PROMOTING FARM TO MARKET DIETS: A STUDY OF HISPANIC WOMEN'S HEALTH INFORMATION SEEKING BEHAVIORS

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COLLEGE OF BUSINESS

BY

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ABSTRACT

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In this paper, a model of health media usage is developed to understand how the target population that is Hispanic women makes decisions and the sources they turn to for information on health related matters. Key factors used in the investigation process were health behaviors, acculturation, and socio-economic status indicators (SES). The objective of the project is to understand how Hispanic women acquire health knowledge.

Understanding health media usage will enable us to recommend best education practices for the promotion of healthy lifestyles. A qualitative research design was used. Acculturation and health behaviors are direct influencers of health media usage. SES indicators such as age, income, and education moderate the relationship between the independent and dependent variables. Future research should consider additional variables such as health concern and health motivation along with quantitative research to test the model.

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CHAPTER I

INTRODUCTION

The rap song created by students at Marshall High School, VA and popularized by

Michelle Obama is reproduced below.

If I'm going to help my brain comes to fruition, I am going to feed it quality nutrition.

We love the cookies but they are not sufficient, We need to eat veggies to make our bodies efficient. Roll my chicken in a wrap; do not jam it in a nugget. Get hyped for healthy snacks, fresh food, we love it.

As the song mentions, healthy eating, getting sufficient exercise, and regular checkups have always been the characteristics of a healthy lifestyle. However, in a fast- paced world filled with processed foods, there is a constant need to reinforce this message. There has been a renewed effort to promote healthy eating habits all across America.

In an attempt to promote healthy lifestyles and healthy diets in particular, the Texas Woman's University (TWU) Institute for Women's Health was interested in the feasibility of designing and implementing a permanent farmers market for the Denton Community (Dr. DiMarco, personal communication, September 25, 2014). The objective is to establish a farm to table program. Farm to table refers to a movement to grow food locally and deliver that food to local consumers. Farmers will be the primary source for fruits and vegetables.

The farmers market will be a permanently designated place where all farmers of the community can come together and sell their produce on a daily basis. The objective is to make fruits and vegetables available to consumers and community. The proposed project will benefit local growers by giving them a venue to sell their produce and putting them in touch with their

potential customers directly. It will also benefit consumers by promoting healthy diets as a preventive to lifestyle diseases such as obesity and diabetes.

However, consumption of fresh produce is still limited (Abraido-Lanza, Chao, & Florez, 2005). The success of the farm to table program will depend on consumers and whether they can be convinced about the benefits of the program. Hence, there is a need to educate consumers about the advantages of using fresh produce in their daily diets. In order to identify the best education practices, there is a need to understand how consumers acquire health related knowledge. Sources of health knowledge could be doctors, health care workers, friends and family, the internet, print or broadcast media, and social networks to name just a few to effectively reach consumers and tell them about the farm to table program, there is a need to first understand health media habits and how health knowledge is acquired.

In this paper, research objectives are presented and a model of health media usage is developed. The methodology, data collection, analysis, and results are presented subsequently.

Research Objective

The objective of this project is to understand how consumers acquire health knowledge and the sources they use. If acquisition of health knowledge is understood, a model of how to educate these individuals on the benefits of using health knowledge to improve their lifestyle can be developed.

The success of the farm to table program will depend on whether the population can be educated on the benefits of eating fresh fruits and vegetables. To suggest education practices, an understanding of how the target population makes these decisions and the sources they turn to for information on health related matters is needed. The objective of this paper is to develop and test a model of health media usage behaviors and the influencing factors. The model will be tested in the context of a specific population, viz., Hispanic women, as there is little published research on the health behaviors of Hispanics. An additional impetus for focusing on the Hispanic community

was the growth in the Hispanic population in Denton by 23 % from 2011 to 2015 (Texas Demographic Center, 2015).

In Hispanic families, women are traditionally homemakers and strong influencers of the family's health and food habits. Therefore, this study focused specifically on Hispanic women as the target population.

