growing concern. Heart disease is the leading cause of death among Hispanic populations in the U.S.; it accounted for 45.3% of all deaths in 2015, according to CDC (Heron, 2017). The risk of getting heart disease is dependent on a cluster of multiple non-modifiable and modifiable risk factors such as age, sex, health history, total cholesterol level, BMI, and management of hypertension, diabetes, and smoking (Balfour, Ruiz, Talavera, & Allison, 2016). There is limited published data on hypertension among Hispanic populations. However, studies show “Hispanic adults [are] least likely to be aware of their HTN compared to Non-Hispanic Whites (NHW) (78% vs. 81%) and Non-Hispanic Blacks (NHB) adults” (Balfour, Ruiz, Talavera, Allison, and Rodriguez, 2016, p. 12). Even with diagnosis, Hispanics are less likely to be compliant with their treatment (70%) than their NHW and NHB counterparts (77 & 80%, respectively) (Balfour et al., 2016). In addition, Hispanics are less likely to maintain control over their high blood pressure (41%) compared to NHW and NHB populations (56% and 48%, respectively) with hypertension (Balfour et al., 2016). There are many theories and hypothesis posed on explaining the findings. However, some of the most significant factors that influence health, health-seeking behavior, awareness, and compliance with the treatment are culture of the patient and cultural competency of the health caregiver.

Culture is defined as “the set of shared attitudes, values, goals, and practices that characterizes an institution or organization” (Merriam-Webster, 2018, para.1). The greater

the divergence between the cultural perspectives of a patient and his/her respective caregiver, the more challenging it is to reach a mutual understanding and setting SMART (Specific, Measurable, Achievable, Relevant, Timely) goals for health promotion. In light of this potential conflict, the project incorporated cultural competency and appropriate communication to effectively guide the Hispanic participants' decisions on managing their high blood pressure. The Cross (1989) framework delineates a step-by-step approach to achieve cultural competence, and certain elements of the LEARN model and Centering Pregnancy model were integrated into the development of the teaching framework for the Hispanic women with hypertension.

*Specific Aim/Goal*

Culturally targeted and interactive group education setting, focused on the DASH diet with SMART goals, and subsequent text message prompts will improve hypertensive Hispanic women's self-evaluation of their diet-related goals.

## CHAPTER 2

### Literature Review

#### *Cultural Competency and Cultural Influence on the Health of Hispanics*

Culture affects health outcomes due to its impact on communication between health care providers and patients, health literacy, values, and traditional health beliefs. According to Cross et al. (1989), cultural competence is defined as a “set of congruent behaviors, attitudes, and policies that come together in a system, agency or among professionals and enable that system, agency or those professions to work effectively in cross-cultural situations” (Georgetown University, n.d., para. 3). It ranges on a continuum of cultural destructiveness, which is a complete disregard for another’s culture, to cultural proficiency, which demonstrates competence and application of knowledge into patient-centered care (Touhy and Jett, 2016). There is a direct correlation between a healthcare provider’s cultural competence and the patient’s level of satisfaction as well as compliance after consultation. Compared to non-Hispanic White counterparts, Hispanic patients feel more stigmatized and dissatisfied after consultation with their healthcare providers (Bean, Covarrubias, & Stone, 2014). When faced with discrimination, Hispanic patients’ responses range from avoidance of addressing the stigma to discontinuing the relationship, and occasionally confronting bias (Bean, Covarrubias, & Stone, 2014). One study revealed when the Hispanic participants faced an unambiguous bias by their

healthcare provider, they were more likely to leave the doctor's office and not continue care with the clinic (Bean, Covarrubias, & Stone, 2014). This may increase the risk of noncompliance to medical advice or prescription and inadvertently lead to aggravation of health conditions. Conversely, maintaining a trusting relationship between the healthcare provider and patient engenders higher levels of satisfaction and compliance to the medical regimen provided by the provider. Another study indicated Hispanic patients "who [felt] a sense of agency regarding their health outcomes [had] more collaborative relationships with their doctors" and were less likely to attribute the doctor's statements as prejudiced compared to those who lacked a sense of empowerment in making decisions regarding their own health outcomes (Bean, Covarrubias, & Stone, 2014, p. 699). Thus, healthcare providers could enhance the relationship with patients, decrease the risk of perceived bias, and increase the level of satisfaction or compliance among patients by empowering the patients.

