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The Sweet Taste Of Health: A Positive Deviance Inquiry Into Communicative Acts That Lead To Effective Management Of Diabetes Among Hispanics

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THE SWEET TASTE OF HEALTH: A POSITIVE DEVIANCE INQUIRY INTO COMMUNICATIVE ACTS THAT LEAD TO EFFECTIVE MANAGEMENT OF DIABETES AMONG HISPANICS

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To Mom, Keith and Patrick
THE SWEET TASTE OF HEALTH: A POSITIVE DEVIANCDE INQUIRY INTO COMMUNICATIVE ACTS THAT LEAD TO EFFECTIVE MANAGEMENT OF DIABETES AMONG HISPANICS

by

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This journey has been quite a long one. It would not have been as rich if it had not been as adventurous as it was. The woman that I am today and this thesis reflect of all of those whose shoulders I have stood on to get here. My graduate school journey began in 1995. During those brief two semesters I made meaningful connections that have helped me with this project. To my thesis chair back then Dr. Connie Kubo-Della Piana, thank you for getting this ball rolling for me and telling me I could do it then and now. Thank you also for hosting our final class dinner party at your home in 1996 where I met Keith, my future husband (changed my life)! Dr. Gerry Power, thank you for letting me be a part of every project you worked on and for writing my letter of recommendation 16 years later from London. I am forever grateful.

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Last and most important is my gratitude to my Lord and Savior through whom all things are possible.
ABSTRACT

Diabetes is among the fastest growing diseases in the world. In the U.S., Hispanics are the third most affected population. Nonetheless, there are Hispanics diagnosed with diabetes who have, against all odds, found solutions to manage their disease. This study focused on the intrapersonal and interpersonal acts and behaviors of “positive deviant” Hispanics living on the U.S. – Mexico border that effectively managed their diabetes. They are referred to as “positive deviants” because they accrue “positive” outcomes and “deviants” because they are not the norm.

A PD inquiry was conducted and twelve PD respondents between the ages of 20 and 82 were identified based on seven inclusion criteria: Hispanic, residents of El Paso, Texas, diagnosed with Type 2 diabetes, A1c at prediabetic levels (6.4 or below) maintained for at least one year, taking one (at minimum dosage) or no oral diabetes medications, no insulin intake and no weight loss surgery. In-depth interviews and participatory sketching/photography with PD respondents were used to collect data.

Overall, intrapersonal behavior, the communication that one has with oneself, revealed that PD respondents did not characterize diabetes, including its diagnosis, as a mark of stigma. They were likely to embrace it. Not feeling stigmatized, PD respondents disclosed their diagnosis to family, friends and coworkers, which engendered social support from all quarters. Study findings exemplify the need for utilizing approaches such as positive deviance for diabetes management in order to uncover and amplify the existing wisdom in communities.

Keywords: diabetes, positive deviance, Hispanic, communicative acts, diabetes management, intrapersonal communication, interpersonal communication, disclosure
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The topics of health and well-being have become my passion in recent years because I was diagnosed with diabetes four years ago at the age of 37. I had, as a young woman of 15 years, driven my father who had kidney disease to his dialysis treatments. I also took my grandmother to her doctor’s appointments until she passed at age 83. Both were diabetic, and both took a slew of medicines. I never imagined I would be caught in the crossfire of a diabetes diagnosis so young. So, upon return to my graduate studies in 2013, I chose to focus my energies on the communicative aspects of health. First, I studied the impact of concussions on football players because my son played the game. I, specifically, employed the theory of Apologia to the NFL. I then, with the support of my qualitative methods professor, Dr. Stacey Sowards, shifted my focus to diabetes. I performed a content analysis of a website devoted to Tom Hanks’ diabetes diagnosis disclosure. I found passionate debates about diabetes, which included sentiments ranging from compassion and anger to blame and myths. At least a few people who were responding on the site had control over their diabetes, and I wanted to know what they were “doing” to achieve positive outcomes. With my research on concussions and diabetes, some cognitive dissonance began to surface: We often know what is bad for us and what is good for us - but we choose not to do what is right. In my work with the positive deviance approach I have learned that seeing and hearing is one thing, and “doing” is quite another.

I was introduced by Professor Arvind Singhal to the positive deviance approach in the fall of 2013 and have not looked back since. The first positive deviance (PD) project I worked on in Dr. Singhal’s course was a PD inquiry on the nutritional habits of children living within food deserts, which are defined by the City County Health Department as areas with low access to a supermarket or large grocery store. The project afforded me the opportunity to engage in
interdisciplinary research with two other graduate students. The five-month collaboration gave me insights into the tenets of positive deviance inquiries.

This thesis allows me to shift mental modes and focus my lens on solutions to a problem, as opposed to focusing on the problem. The shift for me is novel and promising. To conduct a PD inquiry, where, I too, could possibly find effective solutions to manage my diabetes is deeply empowering. This is a personal journey for me because I know diabetes can be alleviated through lifestyle actions. I have experienced the expensive toll this disease places on those who are afflicted. While my father and grandmother did not pass away from diabetes, the complications played a role. If we can discover easily replicable behaviors that positive deviants have effectively employed in managing diabetes, we all would be better off.
CHAPTER 1: INTRODUCTION

“Be the difference that makes the difference.”
- Michael Kelly

“Are you ready for your procedure today, Yvette?” asked Dr. Soble minutes before wheeling her into the operating room. “I guess,” answered Yvette. She was very frightened and anxious about getting a tumor in her uterus removed. The tumor was discovered after she experienced her second miscarriage in two years. “We ran the standard pre-op blood work for you and it shows your sugar level was elevated. I see your blood was drawn at three o’clock in the afternoon. You are fine because you had probably already eaten breakfast and lunch,” said Dr. Soble. Yvette replied, “Actually, I only eat once a day and had not eaten when my blood was drawn.” “Well, you better get that checked out,” Dr. Soble said.

The operation Yvette underwent took place in October of 2009. In denial of a possible diabetes diagnosis, Yvette did not go to see the endocrinologist until January 2010. At that time, she was diagnosed with Type 2 diabetes. Several signs like squinting to see at night, as well as drinking a lot of water, and urinating often appeared earlier that year. Remaining optimistic, Yvette believed she could manage the diabetes diagnosis and declined medication. Believing she knew how diabetes could be effectively managed, Yvette attempted to eat smaller portions, exercise, and cut down on carbohydrates. However, a year later she returned to the physician having ineffective results. It took Yvette two very precious years to finally attend diabetes management class, begin to take medications, check her blood sugar regularly, and make changes her eating and exercise behaviors.

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1 See Kelly (2014).
Notwithstanding Yvette’s case, there are people in Yvette’s community, even if a handful, who have figured out how to manage their diabetes in a timely, effective, and sustainable way. These people would be considered positive deviants - “positive” because of their effective outcomes and “deviants” because they are not the norm and unlike those who struggle with managing the disease. The positive deviance (PD) approach helps to identify the positive deviants, as well as the behaviors and communicative acts that make the effective outcomes possible.

**Purpose**

The current thesis investigated uncommon and replicable communicative actions and behaviors of diabetic Hispanics², living in El Paso, Texas, diagnosed with Type 2 diabetes, who had their A1c at pre-diabetic levels for at least one year, who took one or no diabetes medications taking one (at minimum dosage) or no oral diabetes medications, who had no insulin intake, and who had not undergone weight loss surgery. This research examined the communicative practices of people that had been diagnosed with diabetes and who found solutions to manage their disease. Some examples of such individuals are diabetics who formed habits to enable them to take their medication on time, diabetics telling their family they are diabetic instead of hiding their diagnosis, and diabetics converting their fear into

---

² “Hispanic” was the term used in this study because of its universal use by most world, national, state and local health organizations. It was the label of choice by most PD respondents when given the following choices for identification (each filled with meanings rich in history): Latina/o, having origin in Latin America (Hayes-Bautista & Chapa, 1987); Chicana/o, “belonging to a structurally or culturally oppressed group” (Rinderle, 2005, p. 296); Mexican, descendant from Mexico, Mexican-American, of Mexican descent but born in the United States; and Hispanic, affluent Americans of Mexican descent who deny the Indian aspects of their culture often call themselves ‘Spanish’ (Acuña, 2000, pp. 408-409); Mirandé, 2002, p. 3). Perez and Ortega (2008) note: “mainstream hegemony frames the Spanish conquest of the Southwest as a righteous endeavor. It leads people from Spanish-speaking cultures to adopt different ethnic labels that reflect various political perspectives on the region’s history” (p. 123). The U.S. Census Bureau (2011) uses the term “Hispanic” to describe persons who self-identify, regardless of race, as Mexican, Puerto Rican, Cuban, Central, or South American. The CDC’s “Hispanic” label covers: Central and South Americans, Cubans, Mexican Americans, and Puerto Ricans The shift towards a more accepted label of “Latina/o” in health communication is needed.
actionable motivation to manage their disease. The PD approach fosters access into positive deviants’ attitudes, beliefs, and perceptions. The correlations between demographics, culture, social support, and behavior management strategies are also explored within this inquiry. While much focus has been given to what is not working in studies and interventions, which focus on best practices. The PD approach looks for answers to intractable problems in solutions already present in a community. In this case, the unlikely behaviors have been identified to garner how they are helping people with diabetes manage their disease effectively.

The present chapter introduces intrapersonal and interpersonal communication as the fundamental investigative markers of this research. The PD approach is discussed as a method to drive the inquiry into discovering possible diabetes management solutions. The rise of diabetes as a public health issue on a national and local level, especially among Hispanics is explored. Diabetes types, testing, levels, inclusion factors, and risk factors are explained. This chapter lays the foundation for what will subsequently follow in other chapters.

**Introduction to Communicative Acts and Behaviors**

Overlooked acts and behaviors that positive deviants engage in to garner effective management of their diabetes are often communicative in nature. What people say to themselves (intrapersonal communication), and what their interactions look like with others (interpersonal communication) often influence the effective (or not) management of diabetes. Within these interactions, unseen behaviors can be discovered. Asking positive deviants for a “day in the life,” reveals insights into their communicative acts and behaviors.

Intrapersonal communication for positive deviants begins with the decision to disclose their diabetes diagnosis to others. The decision to disclose is informed by self-perception and
self-talk (Barker & Edwards, 1980). Intrapersonal communication begins with the act of deciding how someone feels and communicates with him or herself about it – negative or positive. Self-management strategies and beliefs are all found in this category. The act of self-talk (intrapersonal communication) can be an enabling strategy for positive action. Beliefs such as fear, uncertainty, and stigma can hinder the realization of effective outcomes. Intrapersonal communication includes mindfulness, the act of being fully present in the self-talk. Mindfulness can lead to making better disease management decisions. Intrapersonal communication is where the active process of decision-making begins and can be supported by, enhanced by, or even stymied by interpersonal communication with others.

Interpersonal communication, communicating with others, in the form of social support can be positive or negative (Drummond, 2005a). If conversations with others are not positive, they can affect management outcomes adversely, unless, the recipient of the messages is actively rebranding the message to achieve positive outcomes. Family members kindly reminding diabetics to take medication and in-laws and grandchildren helping check glucose levels are a few examples of effective interpersonal communication strategies. This study was focused on finding these intra and interpersonal communicative acts and behaviors that led to effective management of diabetes. The PD approach was the vehicle that allowed the discoveries to be made.

**Positive Deviance Approach**

The term positive deviance was first introduced in child nutrition by Wishik and Van Der Vynckt (1976), and then systematized and codified by Tufts University professor Marian Zeitlin (Zeitlin, Ghassemi, & Mansour, 1990). The PD approach was first operationalized in the field to combat childhood malnutrition by Jerry and Monique Sternin on behalf of Save
the Children in Vietnam (Bisits Bullen, 2012; Hendrickson et al., 2002; Marsh et al., 2002; Marsh et al., 2007; Sripaipan et al., 2002; Trinh Mackintosh et al., 2002). The PD approach focuses on the solutions to intractable problems that are found within a community and then enables the community itself to replicate those behaviors.

Qualitatively, a positive deviance inquiry is different from the positive deviance approach in that it identifies behaviors within the community but does not move forward towards implementation. A few of the key behaviors that were found in the Sternins’ PD intervention in Vietnam were that some of the community members were collecting, preparing, and consuming their food differently than others. Some caregivers were collecting shrimps and shells found in the rice fields and including them in the meal that their children consumed. Some community members would include sweet potato top greens, as well. The children that were consuming some of these “different” food combinations were well nourished (Sternin, 2002). There were many other micro behaviors that were discovered that through replication transformed the malnourished community to a healthy one: “malnutrition dropped 65 to 85 percent in every village the Sternin’s had visited” (Pascale, Sternin & Sternin, 2012, p. x).

The PD approach can unearth hidden wisdom to solve the most worrisome issues facing a community. In an interview for El Paso’s NPR station (KTEP), Keith Pannell, asked Dr. Arvind Singhal about the possibility of using the positive deviance approach with diabetes in El Paso. Dr. Singhal replied:

The PD approach looks at how some individuals in a community may be achieving better outcomes with diabetes control looking at what’s working and what’s working
against all odds, and finding a way to amplify that so that others can learn from them.

(Singhal, 2014a)

The positive deviance approach searches for what “lies hidden” within a community, which is working against all odds and without outside resources (Singhal, 2014b, p. 176). Through the process of looking for those people within the community that are acting non-normatively, who are outliers, “their behaviors highly uncommon but highly effective in delivering desirable (positive) outcomes. The PD approach is illustrated below in Figure 1 in that some have found far more effective ways of solving a problem than most others.

Figure 1: An illustration of positive deviance at work. Some people have figured out better ways to solve a problem than their peers, without access to extra resources and facing similar or worse odds.


Diabetes in the United States

One in three Americans will have diabetes by 2050 (CDC, 2014a). Diabetes is among the fastest growing diseases in the world. In 1958, less than one percent of the U.S.
population, 1.58 million Americans, was diagnosed with diabetes. That number climbed to 7%, or 21.1 million by 2010. The most recently available 2012 figures (illustrated below in Figure 2) show that 29.1 million people, or 9.3% percent of the population, are diabetic.

Figure 2: The rising rates of diabetes in the U.S.