CHAPTER II

REVIEW OF RELATED LITERATURE

There has been an increasing trend in the number of consumers who have turned to the internet for health information. In 2009, 71% of adults used the internet for health care decisions and in 2011, it increased to 80 % (Kim, 2013). Online health information plays a unique role in improving health literacy. According to the 2013 Pew survey, one in three American adults is using the internet for health related information and for specific medical conditions. This trend is towards an increased access to information using smart devices like smart phones and tablets (Jadhav et al., 2014).

The key variable of interest in this study is health media usage. Understanding how people access health information will identify vehicles for health messages. Health media could be print, broadcast media, online article sources, and word-of-mouth including friends, family, and medical practitioners. People are exposed to a plethora of sources using the internet. The key question is: what are the factors that influence how people acquire and use health information coming from different places and different platforms.

Consumption and evaluation of health information can depend on a variety of factors including how vested the person is in improving his/her health, the cultural groups, and other demographic factors such as age, occupation, income level, and education. For instance, younger people are more likely to rely on social media. Close-knit cultures might turn to family and friends. Young mothers might use a combination of family elders and their social circles of mothers with young children (Raman, 2015). Understanding where people turn for health advice and information will provide information on how to get these messages out to different groups (Raman, 2015).

Health Media

The most pertinent definition of health media usage is provided by Cotten and Gupta as "the search for and receipt of messages that help to reduce uncertainty regarding health status and construct a social and personal (cognitive) sense of health" (Cotten & Gupta, 2004).

There are numerous definitions of health media usage in the literature. Broadly speaking, health media usage refers to how people acquire health related information. Health literacy is an alternate expression of this variable. Specifically, health literacy is "the degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions" (Ghaddar, Valerio, Garcia, & Hansen, 2012). Identifying health media sources people use will help to understand how to educate consumers about farm to table programs. Health media also provide insights into how people receive these messages.

Numerous factors influence health media usage. The factors considered in this paper include individuals' health orientation or behaviors, socio-economic status indicators, and the degree of acculturation of the individual consumer. In the following paragraphs, each variable and how they might influence health media usage will be discussed.

Health Behaviors

Abraido-Lanza, Chao, and Florez (2005) define health behaviors as the inclusion of adequate intake of fruits and vegetables, exercise, regular checkups. In this study, we operationalize health behaviors by the quantity of fruits and vegetables consumed, their frequency, exercise routines, and whether consumers have annual checkups.

Research has provided evidence that a healthy lifestyle which combines a prudent diet, regular physical activity, maintaining a healthy weight, moderate alcohol consumption, and not smoking decreases the risk of cardiovascular, diabetes, obesity, and mutation cancer (Chiuve, McCullough, Sacks, & Rimm, 2006). Current dietary behaviors and practices observed within the U.S population can have unfavorable consequences on health due to an unhealthy lifestyle. The

intake of fruits and vegetables is directly connected with the reduction in risk of heart disease, stroke, and cancer. A healthy diet also helps in lowering the risk of type 2 diabetes (Chiuve et al., 2006).

Acculturation

Acculturation is the process by which immigrants adopt the attitudes, values, customs, beliefs, and behaviors of a new culture (Abraido-Lanza et al., 2005). Acculturation involves a behavioral change that happens because of being exposed to a different culture.

Hispanics with high levels of acculturation have seen a health provider more often than those with comparatively low level of acculturations have (Perez, 2014). These outcomes have also indicated that a higher level of acculturation has a positive and increased impact on health behaviors such as exercise and use of health care services (Perez, 2014). The literature review has been consistent with the outcome that low levels of acculturation are associated with lower than average health service use across a wide range of services. Current assumptions about acculturation are less rigid about the certainty and direction of change to the way it is adapted (Arcia, Skinner, Bailey & Correa, 2001)

Socio-Economic Status (SES) Indicators

There are many socio economic status (SES) indicators. For the purpose of this study, age; income; and education are considered (Abraido-Lanza, Chao, & Florez, 2013). Hispanics in the United States have a lower socioeconomic status (SES) profile (Abraido-Lanza et al., 2013). An inverse relationship exist between SES and poor health in relation to morbidity and mortality (Abraido-Lanza et al., 2013). Income, which is one of the key SES indicators, is consistently and positively related to intake of fruits and vegetables (Abraido-Lanza et al., 2013).