Empowerment becomes more effective when the health care provider understands and adapts to the cultural needs and values of the Hispanic patients. One of the fundamental ways health care provider could enhance communication is by eliminating the language barrier between the provider and the patients. Research shows culturally competent translation and translated material increase the participation among Asian Americans, Latinos, and Pacific Islanders (George, Duran, & Norris, 2014). In addition to language, awareness of the underlying cultural values among Hispanics is integral for effective communication. The Hispanic culture has collectivistic nature, which emphasizes putting "family's needs before needs of oneself" (familismo)

(Gonzalez & Mendez-Pounds, 2017, p. 57), respect towards elderly or those higher in authority (*respeto*) (Gonzalez & Mendez-Pounds, 2017), “positive, personal relationships” (*personalismo* and *simpatia*) (Jones, 2014, p. 1425), and trust (*confianza*) (Jones, 2014). In a healthcare setting, developing *confianza* is especially important (Jones, 2014). The first stage of developing trust is when the patient is in need and their needs are met by reliance on the nursing care (Jones, 2014). It is critical for the patients to feel that the nurse is providing appropriate and competent care to meet their needs. The second stage is the development of connectedness between the patient and the nurse (Jones, 2014). This is where *personalismo* and *respeto* contribute as nurses personally relates to the patient and shows respect by addressing the patient’s desires and feelings throughout the interventions. Thorough explanation of the illness and treatment as well as opportunities for the patients to ask questions are demonstrations of respect. The last stage is “Feeling *Confianza* (Trust),” in which the patients feel like the healthcare provider is a family and become more willing “to share something personal, ask for help, and allow the nurse to help” (Jones, 2014, pp. 1431-1432). If trust is not established, Hispanics may refrain from asking questions for fear of appearing ignorant or a bother, but a positive encounter could improve their adherence to the nurses’ advice and result in better health outcomes and overall well-being. While developing a trusting relationship takes time and awareness of the Hispanic cultural values, once *confianza* is established, interventions become more effective, and patients become more compliant to the medical advice with higher levels of satisfaction.

### *LEARN Model*

The LEARN model is one of the appropriate approaches, which promotes cultural competency and effective communication with the Hispanic patients. “L” stands for “Listen” and gives opportunity for caregiver to ascertain the patient’s understanding of the issue (Berlin & Fowkes, 1983). “E”, which stands for “Explain,” is the explanation the caregiver provides about the illness, plan of care, and suggestions for self-care management (Berlin & Fowkes, 1983). “A”, which is “Acknowledge,” is the process of acknowledging the similarities and differences between the patient’s and the caregiver’s point of view (Berlin & Fowkes, 1983). “R”, which is “Recommend,” is the caregiver’s recommendation for the plan of care that fits the patient’s conditions having completed the three prior steps (Berlin & Fowkes, 1983). “N” stands for “Negotiate,” which is the process of integrating patient’s feedback and his/her perspective into the plan of care for a mutual goal (Berlin & Fowkes, 1983). The LEARN model provides avenues for interactive and respectful communication between the health caregiver and the patient. It is an appropriate model to use for teaching the Hispanic community because they hold cultural values of respect, trust, and personal relationship (Gonzalez & Mendez-Pounds, 2017).

The LEARN model could serve as an effective communicative model in the teaching session about hypertension. For example, the student nurse “Listened” to the clients’ perspectives on high blood pressure and their lifestyle, specifically dietary patterns. Then, she had the opportunity to “Explain” briefly about the disease process and plan of care (e.g., importance of adhering to BP medications prescribed by doctor as

directed and doing regular check-ups) and self-care management (e.g., how to take blood pressure, using recipes for DASH diet, and exercise). Subsequently, through this interactive process, the participants and the student nurse “Acknowledged” the similarities and differences between one another’s point of view. The student nurse gave “Recommendations” on setting SMART goals individualized for each patient. Furthermore, she “Negotiated” the best three goals for the patient through mutual consensus. Before the session ended, the student nurse received the patient’s feedback on the plan of care through self-evaluation paper. Each step promoted better communication and mutual comprehension between the patient and healthcare provider.