Source: National Health Interview Survey (CDC, 2014a).³

A staggering 27.8% of diabetics are undiagnosed (CDC, 2014a). One in four diabetics do not know they have it and another 86 million adults – more than one in three U.S. adults – have prediabetes, where their blood sugar levels are higher than normal but not high enough to be classified as Type 2 diabetes. Without weight loss and moderate physical activity, 15 to 30 percent of people with prediabetes will develop Type 2 diabetes within five years.

---

³ “The number and percentage of the U.S. population with diagnosed diabetes were obtained from the National Health Interview Survey (Moore, et al., 2000; Massey, et al. 1989). NHIS, available at http://www.cdc.gov/nchs/nhis.htm) of the National Center for Health Statistics (NCHS), Centers for Disease Control and Prevention. Conducted continuously since 1957, the NHIS is a health survey of the civilian, non-institutionalized population of the United States. The survey provides information on the health of the United States population, including information on the prevalence and incidence of disease, the extent of disability, and the use of health care services. The multistage probability design of the survey has been described elsewhere (Botman et al., 2000; Massey et al., 1989). Estimates for years 1958-1979 were obtained from published data (Harris, 1985), and estimates from 1989 forward were derived directly from the NHIS survey data. Because diabetes questions were not included in the survey for some years before 1980, the estimates were missing for these years” (CDC, 2014a).
Moreover, nine out of ten people with prediabetes do not know they have it. Hispanics (12.8%) are the third most affected population after Non-Hispanic Blacks (13.2%) and American Indians/Alaska Natives (15.9%). Health complications to people who are diabetic include blindness, kidney failure, heart disease, stroke, and loss of toes, feet, and legs. The total direct and indirect diabetes cost in the United States, according to the CDC in 2012, was $245 billion. Medical costs for people who are diagnosed with diabetes are double, and the risk of death is 50% higher (CDC, 2014a). As illustrated in Figure 3 below, the number of people with diabetes increases among all social, racial, and ethnic groups, the search for answers and clarity about the disease is critical.

**Figure 3:** Racial and ethnic differences in diagnosed diabetes among people aged 20 years or older, United States, 2010–2012

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>Age-adjusted percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Hispanic whites</td>
<td>7.6</td>
</tr>
<tr>
<td>Asian Americans</td>
<td>9.0</td>
</tr>
<tr>
<td>Hispanics</td>
<td>12.8</td>
</tr>
<tr>
<td>Non-Hispanic blacks</td>
<td>13.2</td>
</tr>
<tr>
<td>American Indians/Alaska Natives</td>
<td>15.9</td>
</tr>
</tbody>
</table>

*Based on the 2000 U.S. standard population.


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4 “Among Hispanic adults, the age-adjusted rate of diagnosed diabetes was 8.5% for Central and South Americans, 9.3% for Cubans, 13.9% for Mexican Americans, and 14.8% for Puerto Ricans. Among Asian American adults, the age-adjusted rate of diagnosed diabetes was 4.4% for Chinese, 11.3% for Filipinos, 13.0% for Asian Indians, and 8.8% for other Asians. Among American Indian and Alaska Native adults, the age-adjusted rate of diagnosed diabetes varied by region from 6.0% among Alaska Natives to 24.1% among American Indians in southern Arizona” (CDC, 2014a).
Diabetes in El Paso, Texas

The most recent report by the City of El Paso’s Department of Public Health, *Community Health Assessment*, published in July 2013, shows the demographics that make up the El Paso region: 82% Hispanic population (30% of which experience linguistic separation), a young population, low education (29% non high school graduates), low income, high poverty, and poor community need index scores. The overall health of El Paso in the 2013 *County Health Rankings and Roadmaps* was high at 66 overall out of 232 Texas counties, and mortality in the top 10% (22 out of 232), the morbidity indicators ranked El Paso 183 out of 232.

The City reports that 30% of residents of El Paso County live in a food desert (an area with little or no access to a grocery store), which coupled with low-income, are risk factors for a population that is overweight and obese. Inactivity was reported by 29% of adults in El Paso adding to the climbing rates of diabetes in the City. In 2010, 12% of El Pasoans reported that they were told by a physician that they had diabetes: “this is a 15% increase between 2007 and 2010” (El Paso Department of Public Health, 2013, p. ix). A lower percentage of people are getting their A1c (a three month measure of cellular glucose level) checked regularly, which the report says could be attributed to “lack of access to preventative care, a lack of health knowledge, insufficient provider outreach, and/or social barriers preventing utilization of services” (El Paso Department of Public Health, 2013, p. ix).

The diabetes disparity in El Paso echoes the 2003 Institute of Medicine landmark report on racial and ethnic disparities in healthcare: “specifically the report noted that African Americans, Hispanics, and Native Americans experience a 50-100% higher burden of illness and mortality from diabetes than White Americans” (Chow, Foster, Gonzalez & McIver, 2003, p. ix).
Trends in prevalence and control of diabetes, have found, over the past two decades, the prevalence of total diabetes has increased substantially; however, the proportion of undiagnosed diabetes cases decreased, suggesting improvements in screening and diagnosis. Among the growing number of persons with diagnosed diabetes, glycemic control improved but remains a challenge, particularly among non-Hispanic blacks and Mexican Americans. (Selvin et al., 2014, p. 517)

Understanding diabetes is crucial to management.

**Diabetes Types, Testing, A1c & Risk Factors**

There are different types of diabetes. Prediabetes is a state where blood sugars are higher than normal but not yet at the level to be diagnosed diabetic. Usually prediabetes manifests itself as a Type 2 diagnosis; however, diabetes can be delayed with some interventions. Type 1 diabetes can come at any age, but Type I is typically found in adolescence. In Type 1, the body ceases to produce insulin and is managed with insulin injections. There is no known way to prevent Type 1 at this time. Type 2 diabetes is brought on as the body gradually loses its ability to use and produce insulin and accounts for 90 to 95 percent of diabetes cases (CDC, 2014a). Gestational Diabetes (GD) is developed during pregnancy. The hormones used to help the baby grow block the insulin from the mother’s body to be effective. Four tests that can aid in a diabetes diagnosis: an A1c, a fasting plasma glucose (FPG), an oral glucose tolerance test (OGTT), and the random plasma glucose (RPG).

There are risk factors associated with all of these forms of diabetes.

More stark and preventable factors are those associated with Type 2 diabetes. Type 2 diabetes is a chronic disease that can be managed. Some people do it better than others.

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5 In the past, the A1C test was used to monitor blood glucose levels but not for diagnosis. The A1C test has now been standardized, and in 2009, an international expert committee recommended it be used for diagnosis of Type 2 diabetes and prediabetes (The International Expert Committee, 2009).
grasp of factors that might put a person at risk of a diabetes diagnosis are needed. People may inhibit some, all, or no risk factors and be diagnosed with diabetes.

As noted previously, the present thesis sought to investigate the behavioral and communicative practices of positive deviants who are Hispanic, diagnosed with Type 2 diabetes, who take one medicine at minimum dosage for their diabetes or no diabetes medications, who have their A1c managed at 6.4 or below for a period of year or more, who have no insulin intake, and who have not undergone weight loss surgery. A1c is a blood test that provides information about a person’s average levels of blood glucose (also called blood sugar) over a three-month period (NIH, 2014). The A1c test looks on the cellular level, looks at the attachment of glucose to hemoglobin, the protein in red blood cells that carries oxygen. In the body, red blood cells are constantly forming and dying, but typically they live for about three months. The A1c test result is reported as a percentage. The higher the percentage, the higher a person’s blood glucose levels have been. A normal/non diabetic A1c level is below 5.7 percent. (NIH, 2014, para. 2)

A person’s A1c level, in order to be considered managed, must remain first at a constant. The second indicator of a good A1c level is the number. If the number is higher than 6.4, it is considered healthy for diabetics but still not considered a prediabetic level. Maintaining an A1c level of 6.4 or below for a period of a year or more illustrates stability with A1c, but also a level that is prediabetic and healthier than one that is higher. The reason that higher numbers are allowed is because management of levels is difficult to begin with.

Type 2 diabetes represents the largest group of diagnosed and preventable cases and,

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6 A1c and HbA1c both represent the Glycohemoglobin test for glucose bound to hemoglobin (Hb). The terms A1c, hemoglobin A1c, HbA1c or glycohemoglobin test are used interchangeably. A1c is currently the preferred label used by the CDC, ADA and NIH (U.S. Department of Health and Human Services, 2014).
therefore, is the focus of this study. Specifically, this study aimed at identifying Type 2 diagnosed diabetics that are effectively managing their diagnosis (i.e., the positive deviants). The positive deviants face most of the risk factors associated with Type 2 diabetes; however, they have found a way to keep their diagnosis under managed control. Risk factors for Type 2 diabetes include, but are not limited to, older age, obesity, family history, having diabetes while pregnant (gestational diabetes), a sedentary lifestyle, high blood pressure, impaired glucose tolerance (IGT), and race/ethnicity (CDC, 2014; IDF, 2014; NIH, 2014).

These risk factors become more complicated with current research identifying more inclusionary factors such as the correlation of sugar intake and/or availability, and the incidence of diabetes. An article by Rich Cohen marks the history of sugar, with its beginnings as a miracle elixir that created cocaine effects in the brain of consumers. Sugar was often used medicinally. The change in the mutant genes made the amount of sugar we needed smaller and no longer required long storage for survival, therefore, making the storage and excess of sugar in the body probable. Cohen wrote of a physician in 1905 where, “Haven Emerson at Columbia University pointed out that a remarkable increase in deaths from diabetes between 1900 and 1920 corresponded with an increase in sugar consumption” (2013, p. 96). This assertion is supported by the recent research showing the correlation of sugar availability and/or consumption is directly tied to diabetes prevalence; further, “differences in sugar availability statistically explain variations in diabetes prevalence rates at a population level that are not explained by physical activity, overweight and obesity” (Basu, Yoffe, Hills & Lustig, 2013, p. 1).

People who take one oral medication to treat their diabetes diagnosis are considered to be doing a very good job of diabetes management. As A1c levels fluctuate, doctors begin to
prescribe two or more medicines for management and in some cases turn to insulin. Taking only one medication at the minimal dosage is also considered as effective diabetes management. This research focuses on Hispanics, because of the high incidence of diabetes in that ethnic group. Some of the reasons that Hispanics are highly affected by diabetes include having strong risk factors. Social, economic, and cultural associations can strengthen the risk factors. Calzada and Mora examined the various determinants in play with first generation Hispanics diagnosed with diabetes. The determinants include: biologic, social, and cultural elements. Cultural factors such as language barriers, beliefs regarding weight, acculturation, and changes in diet, lack of access to health care, integration of traditional and folkloric beliefs, negative attitudes towards medications, and herbal remedies affect diabetic outcomes in the Hispanic population. Social factors illustrate that the impact of social determinants of health in first-generation Hispanic Americans exponentially increases the susceptibility of this group to risk factors influencing disease processes. Evidence of increasing income inequality among Americans and increasing numbers of low-income families during an economic downturn has directed special attention to potential effects of low-income on the health and well-being of individuals with diabetes. (Calzada & Mora, 2011, p. 15) A recent study conducted by Anekwe and Rahkovsky (2014), showed that food prices were positively associated with blood sugar levels of Type 2 diabetics. The food study found that price increases for healthy foods were associated with a relative increase in blood sugar levels for low-income US adults with Type 2 diabetes compared with their higher-income counterparts. Likewise, price increases for less-healthy foods were associated with a relative decrease in blood sugar levels for the low-income group
compared with their higher-income counterparts. These findings suggest that low-income US adults with Type 2 diabetes benefit more (in terms of blood sugar) from low prices of healthy food than their higher-income counterparts. (p. 683)

These risk factors are found amplified in the populace of El Paso, Texas. This study employed a PD inquiry to discover diabetic positive deviants within El Paso, and identify the behaviors that allowed for their effective diabetes management.

**Summary**

The purpose of this present thesis was to discover Hispanic, diabetic, positive deviants, and the replicable micro-communicative acts they engage in to manage their diabetes with the use of one or no diabetes medications and no outside interventions. This chapter introduced intrapersonal communication, interpersonal communication, and the positive deviance approach. An overview of diabetes nationally and on the local level in El Paso was explained. The types, testing, A1c levels and risk factors that may lead to a diabetes diagnosis were explored. The elements in this chapter aided in establishing the framework for the literature review, research, and methodology to come in subsequent chapters. Chapter 2 delves into the literature surrounding diabetes management, intrapersonal communication and interpersonal communication, as well as discussion of relevant case studies conducted using a positive deviance approach. Chapter 3 reviews the methodological approach of this current research study. Chapter 4 reveals the current research findings. Chapter 5 discusses the research implications and next steps.
CHAPTER 2: LITERATURE REVIEW

“Are you going to eat that?” uttered Yvette’s son. “Yes, I am,” said Yvette as she stuffed the entire cupcake into her mouth quickly. Since being diagnosed with diabetes, Yvette felt scrutinized and judged by everyone around her. “I should not have told anyone I was diabetic,” she thought. It was even harder on her family, friends, and coworkers because if they asked the wrong question about her food choices, she flipped out.

Yvette struggled because her doctor told her that diabetics have a higher incidence of miscarriage, and she blamed herself for the loss. She also struggled to lose weight and eat right. She continually had stress at work and home, and some days she forgot to take her medications. “I know what is right for me but I do not want to do it sometimes,” she thought. The struggle with diabetes about lifestyle choices is a daily one. There is no respite. Intrapersonally, choices and decisions have to be made about food, exercise, medications, and stress management. Further, conversations that occur between people with diabetes and others are vital in understanding how diabetes gets managed. Daily pressures about making good choices like whether or not to eat the cupcake or not can become as complex as the disease.

The pressures that present themselves within these complex choices and decisions are affected by strongly held beliefs by the diabetic. To better understand these underlying factors and how they affect decisions, choices, and outcomes, we must understand their roots. This chapter reviews the literature regarding communicative acts and behaviors that aid in understanding the complex communication that diabetics have with themselves and with others. It serves, as a lens into what is at play when people approach their diabetes diagnosis and in turn how they respond to it. Also explored are notions of stigma, fear, and uncertainty -
-beliefs that are inherent in understanding a diabetes diagnosis and its subsequent management. The PD approach and its application in the field of health communication is examined. The chapter concludes with the research questions that helped guide the present research.