There is some research to indicate that low-income consumers may not benefit from the consumption of fruits and vegetables unless they understand the impact of the consumption of fruits and vegetable and their influence level (Di Noia & Byrd-Bredbenner, 2014). This underscores the need for education regarding healthy lifestyles. Hispanics in lower income

brackets are less likely to turn to their health care providers or printed/electronic sources of information. Similarly, older and less educated Hispanics are more likely to rely on friends and family network for their health information. There are several reasons for these behaviors including access to media sources, lack of trust and fear of authority with respect to immigration concerns.

The theoretical model in Figure 1 explains how the three variables, viz., health behaviors, acculturation, and SES indicators influence health media usage. The theoretical model will be used to guide the research for this project.

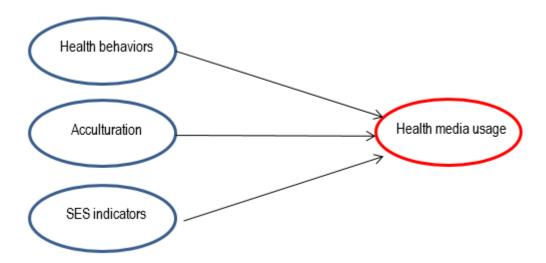


Figure 1. Model of health information seeking behavior.

Target Population

The population for this study will be Hispanic women. The definition of Hispanic in this project uses the U.S. census definition of Hispanic, i.e. someone is Hispanic or Latino if they self-identify as Hispanic or Latino (Taylor, Lopez, Martinez, & Velasco, 2012). The definition includes Spanish dominant and English dominant persons. Dominance refers to the language that is primarily used by the person.

Hispanic women were chosen for several reasons. First, the percentage of lifestyle diseases in the Hispanic population is high at 72 % compared to 66 % in non-Hispanic whites

(American Heart Association, 2014). This group stands to benefit from a farmer's market that is readily accessible and operates in the community. Second, it is interesting to see Hispanics use of health information sources is very sparse. Finally, The Texas Higher Education Coordinating Board ranks TWU's Hispanic enrollment increase (244% from 2000-2013) as the eighth-highest enrollment growth percentage among universities in Texas and more than double the statewide growth in Hispanic enrollment (Fall 2013; Texas Woman's University, 2013). The combination of Hispanics and women thus makes this an ideal target population to be considered for this project. The results of this project will benefit TWU students and the larger community.

CHAPTER III

METHODOLOGY

The methodology used for this study was divided into two phases. The first phase is a detailed literature review and the second phase is qualitative research using in-depth interviews. Data collection for this study was initiated after the Institutional Review Board (IRB) of Texas Woman's University granted permission. The letter of approval from the IRB is included in Appendix A.

Secondary Data

TWU library databases were accessed to find information on other fruit and vegetable community centers. Specifically, how the students educated their local populations on benefits of a healthy diet was determined. For example, students at the University of Colorado, Colorado Springs (UCCS) maintain an education truck called the *Flying Carrot*. They provide food demos and use food literacy projects to raise nutritional awareness (University of Colorado, 2014.)

Oualitative Research

A detailed interview questionnaire was used (see Appendix C) to understand links between variables used in the model as described in Figure 1. The objective of the depth interviews was to test the model. Depth interviews with 10 Hispanic women were conducted. These women were from various age groups and backgrounds. Out of the 10 interviews completed, eight participated in personal interviews and two interviews were completed by telephone. One of the respondents was Spanish speaking only and hence a translator was used to conduct that interview. Each interview lasted approximately 45 minutes to an hour. Respondents were not compensated for their time. The questions asked in the interview were around the four variables used in the model, health behavior, acculturation, SES indicators, and health media usage. These factors were studied individually as well as in relationship with the outcome

variable, health media usage. The interviews were conducted on TWU campus at various times as convenient to the respondents.