#### *CenteringPregnancy Model*

In addition to the LEARN model, CenteringPregnancy served as a crucial framework for the hypertension group education workshops. CenteringPregnancy is a group prenatal care teaching model, developed by Sharon Schindler Rising, which proved to be an effective approach for Hispanic women during and after pregnancy (Lathrop, 2013) A study done at two public health clinics in Palm Beach County, Florida, compared the effects of traditional prenatal care and CenteringPregnancy on preterm births among Hispanic women (Tandon, Colon, Vega, Mega, and Alonso, 2012). The result was statistically significant: women giving preterm births were 5% for those who participated in CenteringPregnancy versus 13% for those who were given traditional prenatal care (Tandon et al., 2012). In a typical CenteringPregnancy model, a group of 8 to 12 pregnant women of similar term participates in ten 90-minute sessions (Lathrop,

2013). The program has several unique characteristics, such as encouraging women to perform self-assessment of weight, urine, and blood pressure; engaging women in facilitated group discussions on topics of “fetal development, nutrition, exercise, infant care and feeding, preparation for childbirth, substance abuse, parenting techniques, and postpartum issues”; and creating a relationship-centered support environment (Lathrop, 2013, p.121). Its ultimate goal is to build participants’ self-efficacy over managing their own health, provide knowledge related to their condition, and psychosocial support.

Certain defining components of CenteringPregnancy can be implemented into the teaching model for Hispanic women with hypertension. For instance, in the teaching session for hypertension, smaller groups of hypertensive women were gathered with a student nurse as the facilitator of group discussions and interactions. In the session, the participants had the opportunity to learn how to take blood pressure with an electric blood pressure cuff and practiced with each other. They also discussed ways to implement the DASH diet into their lifestyles and set three or more SMART goals individually. Majority of the time was spend on sharing one’s experience, which created peer support. Based on principles from the CenteringPregnancy model, the teaching model for hypertension incorporated interactive opportunities for participants and the caregiver, and it honed skills for effective self-management of high blood pressure.

### *The Dash Diet*

The area of focus in the interactive, teaching environment was on the DASH diet. Sodium intake has a direct correlation to elevated blood pressure. In 2008-2011, several



studies were conducted to compare the sodium intake of Hispanic participants aged 18-74 years from four US cities: Miami, Bronx, Chicago, and San Diego (Siega-Riz, Sotres-Alvarez, Ayala, Ginsberg...& Horn, 2014). The average sodium intake among the Hispanic population was 1705 mg/1000 kcal, and the AHA (American Heart Association) recommendation for salt intake is  $\leq 1500$  mg per day (AHA, 2018). Thus, on a typical 2000 kcal diet, an average Hispanic person would consume  $>200\%$  recommended salt intake. One of the most effective approaches to decrease hypertension is implementing the DASH diet. Research supported by NIH's National Heart, Lung, and Blood Institute (NHLBI) developed the DASH diet to regulate high blood pressure, and it has been ranked by the *U.S. News and World Report* as the best diet for the past 8 years among 40 types reviewed ("DASH ranked Best," 2018). The DASH diet focuses on consuming vegetables, fruits, whole grains, low-fat dairy, and lean protein. It is also rich in magnesium, calcium, and fiber (Mayo Clinic, 2016). In addition to decreasing blood pressure, the DASH diet has been proven to lower cholesterol and promote weight loss. Adopting it can regulate a woman's hypertension as well as improve health of the whole family for whom she prepares food.

### *mHealth*

MHealth has been shown to be a cost-effective, easily-accessible, and beneficial tool for communication and facilitating patient's behavioral changes. According to one study, 95% of the global population has access to a mobile cellular network (Iribaren et al., 2017, p. 29). Thus, mHealth or text-messaging intervention (TMI) is rapidly growing

and has become an area of increased research. TMI has been classified in various ways: (1) Initiation of behavioral changes (2) Collection of data or information for health promotion (3) Communication of all resources/supply available (Iribaren et al., 2017, p. 29). For the purpose of the HTN/Diet education project, mHealth was utilized as a behavior modifying communication. The participants were given a reminder once a week for three weeks regarding adherence to the SMART goal(s) set for each week. The method of communication was two-way text messaging (Schilling et al., 2013), which allowed the sender and receiver to exchange information and feedback. By implementing this mode of communication, the student nurse provided follow-up care for each participant and asked about meeting their smart goals. MHealth follow up care was incorporated to meet the financial and transportation barriers the patient population experienced. It is not only a beneficial tool for improved behavioral changes among patients with noncommunicable disease, but also a cost-effective tool among middle- to low-income populations (Beratarrechea et al., 2014). By implementing follow-up care through mHealth system, the student nurse and participants were able to maintain ongoing communication in an easily-accessible and cost-effective manner. Consistent with cultural consideration communication and best practice in mHealth the primary language of the participants was used, the content kept short and comprehensible (3rd to 5th grade reading level), and privacy of participants was assured (Schilling et al., 2013). These modifications for TMI were made based on an individual, case-by-case basis.