**Communicative Acts and Behaviors that Lead to Positive Outcomes**

In the search for clarity, most diabetics seek information that can be found from health practitioners, family, friends, and support groups. Information and support is garnered through social communities and first-line familial groups. Further, the importance of social support in diabetes management is essential in garnishing successful outcomes (Drummond, 2005a; Goldsmith, 1992, 1995; Smith et al., 2008). People who do not have this social or familial support often fail at controlling their blood sugars and suffer more health complications. These support mechanisms manifest in conversations with family and friends, having others look out for the diagnosed and includes physicians who listen and address specific problems that come up for patients. The ability to reach out for this support is the first step.

Self-management behaviors are also strongly correlated with healthy diabetes strategies. The shift from the medical model (focusing on research and medical interventions like care and treatment changed outcomes), to public health models (which emphasize behavior change to create outcomes), is essential (Muturi, 2007). The importance of health communication research on attitudes, beliefs, and behavior (Cline, 2003) is why this research is warranted. A PD inquiry researching social support and self-management strategies achieved through communicative acts has not been conducted. In contrast, multiple studies have looked at the barriers in self-management as opposed to successful communicative acts and behaviors. This inquiry is relevant in understanding how these behaviors and acts are
communicated and how they factor into people’s attitudes, beliefs, and actions regarding their diabetes management.

**Intrapersonal Communication**

Intrapersonal communication is defined as communicative messages within oneself which includes elements of self-concept, perception, expectation, and self-talk (Baker & Edwards, 1980). Many people are not willing to disclose their diabetes diagnosis and battle the disease alone. Some, either alone or coupled with social support, have self-engagement strategies and behaviors that have helped or hindered their diagnosis. Intrapersonal conversations are taking place and their importance is vital in understanding diabetes control and effectiveness.

**Self-Management Strategies and Behaviors**

The self-management of a chronic disease diagnosis has been shown to be a strong indicator of effective outcomes. The rhetorical framework surrounding diabetes “management” (Bennett, 2009; Teixeira, et al., 2010) is complex, including aspects of food intake and weight management (Drummond, 2005a; Polk & Hullman, 2011), treatment adherence (Morris & Schulz, 1992; Vermeire, Hearnshaw, Van Royen, & Denekens, 2001), body image, (Weitzman, et. al, 2013), self-care via social support (Tang, Brown, Funnell, & Anderson, 2008) and management of physical activity and exercise (Shultz et. al, 2001). Drummond’s tenets of deterrence, indifference, encouragement, compliment and temptation all fall in within this discursive complexity. All of Drummond’s tenets can be supportive and/or and non-supportive (2005b). When the tenets are used negatively, such as judgments on weight and calling people lazy, they are non-supportive and may cause the person that is affected close-up and not want to disclose their diagnosis and lose the ability to garner social
support. Bennett writes: “diabetes discourses are always situated in a past tense or with a presence that is unquestionably fatalistic. ‘She just didn’t take care of herself’ is a refrain commonly uttered. These cultural narratives, coupled with a deficient semiotics about reoccurring conditions, make this particular struggle especially compelling from a rhetorical perspective” (2009). Diabetics and other people they communicate with are in a constant struggle to understand each other; the need for connection is sought out by the diagnosed. The importance of self-management behaviors and social support for diabetes management is clear.

**Diabetes Beliefs**

Beliefs about diabetes come from cultural, social, and personal understandings. These beliefs have been shown to either help or hinder outcomes depending on the content, degree and strength of those beliefs. Identifying and understanding people’s beliefs allows for the capacity to make correlations between beliefs and outcomes.

**Stigma**

Boundaries created by stigmas associated with disclosure of a chronic disease diagnosis are at the forefront of silence (Ashforth & Kreiner, 1999; Coleman, 1986; Goffman, 1963; Meisenbach 2010). Goffman’s evolutionary thoughts on stigma began with ancient Greek’s. He posited that the body exposes signs of unusual and bad moral status of the affected person (1963). Goffman argued that stigma is more related to a spoiled identity and not linked to the body. Stigma is felt and experienced in the body. “There are two ways to spoil an identity: one is to disclose bodily stigmata and the other is to disclose discreditable information about the embodied individual. Type 2 diabetes becomes a site where both types of disclosures converge” (Bock, 2012, p. 155). The stigma can occur when “elements of
labeling, stereotyping, separation, status loss, and discrimination co-occur in a power situation” (Link & Phelan, 2001, p. 363). Stigma can restrict an individual to fully seek out health care services (Bock, 2012).

When people feel the stress and social burden associated with a chronic disease, it manifests as stigma, which can put a psychological and/or social burden on the individuals (Fife & Wright, 2000). Within the past decade, many health agencies have argued that stigma is the leading impediment to health promotion treatment and support (US Department of Health and Human Services, 2014). It is important to tailor “the message in order to maximize the awareness of the health threat among people but at the same time to mitigate the perceived stigma and negative emotional outcomes associated with certain diseases” (Yoo, 2008, p. 25). Coupled with stigma, the diagnosed must also maneuver through other intrapersonal beliefs such as perceived fear and uncertainty of their diagnosis.

**Fear and Uncertainty**

Diagnosis of a chronic disease brings uncertainty about how the future will pan out (Hines, 2001). In order to deal with the perception of uncertainty, Duggan (2006) assembled a collective of interpersonal communication strategies that have yielded good health outcomes. Duggan points out that these uncertainties may be brought on by cultural perceptions of the illness (Babrow, et al., 2000). Fear is perceived as an obstacle to good health outcomes; “the Hispanic folk illness belief *susto* refers to an episode of severe fright, and Mexican American immigrants hold varying views on its relation to diabetes” (Lemley & Spies, 2015, p. 185). This *susto* is an episode of fright that might be the catalyst to a diabetes diagnosis. *Susto* can manifest from perceived diabetes stigma or other perceived fear.

Fear of diabetes complications and life expectancy are rooted in death attitudes that
deal with social, psychological, and cultural influences (Kastenbaum & Aisenberg, 1972). Religiosity and fear beliefs are “influenced by age, gender, race, and other demographic factors” (Daaleman & Dobbs, 2010, p. 225). Strong fear about chronic ailments might increase with age due to increased knowledge of disease. However, when fear is coupled with religiosity and spirituality factors they may level out due to the control these measures have on anxiety. People can reduce anxiety by practicing religion and believing in something greater than themselves. Once stigma, fear, and uncertainty are mitigated, a decision by the diagnosed is made to disclose their diagnosis to others.

**Disclosure**

Disclosure can be a very positive experience for people diagnosed with chronic disease: “when people living with HIV disclosed their status to more people, they reported more social support” (Smith, et al., 2008, p. 4). The importance of familial disclosure is apparent. It is an inner struggle to decide whether to disclose diagnosis. This is the first intrapersonal decision that affects how interpersonal social support will play out.

**Interpersonal Communication**

Interpersonal communication requires interaction with another person where messages are sent and received by two parties. The quality of conversation and relationship between the interactants influences the outcome (Miller, 1978). Health communication outcomes have shown a correlation with people disclosing and speaking to others about their disease (Farrell & Geist-Martin, 2005). The need to identify with relational others can be vital in a diabetics management and understanding of the disease.
Social Support

Non-disclosure among diabetics undermines the need for social support. Social support is defined as a “complex process of individual interpretation and interpersonal negotiation of face guided by shared conventions of inferring messages about support, acceptance, and autonomy” (Drummond, 2005a, p. 70). Most people “perform more supportive behaviors than they realize, and as a consequence, have positive effects on people’s health and moods. Research shows that supportive communication can help speed healing, reduce symptoms and stress, lessen pain, and build self-esteem” (Pre, 2005, p.173). Close relationships offer social support benefits to both the person in need and the supporter within that relationship (Coyne, Ellard, & Smith, 1990; Wing, Marcus, Epstein, & Jawad, 1991).

Drummond (2005a) found five thematic revelations in her study of women with diabetes that were searching for social support: deterrence, indifference, encouragement, compliment, and temptation. Deterrence includes the use of other peoples’ messages to diabetics with “rule-like” terminology such as, shouldn’t, don’t, can’t, and not, to command the diabetic to not eat at all, or to avoid or cease eating a diabetes inappropriate food” (p.71). However, support is not deterred from these situations and the “command is seen as impolite, offensive, or insensitive” (p. 71). Indifference is the lack of interest by the relational other with one’s needs as a diabetic. Encouragement manifests in acts that are deemed and perceived as supportive; it can be found in the form of a compliment. This is when relational others encourage prompted by change “but cease when long-term goals are achieved” (p. 73). The final revelation found by Drummond (2005a) is temptation, which encourages the diabetic to indulge, the “encounters feature an outright accusation or implication that it is the
relational other that will be harmed if the diabetic does not comply with the request” (p. 73).

The importance of the health messages and information that are being received are no longer just found in formal medical settings (Kreps, 2001). The reality is “most Americans, however, spend the majority of their time talking about health-related issues and learning health – related information in non-medical settings” (Cooke-Jackson, 2011, p. 252). She emphasizes Drummond’s (2005a) call to “examine health-related interactions between family members in a naturalistic, home environment” (Cooke-Jackson, 2011, p. 252). She utilized the socio-ecological framework which “posits the fundamental importance of interrelationship by moving the researcher beyond the individual as the primary foci into a multi-layer array of social, environmental, and cultural constructs (McLeroy, Bibeau, Stechler, & Glanz, 1988; Stokols, 1996) that are embedded in the health behavior outcomes” (2011, p. 238). She researched conversations between African American mothers and their adult daughters to negotiate diabetes to understand the dyadic relationship.

The themes identified by Cooke-Jackson explored family, experience with diabetes, frustration, fear, and prevention (2011). She called for the need of health communication research in order to ensure “open dialogue and provide accurate education information regarding diabetes. This can serve to potentially eliminate any myths or misdirected knowledge that both parties might have gained from other inaccurate information channels i.e., family members or friends” (Cooke-Jackson, 2011, p. 251). The blockade in talking “out loud” about a diabetes diagnosis – disclosure, may be one of the biggest roadblocks to engendering social support.

Disclosure is a result of effective intrapersonal communication. The ways in which stigma, fear, and uncertainty are perceived inform the decision to (or not to) disclose. Social
support from family, friends and co-workers is made possible with diagnosis disclosure. The interpersonal communication begins with a physicians diagnosis. Careful negotiation occurs within the social support relationships that make effective management possible. Identifying diabetes management strategies that are communicative requires no additional resources. Utilizing the PD approach to discover these hidden, yet replicable behaviors would prove beneficial.

**Positive Deviance Foundations**

Effective diabetes management is a function of how communicative strategies - intrapersonal and interpersonal – are put to work. The PD approach to diabetes management is premised on finding solutions within a community that are working. Some people are more effective in managing their diabetes than others.

The positive deviance approach is inherently bound by a simple theme: in plain sight. The PD approach finds solutions to intractable yet adaptable problems, from assets found within a community/social/human system. The positive deviance approach focuses on the premise that individual difference is a community resource (Singhal, Buscell & Lindberg, 2010; Pascale, Sternin & Sternin, 2012). Looking for what is working, “PD is an approach to social change that enables communities to discover the wisdom they already have, and then to act on it” (Singhal, 2011, p. 196).

Wishik and Van Der Vynckt (1976) were among the first to work with the concept of positive deviance in the field of child nutrition. In positive deviance approach infancy, “it had simply been used to describe those statistical outliers encountered in fieldwork who outperform the norm” (Pascale, Sternin & Sternin, 2012, p. 23). Zeitlin and colleagues from Tufts University School of nutrition, in 1989, pioneered positive deviance inquiries by

Singhal (2011) identified key markers of the positive deviance approach: solutions exist within the community; community self-discovers solutions; seeking community ownership; the solution delivers better outcomes; change agents relinquish expertise, listen and facilitate; focused on identifying and amplifying assets; moves from solution-identification to problem-solving; adopters learn by doing; open to self-replication on account of endogenous wisdom; valorizes behaviors of ordinary people, can begin now as a solution resides in the now; needs limited resources as someone is practicing those behaviors against all odds. (p. 202)

These PD markers show the importance of harnessing the solutions found within local wisdom, as opposed to bringing in outside solutions and then await diffusion. It introduces a different way of introduction and subsequent diffusion (Durá & Singhal, 2009; Pascale & Sternin, 2012; Singhal, Sternin & Durá 2009).

Positive deviance makes the shift from knowledge, action and practice-KAP model, to practice, action and knowledge model –PAK: “the PD approach is premised on the notion that it is easier to act your way into a new way of thinking than to think your way into a new way of acting” (Singhal, 2011, p. 200). The notion that by “doing” we learn more than by “telling” or “seeing” is a critical element in positive deviance. For instance, in the Vietnam malnutrition project, the Sternins talk about the village elder that noted: “a thousand hearings isn’t worth one seeing and a thousand seeing isn’t worth one doing” (Singhal, 2011, p. 199).
Adoption of positive deviance and its success builds from its inherent need to come from, replicate and amplify within a community (Durá & Singhal, 2009; Pascale, Sternin, & Sternin, 2012): “the community owns the solution, self-discovers it through a dialogic inquiry and there is ‘social proof’ that those ideas can be implemented locally with no extra resources” (Singhal, 2010, p. 606). Positive deviance allows for swifter action in finding behaviors with minimum cost, becoming a successful approach to issues affecting poor communities. According to Marsh et al. (2004) “the potential for the approach to help communities to gain better health or other social benefits is vast and largely untapped” (p. 1177).

The positive deviance approach has been used in many fields including inquiries into positive educational outcomes: timely high school graduation (Ayala, 2011), first generation Latino college success (Castañeda-Flores, 2013), college readiness (Rainey, 2013), and academic success of learning-disabled University students (Kallman, 2012). PD has been used widely in child malnutrition: (Bolles, et al., 2002; Dearden, et al., 2002; Guldan et al., 1993; Lapping, Schroeder et al. 2002; Levinson et al., 2007; Mustaphi & Dobe, 2005; Sethi et al., 2003; Sethi et al., 2007; Trinh Mackintosh, et al., 2002). Reproductive health PD inquires have been conducted on teenage pregnancy (Diaz, 2010), promotion of condom use among commercial sex workers (Positive Deviance Initiative, 2011), improvement of family planning methods in Guatemala (Lapping & Ortolano, 2003), improvement of pregnancy outcomes in Egypt (Ahrari, 2002), and female genital cutting in Egypt (Oloo, Wanjiru, & Newell-Jones, 2011). PD approach has been utilized in a myriad of other sectors with issues such as: MRSA transmission (Singhal & Greiner, 2007), smoking cessation (Awofeso, Irwin, & Forrest, 2008), newborn care in Pakistan (Khatoon, Ambreen, Shafique & Sternin, 2002; Marsh, et al.,
2002; Shafique, Sternin, & Singhal, 2010), public health data reducing health disparities (Bradley, et al., 2009; Walker, et al., 2007), investment banking advisers practices (Pascale & Sternin, 2005); psychological resilience in the Netherlands (Bouman, Lubjuhn & Singhal, 2014). The list of programs is vast and growing “over the past three decades, the Positive Deviance (PD) approach to social, organizational, and individual behavioral change has yielded over 100 peer-reviewed publications” (Singhal, Buscell & Lindberg, 2014, p. 86).