The data collected were qualitative and the interview outcomes were noted for all the respondents. Emergent themes and relationships related to the variables in the model of health media usage were examined. Data were analyzed and themes were developed according to the links between each variable. The three broad classifications of data were subdivided as below.

The first category focused on the relationship between health behavior and health media usage. The second category was the relationship between acculturation and health media usage, and the third category was the relationship between SES indicators and health media usage.

CHAPTER IV

RESULTS

Health Behavior and Health Media Usage

During the interview process, the respondents were asked open-ended questions about their health behavior and their broad understanding about health behavior in their personal lives. The feedback from respondents is summarized in Tables 4-6 and Tables 1-3 contain demographics. All participants had the same level of understanding towards food habits related to their eating patterns and exercises.

All participants uniformly responded to the health behavior question related to medical checkups. They said they would not use the health care provider unless it was an emergency situation. The age groups 18-19 and 20-24, as referenced in Table 4, are college- age respondent who are not willing to spend their limited income on health care. They also do not perceive the need to visit a doctor. One of the respondents from this group said, "In the past, for minor ailments, I have used the internet to search for home remedy and discussed the same with family or close friend to fix the health issue and I will not visit a doctor unless there was a health emergency or life threatening situation." These age groups rely on health media as their source of information.

The age groups 25-34, 35-49, and 50-64 are also reluctant to see a health care provider due to fear and lack of trust in the system and low earning capacity. These age groups rely more on their friends and family network to seek advice for health related information. One of the respondents from the age group 50-64 years, who was suffering from high blood pressure and was borderline diabetic, mentioned that she hates visiting the doctor for regular checkups as they keep prescribing medicine and blood draws. She does not have time and money and would rather

ask her family and friends about remedies she could follow to keep both her blood pressure and diabetes under control.

This study did not measure consumption of fresh produce for respondents. Likewise, amount of physical activity and diet varied from respondent to respondent. This lack of information is highlighted in the section on limitations. Respondents were not opposed to the idea of consuming fresh produce; however, they did have apprehensions about cost and accessibility of the farmers' market.

Respondents in the age groups 35-49 and 50-64 had limited sources of income and were apprehensive about the affordability of fresh produce. Some were also concerned about the farmers' market operation hours as they would be working during the daytime and could not access the farmers' market during those hours. Health behaviors do not seem to directly influence health media usage. Rather, if the person was concerned about their health, they were more likely to consult or research some source of health information. Hence, contrary to the model presented, it appears that health concern is a better influencer of health media usage than health behaviors.

Acculturation and Health Media Usage

This was an interesting section in the personal interview as the respondents were from several age groups. Younger respondents (18-24) were more acculturated as they were born in the United States. This age group is more inclined to look for more sources of information such as internet, social media, chat rooms, health magazines, and visit to doctors/nurses for critical care as required. In contrast, people in age groups from 35-49 and 50-64 years, as referenced in Table 5, have been in the United States for over 15 to 20 years. They had the lowest acculturation as it has taken them a long time to assimilate. They were more inclined to socialize with their own ethnic groups and bond strongly with them. The lack of English language skills is one of the primary influencers of such behavior. Health media usage differed between younger and older groups since their levels of acculturation were different.

SES Indicators and Health Media Usage

The three SES factors that were studied were age, income, and education. The SES indicators had a direct influence on health media usage. Students between the ages of 18-24 were either part time workers on campus or were not employed. This group was dependent on their family income for their education and living expenses. On the other hand this group had college education and was more inclined to use social media. In addition, they accessed health related information online. During the interview the respondent perceived themselves to be in the low income group due to various reasons and family commitments. The age groups 34-49 and 50-64 attained their education through middle school. They only looked to family and friends for health related information. There was no direct relation between the SES and health media usage. Instead, SES variables moderate the relationship between acculturation and health concern and the dependent variable, health media usage. Similarly, the age groups of 50-64 were more concerned about health and more likely to seek health information but because of lower income and education, they preferred family and friends as sources of health information.