## CHAPTER 3

### Methods

#### *Participants*

Baylor University IRB guidelines were reviewed, and the project was not considered to be human subjects research. However, clinical protocol and patient privacy guidelines were followed. The inclusion criteria of the targeted audience were women and men over the age of 18, married or single, diagnosed with hypertension (elevated or stage 1 hypertension - 120-139 mm Hg systolic or 80-89 mm Hg diastolic), and patients of the Agape clinic. Exclusion criteria were women with elevated blood pressure accompanied by symptoms of target organ damage symptoms, such as headache, chest pain, blurry vision. No patients were excluded due to symptoms. Arrangements were in place to urgently refer to a health care provider. Other exclusion criteria were hypertension related to renovascular disease, Cushing syndrome, hyperparathyroidism, hypothyroidism, rare genetic abnormalities, pregnancy, use of medication/drugs that affect blood pressure to include amphetamines, cocaine, systemic glucocorticoids, monoamine oxidase inhibitors, erythropoietin.

#### *Site and Sampling*

The Agape clinic is a non-profit organization, located at 4104 Junius Street, Dallas, Texas 75246, and the majority of the patients are low-income Hispanic

populations. The participants were selected via convenience sampling and snowball sampling with the assistance of Ms. Ethany Howden, MSN, RN, FNP-C, who currently works at the Agape clinic. We provided healthy breakfast/snacks, such as sweet potato & black bean tostadas, egg breakfast burritos with fruits, and strawberry-banana protein smoothies to gather more participants. The target sample size was 8-10 participants.

### *Data Collection*

Demographic Data included patient's name and current blood pressure.

Participants' responses to the group teaching and their adherence to their goals after the meeting was collected via mHealth, or text messaging. The follow-up text-message took place every 7 days at the same time (7:00 pm) for 3 weeks following the session. The format of the text message for follow-up care is one shown in the Appendix A. The type of data collected was closed-ended responses text typed by the respondent. The participant initiated a text to join at the end of the session and was given the option to opt-out anytime during the follow-up care by texting back, STOP. The text messaging did not disclose any protected health information or contain any information unrelated to the study's purpose.

### *Procedures*

A bilingual translator (a certified translator from Agape clinic/ nursing student from BULHSON) was selected to translate during the session and to assist in text messaging. LEARN model and essential elements of CenterPregnancy model, were incorporated as previously discussed, to develop a culturally-sensitive, interactive, group

teaching model for Hispanic women with hypertension. Participants voluntarily provided their name and mobile number after explanation about the purpose of the education session.

*Initial assessment and Introduction (5 min):* The student nurse had participants fill out a simple survey and provide their most recent blood pressure taken, if known, as shown on the first section of Appendix D. The student nurse made a self-introduction via AIDET (Acknowledge, Introduce, Duration, Explanation, and Thank you) and clarified the purpose of the meeting. Participants were given the opportunity to ask questions and discuss their current concerns and/or knowledge regarding hypertension.

*Explanation (5 min):* The student nurse identified the three objectives of the session: (1) Be able to identify the systolic and diastolic values for high blood pressure. (2) Be able to state the recommended amount of salt intake per day according to DASH diet. (3) Formulate and share at least one SMART goal for the week using the DASH diet. The student nurse proceeded to teach about the pathology and complications of hypertension (AHA, 2017) as well as about the DASH diet (UWHealth, 2019) by using the Spanish-translated, fill-in-the-blank worksheets as shown on Appendix B. The participants filled in the blanks as the student nurse and translator read the answers as shown on Appendix C.

*The Workshop Plan (18 min)*

1. Hands-on Activity (5 min):

- a. The student nurse brought out canned black beans, 25% less sodium *Spam*, tomato sauce can, chicken noodle soup can, and *Mrs. Dash* seasoning.
  - b. The participants guessed the amount of salt contained in each portion.
  - c. The participant who the guessed the values/order closest to the salt content on the nutrition label, received prizes: almond dark chocolate bar and a 100-calorie cashew nuts packet.
2. Setting SMART goals together (5 min)
- a. The student nurse went over each acronym and provided an example of each.
  - b. The participants wrote down SMART goals individualized to their lifestyle and needs. Assistance was given upon request.
  - c. Then, the participants shared their SMART goal(s) to the group and gave feedback.
3. Explain about mHealth/text messaging follow-up (2-3 min):
- a. The student nurse explained that mHealth would be strictly used for follow-up care on the SMART goals/ reminders.
  - b. Information would not be shared with other people, and the follow-up text messages would occur once a week at 7 pm for three weeks following the session.