Positive deviance is a data driven approach comprised of few stages. A PD inquiry (comprised of the first three steps of a positive deviance approach/program) aids in identifying positive deviants and effective behaviors. This stage calls on the community to seek and “to discover demonstrably effective behaviors and strategies among its members” (Positive Deviance Initiative, 2014, para. 1). PD programs (comprised of all five steps) implement the (design) phase of the findings by creating “doing” opportunities for community members within the community they were discovered in. The PD approach observes the non-normative actions of positive deviants (outliers) because “their behaviors highly uncommon but are highly effective in delivering desirable positive outcomes. These individuals represent what we call ‘positive deviants,’ and the (micro) behaviors they engage in are positive deviant (PD) practices” (Singhal, 2014b, p. 176). The observations of these non-normative actions are made via observations and conversations with community members.

It is important to note that the PD approach is malleable (during some stages), it has been conducted using many foundations: qualitative, quantitative, and mixed methods (Bisits Bullen, 2012). The process of identifying positive deviants requires a focused understanding of the problem. Positive deviance approach contains foundational process requirements. The PD approach is usually implemented when four criteria are met: 1) the problem is complex
and requires behavioral or/and social change; 2) the problem is intractable and other solutions have not worked; 3) positive deviants exist making solutions possible; and 4) leadership commitment exists to finding solutions (PDI, 2010). The basic principles (See Table 1) that are present in all or most PD inquiries’ and programs include the following criteria according to the Positive Deviance Initiative (2014):

Table 1: Guiding Principles of the Positive Deviance Approach

<table>
<thead>
<tr>
<th>Principle</th>
<th>Details</th>
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<tbody>
<tr>
<td>1.</td>
<td>The community owns the entire process.</td>
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<tr>
<td>2.</td>
<td>All individuals or groups who are part of the problem are also part of the solution and hence the PD process involves all parties who affect the problem. “Don’t do anything about me without me.”</td>
</tr>
<tr>
<td>3.</td>
<td>The community designs ways to practice and amplify effective behaviors and strategies and unleashes innovation.</td>
</tr>
<tr>
<td>4.</td>
<td>Community members recognize that “someone just like me” can get results, even in the worst-case scenarios (social proof).</td>
</tr>
<tr>
<td>5.</td>
<td>PD emphasizes practice instead of knowledge—the “how” instead of the “what” or “why.” The PD Mantra is: “You are more likely to act your way into a new way of thinking than to think your way into a new way of acting.</td>
</tr>
<tr>
<td>6.</td>
<td>The community creates its own benchmarks and monitors progress.</td>
</tr>
<tr>
<td>7.</td>
<td>PD process facilitation is based on deep respect for community, its members, and its culture, and focuses on interactive engagement, and capacity to let the community lead.</td>
</tr>
<tr>
<td>8.</td>
<td>The PD process expands existing networks and creates new ones.</td>
</tr>
</tbody>
</table>
Operationalization of PD methodology requires five steps towards implementation (Table 2).

PD inquiries go to step three while a positive deviance process/program, completes all five steps. The other key difference is that an inquiry is typically researcher-driven while an approach is community-driven.

Table 2: Basic Steps to Carry Out the Positive Deviance Approach

<p>| | |</p>
<table>
<thead>
<tr>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. DEFINE</td>
<td>Define the problem, current perceived causes, challenges and constraints, common practices, and desired outcomes.</td>
</tr>
<tr>
<td>2. DETERMINE</td>
<td>Determine the presence of PD individuals or groups.</td>
</tr>
<tr>
<td>3. DISCOVER</td>
<td>Discover uncommon but effective behaviors and strategies through inquiry and observation.</td>
</tr>
<tr>
<td>4. DESIGN</td>
<td>Design activities to allow community members to practice the discovered behaviors.</td>
</tr>
<tr>
<td>5. DISCERN/MONITOR</td>
<td>Discern, monitor and evaluate the resulting project or initiative, which further fuels change by documenting and sharing improvements as they occur, and help the community discern the effectiveness of the initiative.</td>
</tr>
</tbody>
</table>

The PD inquiry that is being facilitated in this thesis will call upon the first three steps.

The final two steps require a design for implementation and discerning the effective of said initiative within the community. Community lead support of a positive deviance program is essential; therefore, following the process is required. First, the community defines the problem and agrees that it exists. Second, the community determines and identifies the positive deviants that exist within the community. Third, the community discovers through observation, the behaviors and strategies positive deviants possess. The focus of this thesis is
on effective diabetes management, therefore, the following exemplars of the PD approach that focus on health communication are reviewed here.

**PD in Health**

The PD approach has been applied to a myriad of health issues. The foundational work on PD was done by the Sternins on behalf of Save the Children to combat child malnutrition in Vietnam. Their work is the most distinctly cited, studied and dissected PD model (Bisits Bullen, 2012; Hendrickson et al., 2002; Marsh et al., 2002; Marsh et al., 2007; Sripaipan et al., 2002; Trinh Mackintosh et al., 2002). We review this case and discuss the use of PD to combat malaria in Cambodia, and then exploratory use in two instances of PD for diabetes management. The first looks into medical home practices that yield better diabetes care outcomes and the second examines diabetes in Texas.

**Child Malnutrition in Vietnam**

Monique and Jerry Sternin were charged in 1990 by Save the Children to travel to Hanoi, Vietnam to help combat rising childhood malnutrition rates. PD was a marker utilized by Zeitlin, a nutritionist from Tufts University who, in the 1980’s, identified PDs as children who came from the poorest and against all odds areas and backgrounds, who were not malnourished. The battle for the Sternins was to take the concept of the PD approach and develop it in Hanoi to find out if there were any children in these areas that were not malnourished. They found that,

Yes, indeed, there are some children from very poor families who are healthy! Poor families in Thanh Hoa that had managed to avoid malnutrition without access to any special resources would represent the positive deviants - ‘positive’ because their
children were well nourished, and ‘deviants’ because they were doing some things differently. (Singhal, 2014b, pp. 177-178)

The Sternins identified the positive deviants and asked what are they doing differently. The findings were identified using interviews and observation. In a group or culture some daily practices that are considered the norm are not reported due to the mundane nature they possess by the “doers.” It is in the observing that some non-normative behaviors are noted which might otherwise be overlooked. PD behaviors that were identified include: sweet potato greens added to soups instead of being thrown out; shrimps and crabs from fields added to meals; daily meal allotments were kept the same but spread to 3-4 meals as opposed to 2; active feeding was employed as opposed to just placing food for children to self-feed; and children’s hands were washed before mealtimes (Pascale, Sternin, & Sternin, 2012; Shafique, Sternin, & Singhal, 2010; Singhal, 2014b).

The next move was towards dissemination, that is, how to best get these discoveries out to the community effectively without employing “best practices.” The need to shift from away from top down “telling” to community led “doing” was key. The intervention included PD mothers teaching others in the village what they were doing by collaboratively engaging in collection, cooking, and assembly of the foods. Further, the mothers washed children’s hands together, fed them together, and behaviors through emersion were garnered and performed. The PD nutritional program was two weeks long. The project, two years long, yielded an 85% drop in the malnutrition rates within those communities and has been sustained and eradicated (Trinh Mackintosh, Marsh, & Schroeder, 2002; Pascale, Sternin, & Sternin, 2012; Singhal, 2014b).
Improving Malaria Outcomes in Cambodia

The Malaria Consortium utilized positive deviance as a “method of behavior change communication for malaria control” (Shafique & George, 2014). The research “focused on mobile and migrant workers and resident communities in three villages in Sampov Luon, north-west Cambodia” (Shafique & George, 2014, p. 2). At a country level Cambodia had experienced an 81% decline in cases of malaria and a 95% decline in deaths from 2000-2013. This project stemmed from the emergency evidence that a mutated strain of parasites was present. The focus of the positive deviance program was on mobile and migrant populations in the area. The migrant workers who moved into these areas for temporary work, stayed for 15-30 days, and included men and women aged 15-50. The project was carried out in two phases. (Shafique & George, 2014).

The first phase consisted of a one-week implementation process that included pre-orientation, community orientation, situation analysis, participatory analysis, and community feedback. This phase also identified “role models” from the community that would be utilized in the next phase. This phase identified community members and stakeholders and invited everyone into the process. They held “six focus group discussions and 13 in-depth interviews with community members, farmers/landlords and mobile and migrant workers. Mosquito nets and hammock nets were used to animate the focus group discussions and in-depth interviews” (Shafique & George, 2014, p. 12).

Identification of malaria prevention role model behaviors included a female worker who slept under a treated net and would cover her arms and legs at night with a scarf when watching TV or cooking; a mother of a worker, who sprayed and gave her daughter a treated net with instruction to sleep under it nightly; a community member who cleaned and would
prepare his bed nightly, no matter how tired, by tucking the net under the sheet; and a farm worker who bought extra nets and provided it to the workers he hired to use while under his employ. The identification of malaria treatment role model behaviors included a farm worker who would give money to his employees to seek medical intervention upon becoming ill because he understood the importance of early detection and treatment; and a community member who had previously contracted malaria and gone to the health center and had maintained health and returns to health center upon feeling ill. Phase two was six months long and included replication of “role models” behavior through identification of volunteers, training volunteers, positive deviance sessions, monthly meetings, positive deviance seminar and evaluation (Shafique & George, 2014).

**Improving Diabetes Care in the Medical Home**

The positive deviance approach was used to “identify and compare factors driving the care models of practices showing the greatest and least improvement in the diabetes care in a sample of 25 primary care practices in southeast Pennsylvania” (Gabbay, 2013, p. 99). The medical home: “encompassing concepts known as patient-centered medical home and advanced primary care practice” (Gabbay, et al., 2013, p. 99). A cross-sectional approach to PD was taken to understand the research question, “what structural and process characteristics of practice transformation seem to distinguish higher-performing from lower – performing practices” (Gabbay et al., 2013, p. 101)? The 18-month inquiry into finding and identifying the practices utilized a survey and semi-structured interviews, to find the deviants “doings”.

The four key themes identified were “(1) managing competing demands, (2) leadership and vision, (3) building teams and resource capacity, and (4) monitoring progress and feedback” (Gabbay, 2013, p. 103). The higher performing practices in medical homes
with better diabetes care exhibited the following: most had electronic health records, had stable financial systems and processes, call for all members to practice initiatives, careful articulation and reinforcement of how the medical home will help patients and the practice and the need for changes, careful and deliberate plan of action with diabetes patients (this included the practice of novel methods of care). Some of these novelties included the finding that if one clinician and one office staff member took the time to talk over new implementation of programs, outcomes would be positively affected. The two worked out the kinks before they rolled out the new programs, including everyone in the process with collective problem solving, and shared decision-making. Everyone in the organization felt seen, heard, and part of the process.

The effective organizations exhibited high levels of trust, respect, and collaboration, often facilitating regular meetings and inviting open communication, through team development in composition and education/training. In order to provide oversight and support to avoid mistakes there was an expansion of medical assistant role and focus on stable staffing. The systemic processes to solicit and share feedback enabled the stimulation of change that in turn created and fostered healthy competition among clinicians and shared planning and decision making on the changes (Gabbay, 2013, p. 103).

How is the present study different from the studies reviewed above? First, it looks at effective diabetes management in a citywide population without being limited by organizational, employment, or insurance boundaries. It specifically searched for uncommon yet replicable communicative acts that positive deviants engaged in to garner consistent prediabetes A1c levels with little to no medicinal intake.
Diabetes Management Strategies among Hispanics

The PD approach has been used once before to understand management strategies in Hispanics diagnosed with diabetes. In an unpublished study (presented to the PD Initiative via slide show) 78 low-income Hispanic adults with diabetes were determined to be positive deviants. PD respondents were taken from a pool of HEB Supermarket employees from San Antonio and Houston, Texas, who were members of Blue Cross Blue Shield of Texas. They were selected after filling out a questionnaire that established their positive deviant score from indicators of self-care, eye exams, dietary management, and A1c control. The eligibility criteria were ethnicity and income. They conducted group and individual in-depth interviews in Spanish and English from which seven themes were discovered: 1) motivation, emotions and support (the two core motivators were fear and family); 2) diabetes education- need to have diabetes classes offered by HEB (employer), the doctor or BCBS; 3) diet- increasing intake of fruits, vegetables, water, and decreasing portion size; 4) exercise- main motivator feeling good and improve appearance, many exercised with a significant other; 5) doctors visits and tests, 6) medications- daily routines related to time of day, preparing for bed or work, and use of pill box; and 7) self-monitoring and management-having a positive attitude (Schroeder, 2011).

The PDs pointed out the need for physicians to spend more time with Hispanic patients to understand what was being communicated. A call from PDs falling under the motivation theme illustrated the perceived need to better educate Hispanics of complications of the disease through TV, diabetes classes or videos. Schroder identified seven archetypes of the PDs: caretaker, realist, young parent, teacher/leader, social butterfly, pretty woman, and soldier (Schroeder, 2011).
Significance and Research Questions

Bisits Bullen (2012) conducted a multiple case study analysis on PD programs in order to try and rate efficacy of positive deviance programs, utilizing the conceptual framework provided by Rogers’ diffusion of innovations. Success in diffusion is measured by the adoptability of a new innovation, spread into groups within a community made up of innovators/creators, early adopters, early majority, late majority, and laggards (Rogers, 1995). Bisits Bullen (2012) posits, “the spread of the PD approach throughout community health practice can be seen as the diffusion of an innovation” (p. 44). Bisits Bullen identified the topics addressed by PD programs and inquires: first was child nutrition-20 PD programs (50%) and 18 PD inquiries (56%), second was hospital acquired infections- 6 PD programs (15%), chronic diseases only had 1 PD inquiry ever conducted (Bisits Bullen, 2012, p. 65). Much more positive deviance research exists than what met Bisits Bullens criterion.