Sample details of the respondents are outlined in the below Tables 1 to 6. Table 1 illustrates the 10 interview participants' details as divided into the age group ranges as classified by the 2010 U.S Census Bureau interactive population search (U.S. Census Bureau, 2010).

Table 1
SES Indicator – Age

Age	Number of Participants	
18-19	0	
20-24	5	
25-34	1	
35-49	2	
50-64	2	
65 & over	0	
Total	10	

Table 2 illustrates the 10 interview participants' details of the income classification ranges as per the 2010 U.S Census Bureau population search for the working class (U.S. Census Bureau, 2013).

Table 2
SES Indicator – Income

Income	Number of Participants
Not Working	5
Under \$15000	2
\$15,000-\$24,999	3
\$25000 - \$34,999	0
\$35000 - \$49,999	0
Total	10

Note. Classification for working and non-working participants.

Table 3 illustrates the 10 interview participants' details concerning their education levels.

Table 3

SES Indicator- Education levels

Education	Number of Participants	
Elementary	0	
Middle school	3	
High School	0	
College	7	
Total	10	

Table 4

Effect of Health Media Usage on Health Behaviors

Age Range		Health Behaviors			
	Fresh produce	Exercise	Annual check		
18-24	• Due to hereditary lifestyle diseases they do look up online to be aware of the food habits they need to avoid and the intake of fresh produce.	• Irregular with exercise and do some level of online search regarding exercises.	 Hereditary lifestyle diseases concerns them Social media Online users 		
25-34	• Due to hereditary lifestyle diseases they do look up online to be aware of the food habits they need to avoid and the intake of fresh produce.	 Irregular with exercise and do some level of online search regarding exercises. 	 Hereditary lifestyle diseases concerns them Social media Online users 		
35-49	 Wanted 24/7 access to store Inclined to more traditional food Prefer talking to friends and family for seeking information. 	 Heavy house hold work substitutes for exercise. Lack of computer knowledge which is their biggest constraint to access information online. 	 Lack of trust in the medical services Prefer talking to friends and family for seeking 		
50- 64	 Inclined to more traditional food Prefer talking to friends and family for seeking information. 	 Heavy house hold work and due to lack of computer knowledge which is their biggest constraint to access information online. 	 Lack of trust in the medical services Prefer talking to friends and family for seeking 		

Table 5

Effects of Health Media Usage on Acculturation

Age Range		Acculturation	
	Low	Medium	High
18-24	Not applicable	Not applicable	 This age groups are inclined to look for more sources for information
			 Uses various methods to gather information.
			• Internet, social media, Chat rooms, Health
25-34	Not applicable	Not applicable	Younger age groups are inclined to look for more sources for information
			 Uses various methods to gather information.
			• Internet, social media, Chat rooms, Health
35-49	 Language barrier and cultural changes Low education level Seek family advice when in need of information 	Not applicable	Not applicable
50-64	 information Language barrier and cultural changes Low education level Seek family advice when in need of information 	Not applicable	Not applicable

Table 6

Effects of Health Media Usage on Socio Economic Status Indicators

Age range	Social Economic Status(SES) Indicators		
	Age	Education	Income
18-25	Open to accessing information through social media	 College level of education Dependent on family for educational needs Time constraint Open to accessing information through 	 Low income group Dependent on Family income Not working or part time working group Open to accessing information
26-35	Open to accessing information through social media	 social media College level of education Dependent on family for educational needs Time constraint Open to accessing information through social media 	 Low income group Less working opportunity on campus Open to accessing information through social media
36-45	 Midlife crises Seek family advice when in need of information 	 Middle school education level Seek family advice when in need of information 	 Income range below \$ 25000. Seek family advice when in
45-55	 Midlife crises Seek family advice when in need of information 	 Middle school education level Seek family advice when in need of information 	 Income range below \$ 25000. Seek family advice when in

CHAPTER V

KEY FINDINGS

The key findings of the project were first that acculturation had an influence on health media usage. Second, health concerns influenced health media usage. Third, SES indicators moderated the effect of health concerns and acculturation on health media usage. The age group 18-24 exhibited higher acculturation and therefore, was more likely to seek online sources. People in the age groups 35-49 and 50-64 had lower incomes, were less acculturated, and were more likely to rely on personal social networks. Based on these results, a revised model of health media usage is presented (see Figure 2).