- c. By texting STOP, the participants were given the option to terminate follow-up care for any reason. Those who wanted the follow-up care filled out the second portion of Appendix D.
4. *Feedback/Conclusion* (5 min): The participants were asked to fill-out their feedback on how helpful the session was on the last section of Appendix D. They were also given the opportunity to ask any questions or concerns. The student nurse thanked those who participated before they left.

#### *Data Analysis*

Demographic statistics, such as gender, ethnicity, and language(s) spoken/understood were gathered and entered into Table 1. Text message responses were tracked on Table 2. The positive and/or negative responses to the group education workshops were recorded on mHealth Consent and Evaluation of the Session Form (Appendix D).

## CHAPTER 4

### Results

#### *Sample Characteristics*

A total of thirteen patients participated in the HTN/DASH education sessions, which was offered once per month for three months at the Agape Clinic -- January 4th, February 1st, and March 2nd of 2019. The two education sessions averaged 20 minutes. As shown on Table 1, the first group (Participants #1-4) spoke only Spanish and consisted of two Hispanic females and one Hispanic male. The second group (Participants # 5-8) were all English-speaking and consisted of one bilingual Hispanic female and three African Americans (two females and one male). The third group (Participants #9-13) were all Hispanics and Spanish-speaking participants, four of whom were females and two of them were males. Thus, the first group and third groups were provided a certified translator and a Spanish-speaking nursing student, respectively. On the other hand, the second group was able to follow the education session without a translator. Education resources were modified and translated according to the patients' language needs, as shown in Appendices B, C, and D.

#### *Overview*

To best use the time allotted, the session covered over three main areas: (a) the pathology of hypertension, (b) the DASH diet and the recommended daily sodium intake, (c) and formulating SMART goals for the week using the information provided. The first



portion of the education involved participants completing the handouts explaining about hypertension and the DASH diet. This was concise, factual information provided to raise awareness of the potential complications and to educate participants regarding hypertension and lifestyle modification. The Hypertension handout was translated to Spanish by the AHA (2017), and the DASH diet handout was translated by UWHealth (2019), as shown on Appendix B. The participants filled in the blanks as shown on Appendix C as the student nurse and translator taught the lesson. The participants were then taught how to read food labels and were engaged in an activity ranking various food products, such as chicken noodle soup, canned black beans, tomato soup, 25% less sodium *Spam* can, and lemon pepper *Mrs. Dash* seasoning, from highest to lowest salt content. Every participant actively participated, and the person who guessed closest to the true sodium content of the products received a DASH-related snack as a prize — a 100-calorie nut pack and dark chocolate. Then, I taught and assisted participants in the formulation of SMART goals for the first week based on the DASH diet education. I first gave a personal example using every element of the SMART goal pertaining to the DASH diet. Then, I encouraged participants to verbalize their thoughts and to share any suggestions with the rest of the group. This is where most of the time spent and interaction with participants occurred. The participants, especially women, opened up to me and to one another regarding their thoughts, experience, advice, and SMART goal(s). The main roles I had were facilitating conversations and providing constructive feedback regarding their individualized SMART goal(s). The participants were the main executives

of providing peer support, planning, and implementing their self-constructed goal(s) for managing hypertension.

### *Feedback*

All participants were asked to provide an optional written response to the questions: (1) “What did you find most enjoyable and/or helpful?” and (2) “What did you enjoy least and/or recommendations for the future.” Seven out of thirteen participants answered to the optional feedback. Six out of seven respondents were females. All of the participants who responded provided positive feedback, while six of the seven respondents provided feedback for what was least enjoyable/future recommendations. However, three out of six negative feedback did not answer the question about the session itself but pertained to how the participants would change their lifestyle in the future. The answers to the first question could be categorized into two main responses: goal planning (3/7) and the DASH diet (3/7). One of the participants wrote down “the SMART goal has helped me plan about my calorie and sodium intake.” Another participant commented, “I learned how to substitute regular salt with Mrs. Dash.” Another wrote, “... that I had to limit salt intake and eat more fruits and vegetables.” The one negative feedback regarding the session itself was “... wanted more time to gain knowledge [about hypertension].” From the provided written feedback, the vast majority appreciated the education session, specifically about the DASH diet and SMART goal planning. This indicates that, overall, participants value practical changes they are able to make on their lifestyle based on the resources provided, with the exception of one participant who desired more information

about high blood pressure. Empowerment is an effective tool for enhanced learning and behavioral change.