Bisits Bullen (2012) noted: “PD is an innovative approach which is naturally appealing and inspiring. It is clearly effective in the area of child malnutrition, and has the potential to contribute to many other areas of individual behavior change” (p. 146). The importance that positive deviance can play on a chronic illness like diabetes is evident, yet published PD research on diabetes is non-existent. Research in health communication on PD and interpersonal/ intrapersonal behaviors of these positive deviants is also non-existent.

The Schroeder study that utilized a PD framework to understanding diabetes in Hispanics focused on management strategies and adherence of medical interventions. The positive deviants in his study included all diabetics: prediabetics, Type 1 and Type 2. The primary focus was on good outcomes, in those who are diagnosed using medical interventions. The positive deviants were identified among employees from one organization
who were members of a specific insurance plan. The research in the present study focuses the positive deviance lens on taking that research one step further, and finding the needle in the haystack. This study looked at an entire community for people who had Type 2 diabetes and managed A1c at prediabetic levels; focusing on the intrapersonal and interpersonal communication behaviors they engaged in, that led to effective diabetes management. This research deepens and widens the scope of understanding by asking what specific communicative messages positive deviants used on themselves and with others to motivate and garner effectiveness with diabetes management. Specifically, finding effective behaviors and the communicative acts that make them possible. The micro-behaviors included writing down test results to keep a “report card” of their progress, having strong relationships with their physicians and feeling safe to communicate their concerns, being mindful of their actions daily to create routines and schedules that become habits.

**Research Questions**

The present study looks for above average outcomes, against all odds. Therefore, it focuses on finding those individuals who did not undergo surgical procedure for weight loss, are taking either no medication or one medication at low dosage. Further, they should have A1c levels 6.4 or below for at least a year or longer. The search is for Hispanic persons diagnosed with Type 2 diabetes. The following research questions were posed:

RQ 1: *What are the communicative intrapersonal acts and self-behaviors that enable positive deviants to manage their diabetes effectively?*

RQ 2: *What are the communicative interpersonal acts and social support behaviors that enable positive deviants to manage their diabetes effectively?*

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7 These odds are significantly high for those who live in El Paso, Texas.
Summary

This chapter reviewed the requirements of PD and the elements that are necessary to conduct a PD inquiry, approach or program study. Various PD cases relevant to health communication were discussed. This chapter reviewed intrapersonal and interpersonal communication and belief system components that have been shown to positively affect diabetes patient outcomes. The research questions that guide this research were revealed. In Chapter 3 that follows the methodological approach to data collection and analysis will be discussed.
CHAPTER 3: METHODOLOGY

“My husband wants to die and doesn’t love me anymore,” said Josie, a lady at the health fair, to Yvette. Josie’s husband has unmanaged diabetes and made the decision to live his life without rules. Josie has told him that he will die if he does not mend his ways but he refuses to listen. Josie had tears in her eyes as she communicated this to Yvette.

Since her diagnosis and struggle with diabetes, Yvette was a volunteer with the local diabetes association in her town. She attends health fairs throughout the community and offers them information about programs offered by the association. The comment made by Josie mirrors similar statements that Yvette has heard in the past year. These brief conversations Yvette has had with family members, care givers, co-workers, friends, and people diagnosed with diabetes are common. Everyone who approaches the table knows someone or is someone stricken with diabetes. Stories emerge of amputation, loss of eyesight, love, success, and struggle. Josie’s husband has uncontrolled diabetes and did not know what to do anymore. Yvette wondered if there was a way to find and share successful stories so that the behaviors found within them could benefit her community members struggling with inconsistent diabetes management.

In order to begin the process of employing a positive deviance approach to the effective management of diabetes, a roadmap must be followed. The purpose of the present chapter is to describe the process associated with implementing the PD approach. The previous chapters illustrate a strong climb in the incidence of diabetes in the Hispanic population. To employ the PD approach the site of El Paso County was selected for its populous and predominantly Hispanic makeup. This selection allowed me to conduct action
research within my community. The criterion for inclusion and exclusion were set with careful thought placed on what would constitute effective outcomes of the project. Data collection in the form of in-depth interviews and participatory sketching/photography were the primary source of discovery and are mapped out in this chapter. Methods of recruitment of PD respondents and data analysis were also discussed.

**Positive Deviance Inquiry Framework**

The five-step positive deviance process includes (1) define the problem, (2) determine the presence of positive deviants, (3) discover the uncommon but successful behaviors, (4) design activities allowing for community replication, and (5) discern and monitor the progress and effectiveness of the initiative (PDI, 2014). This current thesis conducts a positive deviance inquiry, which utilizes the first three.

The first three steps are used in both a full positive deviance approach/program and a positive deviance inquiry. The positive outliers were the focus of the present research and labeled as positive deviants (PD respondents). For purposes of the current study, Figure 4 illustrates the framework for finding positive deviants for Type 2 diabetes.
Figure 4: Framework for finding PD respondents with Type 2 diabetes

The red blood droplet in the figure is representative of the population of people diagnosed with diabetes. They enter the glucometer and encounter beliefs such as fear, uncertainty and stigma upon diagnosis. Three options are available, the first on the left, is a person who is not managing the diagnosis well (lack of adherence, missing doctors visits, not taking medications, not exercising, and not changing eating habits). The yield in this category is the red square of unmanaged diabetes. The second option is the middle reading; these diabetics are the normative/average group. The group engages in some self management-strategies and treatment adherence with medical interventions. Their outcome is inconsistent diabetes management. This group requires more than one medication for control, has an A1c higher
than 6.5 and is not consistent in their behaviors. Diabetes is a chronic illness that does not allow for manipulation of A1c numbers. If you are not managing your diabetes your readings are inconsistent. The third outcome is found at the top right arrow representing the positive deviants. They have figured out a formula to manage their diabetes and have prediabetic A1c levels for at least one year or more. This group has utilized all the strategies as group two and also conquered negative beliefs associated with diabetes.

Most importantly, this group of positive deviants engaged in effective intrapersonal and interpersonal behaviors that allowed for these positive outcomes. This group used little to no medicinal intervention to manage their diabetes. The minimal dose was marked as 500 mg of metformin, a first line drug used in diabetes management.

**Site of Research**

The location of this research was El Paso, Texas. The mailing list, contacts, and health fair attendees of the El Paso Diabetes Association were first tapped. The El Paso Diabetes Association is a local non-profit agency and is “one of a handful of independent diabetes associations in the country” (EPDA, 2014, para. 1). They provide diabetes management classes, cooking classes, testing, monitoring, and many other services at low cost to the community. Through its outreach programs, the EPDA contacts many diabetics who are Hispanics that might otherwise not have any treatment or education for their diagnosis. The EPDA mailing list includes people living with diabetes, family members of people with diabetes, and members of the community that support the organization.
Selection of PD Respondents

The present PD inquiry recruited twelve PD respondents. After sending out 600 invitations to prospective participants, 47 completed a qualifying questionnaire and twelve met the following criteria:

- They are residents of El Paso, Texas.
- They are of Hispanic ethnicity.
- They must have been diagnosed with Type 2 diabetes.
- They must have an A1c level below 6.4 for one year or more.
- They must be taking only one or no oral diabetes medications. If they are taking one, then a minimum dose of that medication once a day.
- They must not have any insulin intake.
- They must not have had any weight loss surgery.

The requirement of one or no diabetes medication at a minimal dose and no weight loss surgery was made because this inquiry into PD behaviors was based on the PD tenet of “against all odds.” While much literature has shown the importance of treatment adherence, the ability to effectively control A1c with little to no medicine is non normative. Further, many people have turned to surgery for solutions (such as gastric bypass or sleeve), with positive outcomes. However, the focus of this inquiry is to be able to achieve these outcomes with little or no medicinal therapy is the focus of this inquiry.

Procedure for Recruitment

Adhering to Institutional Review Board (IRB) protocols, this present study utilized snowball sampling in order to reach out to possible PD respondents “well-suited to studying social networks, subcultures, or people who have certain attributes in common. It is also
sometimes the best way to reach an elusive, hard-to-recruit population” (Lindolf & Taylor, 2011, p. 114). Utilizing the EPDA database, a flyer (See Appendix C) was sent to all Type 2 diabetics who had attended a management class within the past year, via mass email and mailing. Call for participant flyers were dispersed as follows: three hundred were mailed; the researcher also approached over 300 people during EPDA events and told them about the study to see if they knew anybody who fit the criterion. Forty-seven filled out the Initial Questionnaire to Determine Eligibility (Appendix D) to identify if they were genuine PDs to fit into inclusion in this qualitative study. Thirty-five of the forty-seven did not meet all of the eligibility qualifications and were not selected as PD respondents. The final twelve met all of the eligibility requirements and represent the PD respondents that took part in this research. Once identified, an appointment with the PDs for a formal in-depth interview was made.

**Privacy and Confidentiality**

The files, databases, interview tapes, transcriptions, sketches, and information on all PD respondents were kept secured and only available to the principal researcher. The identity of each PD respondent was coded in order to help secure his or her information. Interviewees were assigned a generic number from one to twelve to ensure confidentiality.

**Data Collection**

This study drew on three primary methods of data collection. The primary method was in-depth interviews, followed by observations and conversations during the interviews, and finally participatory sketching/photography. Once a PD respondent was deemed as qualified (Appendix D) a meeting was set up. A digital recorder was set up to record the interview. They were then asked to read and fill out an IRB consent form (Appendix B). The interview began with open conversation and moved on with questions found on the Interview Guide
(Appendix E/F). The average interview lasted one and a half hour, at which time the interview questionnaire (Appendix E/F) was used to organize the conversation. Of the twelve interviews, three were conducted and translated from Spanish to English. The interviews yielded some demographic information such as age, sex, nationality, years since diagnosis, medicinal intake, and El Paso residency length. Appendix H provides a table of the case matrix of the PD respondents. Upon conclusion of the interview, they were asked to do a sketch or prompted to take a photograph (if preferred) of what defined diabetes management through their eyes.

**Observations and Conversations**

During the conduct of the in-depth interviews, informal observations of, and conversations with, the PD respondents were carried out, which were later used as part of the data analysis. During these observations, particular attention was paid to non-verbal behaviors in order to not miss out on the feelings, emotions, or reactions shown by the PD respondents.

**In-Depth Interviews**

The PD respondents were interviewed upon completion of the IRB Consent form. Interviews provided an “understanding into the social actor’s experience, knowledge and worldviews. Researchers usually select persons if their experience is central to the research problem in some way” (Lindolf & Taylor, 2011, p. 173). The present thesis utilized PD respondent interviews as a primary method of data collection, which helped clarify, explain, define and compartmentalize attitudes for better understanding of the PD respondents’ feedback about diabetes management.
**Interview Guide Design**

The interview guide (Appendix E/F) was created with the desire of keeping the guiding research questions in mind. It was guided with questions that would help ensure that the PD respondents had the opportunity to discuss intrapersonal and interpersonal behavior, and belief systems within the interviews. The goal was to allow for open conversation with just a few questions. PD is a discovery process so leading questions can confound finding the true behaviors and beliefs at play in effective management. However, the importance of maintaining flow and asking questions deemed worthy of inquiry made the interview guide relevant.

**Participatory Sketching / Photography**

The visualization of person’s feelings, emotions, or experiences by way of picture is what is at the heart of participatory sketching/photography. It is a method of collecting data (secondary in this inquiry) to help better understand the PD respondents and their effectiveness with diabetes management. It allows the participant to go beyond talking about their experiences during the interview to drawing (Durá & Singhal, 2009), or photographing those said experiences.

Sketches and photographs aided in understanding our PD respondents’ beliefs and behaviors. They allowed PD respondents to share information they might have otherwise omitted or not found important (Kallman, 2013; Diaz, 2010). The advent of digital platforms such as cell phones also provided an option for PD respondents to gather a few items and take photographs instead of sketching to illustrate their diabetes journey. The sketching and photography complimented the PD respondents’ stories and was not the primary research or data collection tool. They provided a window into what is unspoken for the observer and a
vehicle to communicate difficult situations. Also important were the nuances that PD
respondents might have forgotten or overlooked. Expanding on (Lykes, 1997; Wang, 2003),
Singhal & Rattine-Flahtery (2006) describe

the process of taking a photograph provides an opportunity to develop a story that was
previously rejected, silenced, or overlooked. Further, the photograph’s narrative
becomes a participatory site for wider storytelling, spurring community members to
further reflect, discuss, and analyze the issues that confront them. (p. 317)

For the twelve PD respondents, participation in the sketching and photography
exercise was optional. All of the PD respondents decided to participate and were asked to
document what successful diabetes management looked like to them. The compilation of
sketches and photographs were examined and used as a secondary data set. These sketches
and photographs have been labeled as “Images” in the subsequent chapters.

**Transcription and Data Analysis of Interviews**

In-depth interviews were digitally recorded and later transcribed. The recording, and
the transcript, allowed for detailed review of each interview. The transcriptions were later
coded and analyzed, identifying themes and intricacies in behaviors and beliefs guided by the
work of Miles, Huberman, and Saldana (2013). Their work informed compartmentalizing
findings to allow for more effective analysis. The conceptual categorizing of beliefs, cultural
norms, behaviors, and critical communication behaviors made personally and with others
were also put into thematic section for further analysis. The ethnographic data and
sketching/photography exercise was then added to provide contextualization of data.

The PD respondents were made up of seven retirees, two administrative assistants, one
receptionist, one college student, and one education director. The average age of the PD
respondents was 62, while only the college student was under the age of 54. This demographic (illustrated in Appendix H) represents the highest affected group with Type 2 diabetes, but also represents the group that has access to better healthcare, diabetes awareness, and treatment when compared to younger Hispanic/Latino’s in this category (NIH, 2013). Three of the twelve PD respondents were not taking any medicine for diabetes while the other nine took one medicine daily.

Detailed review of the transcriptions of the interviews and participatory sketches were the driving force of the findings. Revelations of specific behaviors and acts were filtered during various iterations to help identify the clear and useful specific acts that lead to diabetes management effectiveness. The focus was placed on which communicative acts and behaviors the PD respondents employed to yield lasting and documented results. The PD inquiry effectively facilitated discovery of these specific acts and behaviors that were apparent, yet hidden in plain sight.