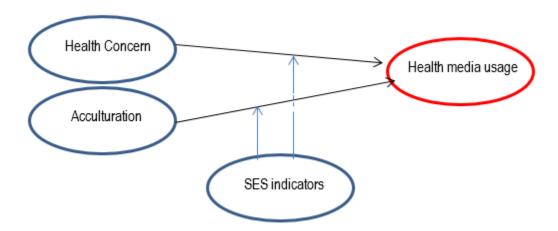


Figure 2. Revised model of health information seeking behavior

Conclusions

All respondents were open to the concept of a farm to table program. The main barrier to the farm to table concept was the perception that fresh produce will be expensive. Timing of the farmers' market was the other barrier as those who were working irregular hours indicated they "needed" 24/7 access to the farmers market to accommodate their work schedules. The last key

barrier was accessibility. This specifically came from the student population. Transportation is one of their biggest hindrances. They wanted the farmers' market to be at walkable distance so that they could take advantage of purchasing fresh fruits and including more of it in their diets.

Summary

A model of health media usage was proposed. The model, presented in Figure 1, suggested that health behaviors, acculturation, and socio-economic status indicators would directly influence health media usage. The model was tested using a qualitative research approach in a population of Hispanic women. Ten interviews were conducted and the results were presented.

The in-depth results from these interviews suggest that acculturation has a direct impact on health media usage. Specifically, respondents who were more acculturated tended to rely on media for their health information. The younger respondents used digital media while older participants used a combination of digital, print, and broadcast sources. With respect to health behaviors (check-ups), uniformly, all respondents preferred not to use a health care provider unless it was an emergency. In the case of younger respondents, this may be as a result of not wanting to spend limited income on health care and the lack of a need to see a doctor. Younger participants relied on health media as sources of information. With older respondents, the causes of reluctance for going to see a health care provider appear to be a combination of fear, lack of trust in the system and lower incomes. This group relied more on their network of friends and family for health information.

With respect to exercise and diets, a less clear picture emerged. This was partly because amounts of fresh produce consumption and exercise was not measured. This is discussed separately in the next section on limitations. Respondents were not opposed to the notion of consuming fresh produce. However, they had apprehensions about cost and access as in hours farmers' markets were open. Respondents in lower income brackets were apprehensive about the affordability of fresh produce. Some of the older women were concerned that farmers' markets

would be open only during the day when they would be at work. Health behaviors do not seem to influence health media usage directly. Rather, if the person was concerned about their health, they were more likely to consult some source of health information (media for the younger group and friends/family for the older group). Hence, contrary to the model presented, it appears that health concern is a better influencer of health media usage than health behaviors.

It was hypothesized that SES indicators (age, income, education) would have a direct influence on health media usage. This study determined that there was no direct relationship between the two variables. Instead, SES moderated the relationships between acculturation and health concern and the dependent variable, health media usage. Younger people were more likely to exhibit higher acculturation and therefore, be more likely to seek out health media sources.

Older people with lower incomes who were less acculturated were more likely to rely on personal social networks. Based on these results, a revised model of health media usage is presented (see Figure 2).

Limitations and Directions for Future Research

The study findings are limited to a small sample. Future research should increase the sample size and include quantitative research. This will increase the potential for the results to be generalized. A second limitation was the inability to include more Spanish- speaking-only respondents. Follow up studies should incorporate translators or Spanish speakers and expand the scope of the study. The study was limited to students and people who work at TWU. Expanding the study to a larger geographical area will lend more validity to the project. In addition, intake of fresh produce and exercise was categorized in general terms as low. Future research should make an attempt to quantify these levels so that a better understanding of what consumers mean by moderate or low/high levels of intake and exercise is reached. Future research should consider additional variables such as health concern and health motivation.