#### *mHealth/ Text Messaging Follow-up Care*

By the end of session, eleven out of thirteen participants gave signed consent to mHealth text messaging follow-up care; the two participants who refused to give consent were Hispanic males. The consent form (Appendix D) includes information about mHealth text messaging, its benefits, option to withdraw anytime, confidentiality, and privacy. A summary of participants' responses identifying weekly SMART goals accomplished are provided in Table 2. As shown in Table 2, there is no statistically significant trend that reveals mHealth to be an effective follow-up care method to prompt participants with their SMART goals. Eight out of eleven participants of mHealth responded at least once to the text messages; three out of eleven participants did not respond at all, and only one participant gave a response for three consecutive weeks. Assistance with forming SMART goals through mHealth were requested by two out of eleven participants. The majority (7/11) proceeded with the SMART goal they had set during the education session for at least two consecutive weeks. A greater number (6/11) members responded the second week following the session compared to the first (5/11) or third (2/11) week. Despite the lack of statistically significant results of adherence to mHealth text messaging response, the group education provided observable benefits for participants' learning and outcomes.

## CHAPTER 5

### Discussion & Conclusion

#### *Advantages of culturally targeted group education*

Hispanic culture values personal relationships, collectivism, and mutual respect between oneself and the healthcare provider. The intimate group setting, therefore, was constructive to the overall learning experience of the patients. The participants actively engaged in discussions, activity, and SMART goal setting process. There was a dichotomy between male versus female response. Hispanic males were more likely to remain reticent, one of the male participants left during the middle of the session, and two men did not sign consent to mHealth text-messaging follow-up care. The women, however, thrived in the group setting. The female participants were observed to open up to one another regarding their health concerns, empathize and provide peer support, and suggest ideas for future behavioral modifications. For instance, one of the participants mentioned she used *Mrs. Dash* to season her meals. Inspired by her lifestyle, other members formulated one of their SMART goals to purchase and use *Mrs. Dash* instead of regular salt for the week. Another common trend observed among both males and females post-session was their verbalized interest in getting their blood pressure checked and monitored. The session has raised awareness of their condition, enabling them to take measures to attain self-efficacy over their own health. In addition, the intimate group

setting has created an avenue for me to be an active advocate for the participants' health. It has generated a sense of mutual trust and direction toward the goals individualized for each participant. Those (11/13) who signed consent to the mHealth text messaging follow-up care are those who demonstrated trust in my role as a facilitator for change. Conversely, I showed respect to the participants through empowerment and acknowledging them to be the actual agents of change.

### *Limitations*

There were several limits to the project implemented. A major barrier was the short duration of the group education workshop. Initially, I had planned the session to last for an hour to permit adequate time to get to know one another, build rapport, partake in more activities, and for Q&A. However, since the available convenience sample were patients who were in the waiting room for their appointments, the education session had to be curtailed to 20-25 minute. This limited time for more practice with the SMART goals and time for answering their questions. Another limitation to the project was the inconsistent availability of Spanish translator for each education workshop. The second workshop did not have a translator, which limited the patient population who could participate. This decreased the sample size of Hispanic women study. Finally, another limit to the project was lack of consistent members for face-to-face follow-up care. As discussed in literature review, the Hispanic culture values "personalismo" and "simpatia" with the health care provider. Although mHealth text-messaging is proven to be an effective method of follow-up care for many populations, it may have not been sufficient

for the patients for this project. Or, there may have been a lack of incentive to continue follow-up care through three weeks.

### *Further Implications*

The culturally targeted group education on hypertension, implementation of the DASH diet through SMART goals, and follow-up care through mHealth have provided some insights and implications for further research. This project is a translational research project, which has increased knowledge about Hispanic women's response and behavioral change related to culturally sensitive workshops and resources. A quasi-experimental/experimental design with a control group and cause-and-effect relationship study would augment the gaps and limitations of the project conducted. It would be interesting to observe how more consistent and longer group sessions would impact the members' lifestyle pattern, specifically diet. Further research could also investigate the effectiveness of mHealth text messaging follow-up for Hispanic populations. From the project, most responses to the text messages took place during the second week after the session. This might implicate the participants did not implement any goals the first week following the session, but the text message could have been a prompt for them to try out their goals the second week. They may have responded out of courtesy, which is a cultural norm. Comparing and contrasting the direct effects of mHealth versus face-to-face follow up on participants' behavior should be studied further. Different responses between men and women in the group session setting were of notable interest. Females were more engaged and interactive, while males were more reserved. Gender roles in

current Hispanic immigrant populations and effectivity of group education sessions for males are also areas for further research.