Ethical Considerations

PD respondents were kept in the forefront of the research throughout the experience. Diabetes is a personal medical condition and therefore has ethical underpinnings that are vital to consider. Throughout the research project, all ethical considerations to make the PD respondents feel safe, heard, understood and protected were maintained by providing the opportunity to exit from the study at any time.

Summary

This chapter reviewed the method that was utilized for this thesis. The PD framework was unveiled. The call for PD respondents, initial eligibility questionnaire, and interview guide were explained. Methods for data collection, ethics, and privacy guidelines were
explored. Finally, methods of data analysis were set forth to render findings for the subsequent chapter.
CHAPTER 4: FINDINGS

Yvette glances the cover of a *Diabetic Living* magazine that reads, “stress less, cook lighter, and move more” (2015). If it could only be that easy, she thought. Later that day Yvette read an article in her local newspaper authored by Dr. Sharma, a physician who is now seeing the complications of diabetes too often in her practice. In the article, Dr. Sharma shares the story of a patient in his late 40s that might end up getting his arm amputated due to an ongoing infection that was precipitated by diabetes complications. Dr. Sharma notes: “he was my third patient of the day who was suffering from a serious complication from diabetes, and non-compliance, especially with diet, was one of the major recurring themes” (Sharma, 2015). She questions the “cultural component to non-compliance in El Paso, where the Mexican diet prevails” (Sharma, 2015). Speaking with people who manage their with diabetes effectively, Yvette has found that very few diabetics consistently employ behaviors such as regular exercise, healthy eating, and testing their blood sugars often. Yvette has tried all of these behaviors, but she knows how difficult it is to be consistent, day after day, meal after meal.

The purpose of this thesis was to find communicative acts and strategies that PD respondents engaged in which allow them to more effectively manage diabetes relative to their peers. Perhaps several of these PD actions are replicable and can allow diabetics like Yvette, and other afflicted Hispanics in the El Paso community, to more effectively manage their diabetes.

The present chapter answers the two research questions posed in the present study. The answers to the research questions that follow were organized in two major sections: communicative PD acts that are intrapersonal and those that are interpersonal.
Intrapersonal Acts and Social Support Behaviors

Research Question 1 asked: What are the communicative intrapersonal acts and self-behaviors that enable positive deviants to manage their diabetes effectively?

This section explores the intrapersonal communicative acts and behaviors PD respondents engaged in, which led them to effective diabetes management. Five thematic categories frame the discussion: (1) initial feelings upon diagnosis, (2) self-management behaviors, (3) self-management strategies, (4) self-management beliefs, and (5) self-management motivators. Initial findings included not feeling stigmatized by diabetes, but feeling fear and uncertainty and making the decision to disclose. The second section on self-management behaviors included the formulation of habits by creating daily routines and how most PD respondents felt about and how they managed their physician’s visits. The third section reveals self-management strategies, including short response to diagnosis, mindfulness, proximity, and sugar understandings. Components found in the fourth section of self-management beliefs, include PD respondents’ prayer/meditation beliefs and self-descriptors. The fifth and final section is made up self-management motivators - quotes PD respondents tell themselves, and their lens shift i.e. preferred use of the word “health” in lieu of “diabetes.” Intrapersonal communication begins at diagnosis.

1. Initial Feelings upon Diagnosis

Most of the PD respondents noted that they were surprised by their diabetes diagnosis. Some PD respondents thought they might possibly get it at one point due to family history, but never really believed it would happen. PD respondent 2 described her diagnosis: “When I was diagnosed with rheumatoid arthritis and also diabetes it was devastating, I asked, what

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8 In reporting results, I use the term “most” if the finding was reported by a majority (at least seven) of the twelve PD respondents. I use the term “all” if the finding pertained to all 12. I use the term “they” to refer to a small number of PD respondents (including one).
will I do about it? How am I going to control this? I was depressed when diagnosed. I didn’t take it well.” Others reported being “sad” PD respondent 5 flipped her sadness and said, “I am not the only one with diabetes, and if I knew that I was coming from a family of diabetics, I would ask, why did I not take care of myself? But then I said, I can now.”

Eleven of the twelve PD respondents are being treated for diabetes along with at least one other chronic disease. One PD respondent recalled his initial diagnosis, “I was riding my bike at the time and had an episode of shortness of breath and dizziness, so I went to the doctor … and I had 80% blockage of the lower descending artery” (PD respondent 1); he was diagnosed with high blood pressure and Type 2 diabetes. PD respondents communicated being “grateful” of their diabetes diagnosis because their other chronic ailments required medication. PD respondents had “hope” with the ability to control diabetes levels by making lifestyle adjustments. After overcoming the shock that came with diagnosis PD respondents encountered emotions such as stigma, fear, and uncertainty.

**Stigma, Fear, and Uncertainty**

None of the PD respondents used “stigma” as a word associated with diabetes or a diabetes diagnosis. They seemed to have embraced their diagnosis. PD respondents reported fear associated with amputation, blindness or death. Having family members with diabetes, and exposure to first line familial diabetes complications was common finding among all of the PD respondents. PD respondent 7 shared her personal story, “my grandfather passed away and the family didn’t talk about it. I was eight. My mother talked about it later when her brothers were diagnosed. She said he [my grandfather] had to have a leg amputated.” Having experienced the death of her mother at a late age to diabetes, PD respondent 10 cited fear as her motivator to taking the diagnosis seriously, “I heard that people that don’t take care of
themselves, have physical problems like amputations, bad circulation… and their stories affected me.”

PD respondents reported having non-compliant diabetic family members. PD respondent 1 recalled his sister who passed away from heart problems caused by uncontrolled diabetes; he recalled, “I saw her never care for herself.” PD respondent 2 revealed her fear when she “was terrified because my mom died of diabetes.” The number one fear held by PD respondents was amputation and insulin dependence as seen in the lives of family members’ uncontrolled diabetes. Remembering their diagnosis was crucial: “I don’t want to forget because of fear of what might happen [to me]” (PD respondent 8). Other PD respondents reported fear with diabetes complications not the controllable disease, “when they told me I was not afraid. I was glad they told me with time, and I got pills” (PD respondent 3). PD respondent 4 echoed her sentiments “I was not afraid of diabetes. I was depressed a bit, then, I gave thanks to God for that disease because I knew it was a disease I could control.”

PD respondents felt uncertain about the future. “What came to mind was, oh-oh, insulin right away. [The thought] that I would not be able to eat tortillas and the food that I wanted to, or worse, the fear that I wouldn’t be able to control my diabetes because I did not know what to eat” (PD respondent 12). PD respondents reported using the fear as fuel to manage their diabetes and not as an obstacle. The strongest motivator to management was fear. “I remind myself that I want to have a good quality of life, to be alive. I don’t want to be sick and be on dialysis or have an amputation” (PD respondent 7). Respondents also reported fear of becoming a burden as a strong motivator, “I don’t want to let anybody down like my daughters. Bringing complications upon myself. I don’t want to be a burden” (PD respondent
8). This fear and lack of stigma led to the next intrapersonal decision for the PD respondents - whether to share their diabetes diagnosis with others or not.

**Decision to Disclose**

If, when, and how to disclose their diabetes diagnosis to others was an important decision made by PD respondents. Disclosure opened the door to social support that was vital to effective diabetes management. All of the PD respondents reported disclosing their diabetes diagnosis with family, friends, and coworkers. Disclosure garnered support for PD respondents. “I told my husband, kids, and mom. I told them I was diagnosed [with diabetes]. My oldest son’s best friend has Type 1 and he [my son] knew about it. They were sorry and asked what they could do to help” (PD respondent 7). The PD respondents described being comfortable disclosing and sharing their diagnosis “I am not ashamed of my diabetes whatsoever. I will talk to whoever wants to talk about it” (PD respondent 10).

PD respondents noted that the decision to disclose their diabetes diagnosis opened vital dialogue with their family. “I told my family I was diabetic. At first it was not a big thing, now that they are grown up and having families, they ask questions” (PD respondent 12). Disclosure, as revealed in Chapter 2, leads to social support, which aids in effective diabetes management. PD respondents moved from initial feelings and beliefs about their diabetes diagnosis to effective self-management behaviors.

**2. Self Management Behaviors**

Most of the PD respondents reported that they themselves were the reason for their effective diabetes management. Many effective self-management behaviors have been revealed through medical literature over the years. The findings represent all behaviors that were utilized by PD respondents. These revelations served to validate within this inquiry their
use by the PD respondents as communication strategies. Ten themes found in this section are detailed routines that became habits: daily, sugar tracking, eating, grocery, cooking, restaurant, exercise, television, medicine, and physicians visits.

**Daily Routine**

PD respondents developed daily habits and routines that helped them manage and control their diabetes. PD respondent 2 said, “Routine has helped me stay in control, it is like I don’t have it [diabetes]. It has become easy, because I can control it.” Some of the daily routines PD respondents reported were:

- They sleep at least 8-10 hours every night.
- They wake up early -- by 7am and hardly ever slept in.

**Sugar Tracking Habits**

Maintaining controlled sugar levels with diabetes was difficult in the beginning for PD respondents. Testing levels with a glucometer ensured daily accurate sugar tracking. Most PD respondents checked their sugar level at least once daily. All of the PD respondents reported that at diagnosis, they tested their sugars more consistently. Once it was under control, they tested less or not at all. Control gave PD respondents the freedom from rigorous testing. Some specific behaviors that helped PD respondents with sugar tracking included:

- They kept their glucometer close and out in the open so that it was visible and acted as a reminder.
- They took a mental note of their results. Some wrote their results down.
- They tested their sugar levels for peace of mind if they were not feeling well.
- They tested sugars levels and adjusted meals accordingly.
• They checked their sugar levels and used them as a guidepost in the morning or in the evening. The glucometer reading was used to ensure they met their target number. Sugar tracking gave PD respondents immediate results; if the number was high or low they all reported no feeling of worry, and they took care of it and moved on. PD respondent 4 checked her sugar to ensure she was on track and when it is was right on she said, “Thank God that my sugar came out okay today.” Sugar tracking made PD respondents mindful that what they were eating would affect their readings.

_Eating Habits_

Eating habits represented one of the highest response categories regarding self-management behaviors for PD respondents. They had a very clear eating philosophy and followed their diets very carefully to achieve optimal results. Some of the behaviors PD respondents engaged in were:

• Most of them did not eat red meat.

• All ate breakfast daily, even though most reported hating it.

• All ate three meals a day and never skipped meals. One PD respondent ate three meals and two snacks in order to eat every 2½ hours.

• Most of them drank water with meals.

• Most of them ate salad with meals to give them a feeling of satisfaction.

PD respondent 2 said, “I discovered salad helps, … if I did not feel satisfied; I knew that in 2½ hours, I would be eating again. That is how I was able to keep it under control.”

• They do not overeat. They ate until they were full then would stop eating. They ate everything in moderation, with no restrictions.
• They served themselves, not allowing others to serve them in order to maintain control over portion and food choices. Serving themselves also allowed them to clean their plate by putting less on it.

• They had routine meals weekly. PD respondents knew what they were having daily and on what days they would go to restaurants.

• Their snack of choice was fruit. They carried snack bars with them in case they would not have time to eat.

• They only ate one slice of bread. If two came with a sandwich they would remove one.

• They sat down to eat.

• The family ate the same meal, making it was easy for the diabetic.

All PD respondents reported not wanting to waste food. They spoke about the Hispanic cultural practice of cleaning all the food off their plates; however, they reported not abiding by it. When the PD respondents ate they were mindful of portions. When asked what “overboard” meant for clarity, PD respondent 6 said, “for my husband it means three enchiladas and two for me and we have no sides.” Careful meal planning required PD respondents buying groceries that made eating well possible.

Grocery Habits

PD respondents reported a high tendency for following a routine when it came to shopping for food. Who shopped, what was purchased, when they shopped, and what did not make it in the cart, was a well thought-out routine.
• Most respondents (both male and female) shopped for their own food as a weekly routine and did not leave it to someone else. This helped them become the gatekeeper of what foods entered the home.

• They purchased healthy foods to ensure good nutrition and bought chicken and fish in bulk.

PD respondents had one or two set days during a week to go for grocery and specific stores that they frequented on those days. They did not overbuy food because of their dislike of being wasteful. Food preparation among PD respondents also revealed effective self-management behaviors.

**Cooking Habits**

Food preparation was in the forefront of the PD respondents’ minds. PD respondents reported the need to be in control of what went into their food preparation and most prepared meals for the family.

• They cooked healthier foods than before they were diagnosed.

• They did not eat fried foods and avoided grease and salt.

• They did not use sugar in food preparation.

• They primarily ate vegetables, whole grains, chicken, and low fat items.

• They cooked meals from scratch.

• They all ate the same meals as everyone in the household.

In some homes only the diabetic was eating differently in the beginning, but PD respondents reported after a while family members adjusted their diet to theirs. PD respondents made efforts to maintain some normalcy with their beloved Mexican food. PD respondent 12 still prepared enchiladas, but used PAM cooking spray in lieu of frying tortillas. She did not use
grease or oil and baked them instead. The chili sauce for the enchiladas was also not fried and was made from fresh ingredients. Families of PD respondents have adjusted to the taste of healthier food, “I have had no complaints and it is the only way I make them now” (PD respondent 12). Food and cooking habits the PD respondents reported at home was reflected in their restaurant habits.

**Restaurant Habits**

PD respondents still enjoyed the occasional visit to a restaurant. They found creative ways to continue to go to restaurants while still maintaining diabetes management.

- They ordered their own food and did not allow others to order for them.
- They asked for a to-go-box and made 2-3 meals out of it. Some asked for it before eating their meal to ensure portion control.
- Most PD respondents never ordered a combo meal when eating at fast food restaurants.
- They ate only until they were full and left the rest of the unfinished food. They did not feel guilty about leaving food on the plate. A few reported purposefully leaving food on their plate to show control.
- They investigated what came with meals on the menu and asked for substitutions if they were high in carbohydrates.
- They did not order the sides that came with the meals. “If I ask for flautas, some restaurants give you flautas with salad and avocado. They don’t give you rice and beans…That’s good because it is less [carbohydrate]” (PD respondent 4).
- They ordered one meal, asked for two plates and shared.
• They ate out only 2-3 times per week and usually at a sit-down restaurant: “I notice I eat more if I eat out than when I stay home” (PD respondent 9).