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APPENDIX A

Promoting Farm to Market Diets Presentation

Promoting Farm to Market Diets Presentation













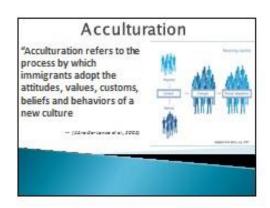




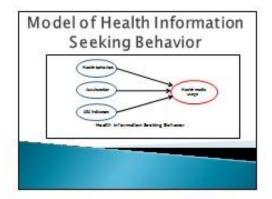










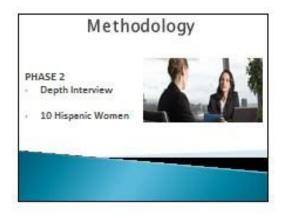


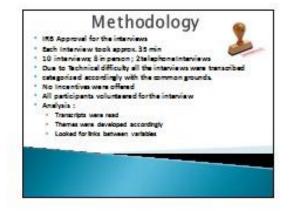






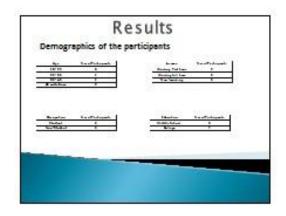






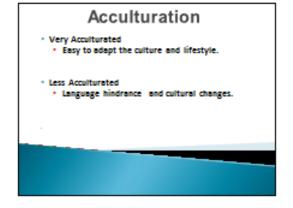




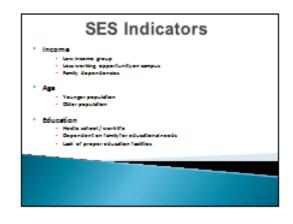




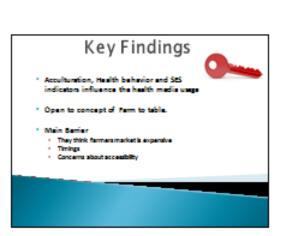




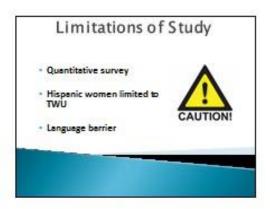
















APPENDIX B

Depth Interview Questions

Depth Interview Questions

- How important is health in your life?
- What factors do you think affects your health?
- What are your food habits?
- Where do you buy your fruits and vegetables from?
- Have you heard about farmers market?
- Have you visited any and how is it different from Walmart, SAMS or Kroger?
- Why is exercise important to you in your daily life?
- How do you know what exercises you need to do?
- What is your opinion on health checkups?
- How often to you get it done?
- In doubt do you visit your doctors for any illness?
- Do you believe in home remedies?
- How long have you been in the United States?
- Do you use internet and social media? For what purpose?
- How is the online information online? How do you get benefited?
- What is your age?
- Do you currently work?
- What is your educational qualification?

APPENDIX C

IRB Approval Letter

IRB Approval Letter



Institutional Review Board
Office of Research and Sponsored Programs
P.O. 80x 423619, Denton, TX 76204-3619
940-898-3378
email: IRB@twu.edu
http://www.twu.edu/irb.html

DATE: March 6, 2015

TO: Ms. Arti Arti Management

FROM:

Institutional Review Board - Denton

Re: Exemption for Promoting Farm to Market Diets: A Study of Hispanic Women's Health Information Seeking Behaviors (Protocol #: 18085)

The above referenced study has been reviewed by the TWU Institutional Review Board (IRB) and was determined to be exempt from further review.

If applicable, agency approval letters must be submitted to the IRB upon receipt PRIOR to any data collection at that agency. Because a signed consent form is not required for exempt studies, the filing of signatures of participants with the TWU IRB is not necessary.

Although your protocol has been exempted from further IRB review and your protocol file has been closed, any modifications to this study must be submitted for review to the IRB using the Modification Request Form. Additionally, the IRB must be notified immediately of any adverse events or unanticipated problems. All forms are located on the IRB website. If you have any questions, please contact the TWU IRB.

cc. Mr. Ron Hovis, Management Dr. Pushkala Raman, Management Graduate School