### *Conclusion*

In summary, culturally targeted group education and empowerment improved the hypertensive Hispanic women's self-evaluation of their diet-related goals. Specifically, peer support and facilitated group education bolstered the level of self-efficacy among hypertensive Hispanic women. Further research is indicated for sustainable behavioral change through mHealth and a systemic review of the group education of Hispanic hypertensive female population.

APPENDICES/TABLES



## Appendix A

### Text message for week 1, 2, 3

“Buenas tardes Señor/a \_\_\_\_\_. Soy María, la estudiante de enfermería en la Agape Clínica. Cuántas metas cumplió usted la semana pasada después de nuestra sesión de presión alta? Hizo algunas metas de nuevo para esta semana or continuara las metas pasadas? Puede pedir preguntas si tenga algunas sobre de su plan or la dieta. Gracias por su contribución!”



## La Dieta DASH

Los Consejos Dietéticos para Reducir la Hipertensión (*Dietary Approaches to Stop Hypertension* o *DASH* por sus siglas en inglés) es un plan alimenticio creado para \_\_\_\_\_ la presión arterial. Esta dieta también es “saludable para el corazón” y reduce el riesgo de sufrir ataques al corazón y derrame cerebral. El plan DASH tiene alto contenido en \_\_\_\_\_ y \_\_\_\_\_, granos integrales, productos lácteos con bajo contenido graso y \_\_\_\_\_ baja en grasa saturada y colesterol. El plan también se centra en mantener el consumo de sal por debajo de \_\_\_\_\_ miligramos (mg) al día. Un consumo incluso menor de sal (1,500 mg al día) puede bajar la presión arterial incluso más. El plan alimenticio DASH indicado abajo está basado en 2,000 calorías al día.



## Appendix C

### Answer Key to the Handouts.

#### ¿Qué es la presión arterial alta?

La presión arterial es la **fuerza** de la sangre contra las paredes de los vasos sanguíneos. Se mide en milímetros de mercurio (mmHg). La presión arterial alta (HBP) significa que la presión en las arterias es **mayor** de lo que debería. Otra denominación de la presión arterial alta es hipertensión.

CATEGORÍA DE LA PRESIÓN ARTERIAL	SYSTÓLICA mm Hg (número de arriba)		DIASTÓLICA mm Hg (número de abajo)
NORMAL	MENOS DE 120	y	MENOS DE 80
ELEVADA	120 – 129	y	MENOS DE 80
PRESIÓN ARTERIAL ALTA (HIPERTENSIÓN) NIVEL 1	130 – 139	e	80 – 89
PRESIÓN ARTERIAL ALTA (HIPERTENSIÓN) NIVEL 2	140 O MÁS ALTA	e	90 O MÁS ALTA
CRISIS DE HIPERTENSIÓN (consulta a su médico de inmediato)	MÁS ALTA DE 180	y/o	MÁS ALTA DE 120