For PD respondents, eating and exercise habits went hand in hand; both were practiced and required for diabetes management. Most respondents engaged in exercise at least three times weekly.

**Exercise Habits**

The PD respondents reported liking what they did for physical exercise. Most did it because it was part of their diabetes management and enjoyed it at the same time. The habits that PD respondents reported included:

• They all worked out at least three times per week and, the number one reported activity was walking.

• They did not lead sedentary lives. They played with pets and grandkids. “I get lazy and the kids make me move.” (PD respondent 4).

• They would set workout appointments to maintain routine.

• They washed dishes, swept their patio, and organized their homes to stay busy.

• They reported being motivated by their spouses who exercised more than them.

• All lost substantial weight after diagnosis through exercise.

• Most walked pets daily.

• They parked in parking lots far away from the entrances and walked.

• They refused motorized chairs, elevators and short cuts and took advantage of stairs and walked.
Many resorted to creative methods of exercise, “I was going on the bus to my work. I did it because I knew I needed to walk. I had a car, but I had to push myself” (PD respondent 12). PD respondents preferred being active instead of sitting and watching television.

*Television Viewing Habits*

PD respondents’ television viewing was minimal. They were not fans of television and reported that it is was waste of time. The TV that they viewed was comprised of favorite “must see” programing.

- They all limited television viewing to 0-2 hours daily.

*Medicine Habits*

Not all of the PD respondents were on medication. Of the twelve, nine were. They were dedicated to their daily medication routine. They took their medication either in morning or at night and did not deviate. If they accidentally missed one pill accidentally, they did not stress.

- Most of them had pillboxes and kept them in close proximity i.e. kitchen, restroom or nightstand.

Maintaining medicine routines and glucose testing led to better A1c levels in PD respondents. Armed with great A1c results, PD respondents reported looking forward to physician visits.

*Physician’s Habits*

PD respondents followed a routine in order to ensure meaningful physicians visits. Carefully thought out behaviors PD respondents practiced included:

- They requested their next appointment and lab orders before leaving the current physicians visit.
• Physician appointment dates were kept on the fridge or set on phone calendars as reminders.

• Blood work was conducted prior to physician’s visits to ensure accuracy of information.

• “Doctor sent postcard [appointment reminder] and my mom reminds me of visit.” (PD respondent 10)

The following section also provides insights into how the PD respondents viewed religion and stress.

3. Self-Management Strategies

The strategies and beliefs that PD respondents utilized for effective diabetes management comprised of seven subsections: short response to diagnosis, mindfulness, proximity, prayer-religion-meditation, sugar beliefs, personal labeling and stress.

Short Response to Diagnosis

The reality and fear felt by the PD respondents clouded the initial shock of being diagnosed. They made active decisions to deal with their diagnosis head on and in a timely manner. Upon diagnosis PD respondents:

• They took medications as prescribed.

• They made adjustments to healthy eating (lowering carbs and sugars) to the best extent possible. They began monitoring closely and diligently their food intake, sugar readings, and exercise.

• They told their families and loved ones about their diabetes in a timely manner without hesitation.
**Mindfulness**

PD respondents were very mindful of their daily decisions and how they would factor into their healthy outcomes. Mindfulness required them to pay full attention with decision-making. Some strategies gave them room for being malleable with their daily practices to alleviate burn out. PD respondents allowed themselves at least one weekly splurge. In order to adjust for calories and carbohydrates, they would skip a meal. They drank more water daily until it became a habit. They found new ways to eat desired foods, i.e. cucumbers instead of tostadas with salsa. The answer was not always giving into temptation but adjusting the temptation. These temptations were managed by controlling what were near the PD respondents - keeping close what is most helpful and important to effective management.

**Proximity**

As was discussed in Chapter 1, studies have been done on food proximity showing correlations with sugar availability and diabetes rates. The foods that we surround ourselves with are inevitably what we might be prone to eating. In the case reviewed in Chapter 1, the proximity of sugar and the rising diabetes numbers was clear. The article points to lack of finances being the catalyst for bad food choices. PD respondents revealed they were mindful of proximity and revealed some understandings:

- They had fruits and snacks available at all times.
- They had medicine with them at all times.
- They carried a water bottle to ensure they always had water.
- They kept glucometer close, i.e. next to prayer book.
• They were aware of social proximity: “I don’t put myself in situations where food is too abundant. Often like parties and restaurants because temptation is too strong” (PD respondent 6).

Being mindful and keeping things that contributed to good outcomes in close proximity emerged as a PD attribute. Mindfulness is a replicable strategy that can enable routines to become habit. PD respondents were very mindful about their relationship with sugar.

**Sugar**

Sugar played a highly important role in the lives of PD respondents. They reported having a love/hate relationship with it. PD respondents’ beliefs about sugar are listed below:

• They know that they consume sugar daily because it is in everything and understand the connection of carbohydrates, sugars, and glucose levels.

• They like sugar but think it is bad.

• They buy candy or sweet bread and eat only a small piece.

• They use splenda as a sugar substitute.

• They believe that by not limiting sugar, it is not missed.

• They do not buy sugar for their homes.

The way they communicate with themselves about sugar, including knowing its important role in their health, helps the PD respondents manage their relationship with the substance in an effective manner. PD respondents also used their religious faith as a positive support strategy.

**4. Self-Management Beliefs**

**Prayer/Meditation/Religion/Spirituality**

Ten of the twelve PD respondents cited being Catholic. Two reported no religious affiliation but reported practicing yoga and meditation. “I think my faith in God, knowing that
he is always with me … he’s got my back. I have faith in God” (PD respondent 8). Some of
the behaviors reported by the PD respondents included:

• They prayed daily, sometimes twice, noting that it was “so important to have spiritual
  connection” (PD respondent 6). Some prayed while they walked.

• They found quiet time and/or meditated daily.

• They prayed at bedtime and read prayer books daily.

  Spirituality reminds me that I am on this earth for a purpose and I was placed by God
  for a purpose, so I am not going to stop myself from being a tool of God and I am
  going to do the work that he put me on this earth to do and I don’t know what it is. So,
  spirituality keeps me in check, it tells me be healthy…. it reminds me you got to keep
  going. (PD respondent 10)

PD respondent 11 shared Image 1 that hangs in her office, noting, “this inspirational message
that I see everyday gives me courage to go on.” PD respondent 6 shared her deep rooted faith
“I pray to the Lord keep me here a little longer so I can see my kids grow a little older and my
grandkids finish their education …. I want to stay a little longer to be with my family …. I
live healthy so I can stay longer” (PD respondent 6). The conversations the PD respondents
are having with themselves and within their faith helped built a foundation of support for them
to go on.
A recurring theme among PD respondents discovered during the interviews was their self-perceptions. During the interview they would say things like “I am really selfish, that is bad, right?” Another PD respondent said, “I have to tell you, I love others, but I love myself more. I am egotistical.” So after the first few interviews, I made sure that if PD respondents did not volunteer a label, I would ask them to describe themselves. Figure 5 is an illustration of a PD respondent’s intrapersonal descriptors. Selfish, independent, egotistical, and strong in that order, were some of the labels PD respondents gave themselves. “I am selfish …I have the freedom to make the choices I want, but smart to not make bad choices” (PD respondent 1).
Figure 5: Illustration of Positive Deviant Intrapersonal Self-Descriptors

**Stress- Don’t Worry be Happy Now!**

PD respondents knew the link between stress and high glucose levels. They were very mindful of the stress in their lives and tried to minimize it. Overstress, PD respondent 10 recalled, led to his condition. To alleviate stress, some PD respondents said they smiled a lot, tried to be happy, and kept an open mind. PD respondents communicated that stress was a mind game and a waste of time; overthinking led to more stress and stress resolved nothing. To reduce stress they engaged in silence, meditation, and prayer. “I am not a worry wart. People tell me, ‘you don’t worry for anything it slides off your back.’ I tell them that it has to” (PD respondent 4). Another PD respondent echoed the sentiment: “If you have problems with your children it raises sugar. I tell her put your problems aside and think of yourself first” (PD
respondent 5). She motivated herself with her words. What PD respondents told themselves to continue on the journey to diabetes management was filled with self-motivating strategies.

5. Self-Management Motivators

The subsequent section takes a deeper look into the intrapersonal self-talk that happens in the mind of PD respondents. It allows us to explore what they tell themselves and would tell others about their effective diabetes management. The section is divided into three themes: quotes that you tell yourself, lens shift, and advice to other diabetics.

PD respondent 7 shared Image 2, which illustrated her motivation for a better day tomorrow. “The sun will come out tomorrow. There’s always tomorrow” (PD respondent 7). This exemplified the hope and yearning for health in order to bring a brighter tomorrow. The PD respondent said that when days were tough and a workout was missed, or she gave in to a food temptation; she told herself “don’t give up because tomorrow brings a new opportunity to begin again.” What PD respondents said to themselves revealed their beliefs about diabetes.
Quotes – What do you tell yourself?

The PD respondents exhibited strong motivation to stay the course of effective diabetes management. What they told themselves and what drove their effective diabetes management gave insights for those that may be searching for answers. The responses to that question included “diabetes should not be limiting” (PD respondent 1); “diabetes is a change of life not a death sentence” (PD respondent 2); “don’t be dumb you only have so many chances” (PD respondent 3); and “grateful for this sickness because it could be worse” (PD respondent 4). Not wanting to be stereotyped PD respondent 1 reported: “I think to me it is motivating about being a Hispanic male over 50 almost 70… I want to be considered outside the norm” (PD respondent 1). “We all have to die one day, but while we have life … it is beautiful … disfrutela (enjoy it)… use it, live it. Take care of yourself as much as you can and keep moving forward” (PD respondent 5). “Glad I have opportunity to remedy it. It is not the end of the world” (PD respondent 11). These responses were about remaining positive and knowing it could be worse. Other responses included lessons that were learned early in life that continue to motivate for leading a healthy life.

Childhood lessons have become motivators. PD respondent 6 shared: “Ustedes tienen que hacer por ustedes. Ustedes son importantes. No voy a estar aqui para siempre (You all need to do for yourselves. You are important. I will not be here forever).” She spoke of what her mother used to tell her as a child, reminding her of the work ethic she instilled in her. PD respondent 8 shared “you have to tener ganas (to want it). Part of it is the way I was brought up. I have a saying in my prayer book, get up, get dressed, show up, and don’t give up” (PD respondent 8). PD respondent 12 shared her motivation:
My dad, I remember so much. I was 14-15 he told me – ‘no le tengas miedo al trabajo’ (do not be afraid of work). You work, if you don’t do it somebody else will. You learn, if you don’t know, learn … don’t be afraid of work…I feel I worked a lot because of my dad and I got through a lot because of what my dad instilled at a very young age.

Diabetes is work - I put in the work.

The final theme of motivating quotes dealt with wanting to be around to enjoy family and remaining healthy to ensure a healthy life full of activity: “My will to be around my family for a longer period of time and enjoy all their triumphs [drives my motivation for diabetes management]” (PD respondent 11). PD respondent 9 tells himself to “never give up staying focused. I want to be a healthy person because I want to be a person that wakes up and does not have something hurting. I do it for myself.” The youngest PD respondent shared:

Of course I can’t do anything without my health, so knowing that one day I want to jump off a plane and I am too fat and they don’t let me jump off the plane, then that is my fault. I put a stop to something I wanted to do in my life, so knowing that I have a bucket list and I have goals set in mind already, that helps me make sure that I am ready to do what I want to do. So I do these little things so that I can enjoy my life.

(PD respondent 10)

PD respondents are very mindful with the words that they use to describe their diabetes and health perceptions. This is important because their consistency with diabetes management has been garnered by utilizing intrapersonal communication belief strategies to create positive health outcomes.
**Important Shift in Lens**

PD respondents focused on “health” not “diabetes” when describing their lifestyle adjustments. During our conversations they made that distinction very clear. Some made sure to point out that they take care of themselves as a universal wellness plan not just a diabetes management plan. It is important to remember that all but one of the PD respondents suffer from other ailments such as high blood pressure, rheumatoid arthritis, heart palpitations, and gastritis among others. They viewed their diabetes as part of life’s full picture and they are very aware of that distinction.

- They spoke about maintaining a healthy lifestyle not diabetes management - “I talk about being healthy, not focus on diabetes” (PD respondent 1).
- They made things “habit and routine” not just following “rules and instructions.”
- They made time for themselves to improve health outcomes. Time was crucial and shifting from “others” to “me” was very important.

Table 3 summarizes the key findings pertaining to intrapersonal communication strategies exhibited by PD respondents.

**Table 3: Intrapersonal Communication Behaviors, Strategies and Beliefs Exhibited by PD Respondents**

<table>
<thead>
<tr>
<th>(1) Intrapersonal Feelings</th>
<th>Quality of Outcome With Respect to Effective Diabetes Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial feelings after diagnosis</td>
<td>Diabetics reported being surprised, sad, hopeful, and grateful. Being honest about their diagnosis allowed them to &quot;feel&quot; their diagnosis without being overwhelmed and stopped by emotion.</td>
</tr>
<tr>
<td>Stigma, Fear and Uncertainty</td>
<td>Diabetics did not feel stigmatized by their diabetes diagnosis. They were not afraid of diabetes; however, fear of amputation, blindness and death; fear of not living a long healthy life; fear of becoming a burden; and uncertainty of the future were reported as the main motivators to effective diabetes management.</td>
</tr>
<tr>
<td>Decision to Disclose Diabetes Diagnosis</td>
<td>Diabetics disclosed their diagnosis swiftly to family, friends and co-workers. This disclosure led to early social support and good health outcomes.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>(2) Intrapersonal Behaviors</th>
<th>Quality of Outcome With Respect to Effective Diabetes Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daily Routine</td>
<td>Maintaining daily routine from the time they woke up, exercised and slept. They stayed on track and garnered more consistent management results.</td>
</tr>
<tr>
<td>Sugar Tracking</td>
<td>Diabetic began consistent glucose tracking until control was maintained. They now check only once daily as health gauge and make the first indicator of issues. They track quarterly A1c levels and write their results down to track progress, this leads to managed A1c under 6.4.</td>
</tr>
</tbody>
</table>
Interpersonal Acts and Social Support Behaviors

Research Question 2 asked: What are the communicative interpersonal acts and social support behaviors that enable positive deviants to manage their diabetes effectively?
This section builds on the intrapersonal communicative insights derived from the previous section to outline the interpersonal PD acts of the respondents. After they openly disclose their diabetes diagnosis, social support comes into play with family, physician, coworkers, friends, and social media, and includes PD respondent’s advice to others.