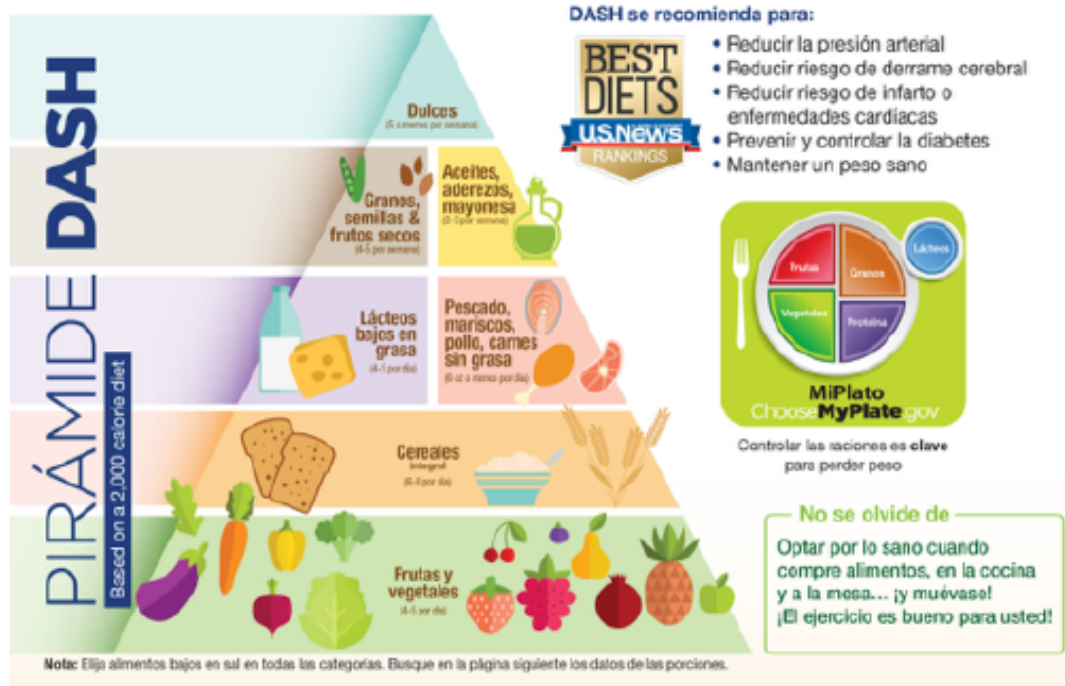
## La Dieta DASH

Los Consejos Dietéticos para Reducir la Hipertensión (*Dietary Approaches to Stop Hypertension* o *DASH* por sus siglas en inglés) es un plan alimenticio creado para reducir la presión arterial.

Esta dieta también es “saludable para el corazón” y reduce el riesgo de sufrir ataques al corazón y derrame cerebral. El plan DASH tiene alto contenido en frutas y verduras, granos integrales, productos lácteos con bajo contenido graso y proteína baja en grasa saturada y colesterol. El plan también se centra en mantener el consumo de sal por debajo de 2,300 miligramos (mg) al día.

Un consumo incluso menor de sal (1,500 mg al día) puede bajar la presión arterial incluso más.

El plan alimenticio DASH indicado abajo está basado en 2,000 calorías al día.



## Appendix D

### mHealth Consent and Evaluation of the Session Form

Nombre: \_\_\_\_\_

Cómo averiguó sobre la sesión?

- Ms. Howden
- Amigo/a de AGAPE clínica
- Otro (especificar):

Presión arterial actual: \_\_\_\_\_

Contesta después de sesión:

Yo entiendo que atención de seguimiento será entregado por mensaje de texto escrito por Mary Moon (estudiante de enfermería de Baylor). Su número es 310-738-0170. Yo entiendo que por firmar esta página, no estoy obligado a responder a los mensajes de texto, y es completamente voluntario. Los mensajes de texto serán mandados una vez a la semana por tres semana. Entiendo que esto es por mi beneficio y en cualquier momento puedo cancelarlo mandando un message de texto diciendo "STOP" esta acción pararía el seguimiento de mi cuidado por mensaje de texto. Doy consentimiento a dar mi numero celular, que es \_\_\_\_\_.

Firma de participe: \_\_\_\_\_

Firma de Mary Moon: \_\_\_\_\_

Firma del testigo: \_\_\_\_\_

La fecha de hoy

Lo que más disfruté/ lo que encontré más útil:

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Lo que menos me gusta o recomendaciones para el futuro:

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Table 1. Participant Demographics

Participant #	Gender	Ethnicity	Language	Consent to mHealth text message follow-up care
#1	F	Hispanic	Spanish	Yes
#2	M	Hispanic	Spanish	Yes
#3	F	Hispanic	Spanish	Yes
#4	F	Hispanic	Bilingual (Spanish and English)	Yes
#5	F	African American	English	Yes
#6	F	African American	English	Yes
#7	M	African American	English	Yes
#8	F	Hispanic	Spanish	Yes
#9	F	Hispanic	Spanish	Yes
#10	F	Hispanic	Spanish	Yes
#11	F	Hispanic	Spanish	Yes
#12	M	Hispanic	Spanish	No
#13	M	Hispanic	Spanish	No

Table 2: mHealth/Text-Messaging Feedback

Participant #	Week 1	Week 2	Week 3	Total Stated Goals Met
#1	1	No response	No response	1
#2	1	1	No response	2
#3	1	No response	2	3
#4	No response	No response	No response	0
#5	2	2	No response	4
#6	2	2	1	5
#7	No response	1	No response	1
#8	No response	2	No response	2
#9	No response	2	No response	2
#10	No response	No response	No response	0
#11	No response	No response	No response	0
#12	NA	NA	NA	NA
#13	NA	NA	NA	NA



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