**Social Support**

When PD respondents were asked to talk about their social support channels their responses revealed three types of support groups: family, physician, and others. Family was reported as one of the strongest social support categories.

**Family**

Family was made up of spouse, children, grandchildren, parents, in-laws, and siblings. The following offer a glimpse into how family became the close support network for the PD respondents. The way they communicate with each other is crucial to understanding how effective interactions take place within the familial relationships. Most of the time PD respondents were taking the time to tell their families how to communicate with them more effectively. For example, if they were being told, “should you be eating that cake” and found it non-supportive they would correct their family member to say it differently or ask them not to say it at all. They used some of those moments when they were called out by family on their behaviors as “reminders” instead of negative judgments. Social support from family, friends, and others was based on action and not just words. Members of the PD respondents social support circle were actively participating in the lifestyle changes that led to effective diabetes management.
PD respondent 1’s story is relevant here. He is 69 years old and his bike as seen in Image 3. His family after dinner asked him to participate with them in a triathlon. The problem was that he did not have a bike. His family, in an effort to help him lose weight and be more active, said, “Why don’t we all pitch in and get him a bike?” He said that he had the money to get it on his own, but took the gesture as a positive one. He continues to competitively ride to this day. It all started with the bike in 1997 and what he considered a gesture of “love and support” not “judgment” as part of his effective management of diabetes.

PD respondents also mentioned parents, siblings, and in-laws efforts as supportive to management efforts. They supported PD respondents by going on walks with them, not bringing sweets to their homes when visiting, helping them test sugars with glucometer and making healthy food a priority which helped make effective diabetes management possible. The youngest PD respondent 10 describes his mother’s devotion: “When I eat at home my mom makes lots of Mexican food. When I was diagnosed she was cooperative with my
environment. She would still make the family fried flautas—would bake mine…now it is for everyone.” When asked for his strongest social support he replied:

Strongest support would probably be, in an odd way, my brother because he is harsh, like he says, ‘you are going to eat that brownie? You know you have diabetes,’ and I think, I hate you. But he says the truth, and he says it in a stern way, with as much judgment as possible and I say, ok fine, I won’t eat it. But, I am also aware that he has the same potential that I do to stay healthy and also to get diabetes, so I think we push each other…We kind of push each other to be healthier. He is my strongest supporter and I am sure he would say the same thing because we are harsh on each other in a mean way but it translates as a reminder, not as anger.

Family members, in general, were deeply committed to helping a PD respondent stay active: “My entire family lost weight and watches what they eat. There is an entire shift. We still make food, but watch what we eat. It has been an adjustment but one that we have made together” (PD respondent 11). PD respondent 3 shared that her son-in-law checks her sugar and if she is doing well he asks what she is craving and gets it for her.

**Spouse**

Strong spousal support is an indicator of effective diabetes management. One of the supporting behaviors was attending diabetes management classes with PD respondents.

My husband went with me the second time to my diabetes classes. He lost 30-40 pounds and then gained it back, but he keeps walking and he cooks. He never teases me. He wanted to learn what to eat and he never got upset or said, ‘we won’t be able to go out anymore because you cannot eat this.’ He let me do my thing because I was managing [my diabetes well]. (PD respondent 2)
PD respondents noted that having a life partner to share the diabetic journey makes management easier. They report spouses eating what they eat, and liking it. PD respondent 5 shared that her husband does tell her if the food she is eating has too much salt and he won’t eat it. She describes this as a “caring gesture”. He also tells her that her sugar will rise if she eats certain things. This keeps her on track: “I am never mad at what my husband tells me … he sees what I eat… I feel more that he is taking care of me (and he is good at that) laughs.” (PD respondent 5)

PD respondents with spouses described the need to share with someone and having someone constantly watching out for their wellbeing is paramount in their effective management of diabetes. PD respondent 6 is grateful for her spousal support “My husband always asks [me if I have eaten]. He gets very worried because he saw me get dizzy once. I used to eat and skip meals and now I have to eat. He would say, “you need to eat” (PD respondent 7). The next most supportive familial group is the PD respondents’ children.

Children

PD respondents, who did not have a live-in spouse, cited their children as strong supporters. Their children performed various actions including checking in on them, buying them pills and placing them in pillboxes, giving them reminders to eat, getting them diabetes testers, and buying healthy foods. PD respondent 4 noted that her daughter was always curious about her sugar readings, and at dinnertime would often say: “we are glad you take care of yourself, mother.”

PD respondent 5 described how her daughter provided long-distance support by sending sugar-free candy during Easter. Children are open-minded and let the diabetic parent pick restaurants, and develop teamwork in making decisions about their own health. They ask
if their parent has eaten, if not they go and get them food. The act of discussing glucose
readings, and giving full support is evident in this group “My daughter gave me her exercise
bike” (PD respondent 11). Grandchildren are strong positive influences in the forefront of PD
respondent’s minds. PD respondent 6 shares: “I love my grandkids. My kids say, ‘it’s like you
don’t love us…what about your kids?’ I love my kids, but I adore my grandkids. My four little
changitos (monkeys).”

**Grandchildren**

All PD respondents who have grandchildren listed them as reasons for effective
diabetes management. They record picking them up from school daily and taking them to after
school programs. One PD respondent home schools her grandson. PD respondents are very
mindful of their grandchildren’s supervision over their diabetes: “my grandchildren say,
don’t eat that because it is bad’, then I say -I can have a little. They all know and they all take
care of me” (PD respondent 3). Some even allow their grandchildren to check their sugar. As
PD respondent 4 noted: “my grandson when he is here, he will prick my finger for testing. He
does not know good or bad readings but does it. All my grandchildren know I have diabetes.”

Grandchildren made PD respondents feel motivated with their diabetes management
“She (my granddaughter) makes me feel supported and very sweet of her to worry about
gram” (PD respondent 8). Sometimes grandchildren are reminders of the need to be mindful,
as PD respondent 12 reports: “sometimes if I am at a party I have a beer or wine. They say,
nana’ and I say, just one. They say ‘no you will have two’ and I know they are watching.”
The small nudges are reminders of why effective diabetes management is important. The most
common support group mentioned by all PD respondents was that of their physician.
All respondents felt comfortable with their physicians and physician’s assistants. Most respondents visited their physicians at their office or in their clinic. One respondent reported their physician even making a home visit. Physicians and physician’s assistants were described as having good rapport, respectful, and trustworthy. PD respondent 10 described her physician: “I really like him because he listens to me and I don’t feel rushed even though he has a lot of patients.”

PD respondents felt like they could ask questions of their physicians. The time and attention that their physician or physician’s assistant gave them allowed for honesty and understanding. Such as that described by PD respondent 2:

I try to be honest because I have been a teacher and you know when students lie to you. I don’t want to be that way. When you lie to your doctor and it’s about your health it is more important, so I have to do well so that my results will remain good.

PD respondent 3 told her doctor everything. The connection between them was uncanny. She was sick a few years back and he came to see her at her home. He checked her into the hospital and then called her children. He was the first to know. While such close relationships between physicians and patients may not be the norm, they seem to be common among our positive deviant respondents.

PD respondents took what their doctor told them very seriously. They believed in following the doctor’s advice and asking for permission to eat certain foods: “Every once in a while my doctor said I can have a burro with chicharron (burrito with pork rind)” (PD respondent 3). Another PD respondent believes of her physician:
When they tell you do this, and that, take this, and that, you should … I follow what they tell me. Sometimes, I overeat my Mexican food. I told him that I am Hispanic; I eat tortillas and tamales but not every day. Doctor said, ‘don’t forget to take metformin’ and I listen. I am very bad at following instructions, but if he tells me to, I will. I am doing well and that matters to me. (PD respondent 6)

Exemplifying the bond even further a positive deviant who works in the medical field said:

Knowing myself I would have slacked off and not watched what I ate and would not have exercised, but I took it seriously. Doctors wish our patients were more compliant and do what I did. To me it was like earning a gold star. My son would compliment me ‘your looking good’ and I heard that from my parents and husband also, but when you hear it from the doctor, it is different. (PD respondent 7)

PD respondents described themselves as good and obedient patients. They listened to their doctor and took medication and got blood work done immediately. They described themselves as “conscientious” about what the doctor said. PD respondent 10 gives a glimpse into physician engagement:

Don’t think that my doctor just gave me the pamphlets and said, ‘ok go read them.’ I mean he did, only after he pulled his chair side to side with mine and went over all of the pamphlets page-by-page and listened and answered my questions.

PD respondents described lab results as grades that they wanted to share with their teacher (physician). Further, they discussed how they felt about everything in total confidence with their physician. PD respondent 12 described her transformation as seen in her Image 4 and attributed her change to her physician.
I am drawing myself big and fat, and draw myself not fat and not thin. But something that I have learned is that I feel good with myself when I am in control, not just the outside, it’s the inside. My doctor is the one that kept me going. He said, ‘I want you to lose 1-2 pounds per month and then in one year you will be far.’ I liked that he said in a month because if I gained, then I knew I had to work harder to catch up.

Image 4: The Transformation

PD respondent 2 wrote down A1c results and record great achievements like grades or gold stars. Image 5 showcases her “good record keeping.” The numbers found in Image 5 represent A1c levels on a yearly basis. She said that she wrote them for me so I could see her history. She reported keeping a more detailed ledger of daily glucose readings, but compiled this list from her yearly physician A1c tests. She went from no medication to a small dose of one medication at the lowest dose once a day. It happened when her readings went from 5.8 to 6.1 and she was grateful she was able to maintain A1c management below 6.4 for 15 years.
PD respondents all shared the need for good record keeping. Some wrote down their sugar levels daily and some had spreadsheets of cumulative results, relying on printouts of blood results given to them from physicians and glucometer readings for histories. Like the physician, co-workers and friends also played a role as part of the PD respondent’s support system.

**Co-workers and Friends**

Most of the PD respondents reported disclosing their diabetes diagnosis to co-workers rather easily and felt understood and supported by them. PD respondents felt that they could talk to some of their trusted co-workers if they needed to.
PD respondents noted that their friends took some time to understand what was considered supportive and non-supportive behavior regarding their diabetes management. After being hounded by friends on what they should prepare for social dinners attended by the newly-diagnosed diabetics, PD respondents told them to fix anything. PD respondent 2 noticed invitations stopped because often friends did not know what to fix, so she had to tell them, “invite me and I will know what to eat.” PD respondents made time to spend with friends. Sometimes the conversations had to be mitigated. PD respondent 10 reports his best friend telling him, “oh you have diabetes, and you know you can’t get rid of that? That is something that you have forever and did you know that you can die from diabetes?” But he knew she meant well, so he told her how he felt about her abruptness and now the conversations show more restraint. He reported not minding the reminders because they contained truth and helped him stay on track with his diabetes management.

The PD respondents noted a strong need for keeping friendships intact. They reported the need to be a part of the group without the need for their friends to make accommodations for them. Once the friendships became comfortable with what worked, they became a very supportive part of the PD respondents’ diabetes management. Sparing use of social media such as Facebook, Twitter, and Instagram was reported by most of the PD respondents.

**Social Media**

PD respondents reported the need to remain present in their reality. Therefore, of the twelve PD respondents, only one used social media often (he was also the youngest of the group). A few PD respondents have Facebook but none post anything to it. None of the PD respondents used any social media for diabetes awareness or management tools. The PD respondents used texting to stay in touch with friends. All PD respondents reported that they
prefer face-to-face communication to any social media applications including Skype. It is important to include this finding because these PD respondents are finding their support mechanisms from face to face communication channels and not from the social media. Having opinions of how they felt about their own diabetes and what they tell themselves, PD respondents had advice for other diabetics.

Advice to Other Diabetics

When asked what advice might the PD respondents offer another diabetic, the following ideas emerged:

• Do not depend on medication alone.

• Be patient and be honest. Do not lie to yourself or make excuses.

• “Follow diet, peque poquito de ves en cuando (cheat a little once in a while) and do not leave pills. Do not think that you are feeling better so no pills, Do not be fooled, keep up and follow your treatment regimen” (PD respondent 3)

• Take care of yourself, do not skip meals, and be with people.

• Do not drink soda. Drink water.

• Watch your salt consumption.

• Do it [diabetes management] for you. “I think it is really putting time aside for you. YOU… the word YOU is very important YOU or ME, MYSELF and I. Saying, I am going to do this for myself and I am going to do it for my future” (PD respondent 6).

• Follow your doctor’s orders.

• Try to maintain a healthy weight.

• Remind yourself that you are worth it.

• Watch what you eat. Eat 3 meals per day. Eat Less.
• Give diabetes management 100% effort.

• Gain control of your body. “Eating, sleeping, and everything and it will work, if you have control” (PD respondent 12).

• Learn what helps and what does not - clear up the myths and reality of diabetes management. “Take care of your body, your health, your mind and be happy doing it. Don’t make yourself miserable, but be honest with what really helps and what doesn’t” (PD respondent 11).

In sum, PD respondents who manage their diabetes effectively exhibit several interpersonal strategies (see Table 4).

Table 4: Interpersonal Communication Behaviors Exhibited by PD Respondents and Others

<table>
<thead>
<tr>
<th>Actors in Interpersonal Interaction</th>
<th>Interpersonal Behaviors Exhibited by PD Respondents</th>
<th>Quality of Outcomes</th>
</tr>
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<tbody>
<tr>
<td>Diabetic and family members</td>
<td>Family members talk to the diagnosed diabetic openly, and do so out of love and ethic of care. They do not judge; they are there to help. No right or wrong but more of a how can we help.</td>
<td>Positive and meaningful conversations occur between the diabetic and family members leading to better quality of care outcomes.</td>
</tr>
<tr>
<td>Diabetic and other people</td>
<td>The diabetic manages conversations with other people so that they might be positive. They are clear of what is and what is not helpful to mitigate negativity.</td>
<td>Conversations between the diabetic and other people lead to healthy communication that becomes positive and not destructive.</td>
</tr>
<tr>
<td>Diabetic and family members</td>
<td>Family members are engaged with the diabetic through action. They buy the bike and go riding with them. They attend diabetes classes and ate like the diabetic. Making lifestyle changes in support of the diabetic.</td>
<td>Support through action occurs between the diabetic and family members building support and encouragement leading to consistent behavior change success.</td>
</tr>
<tr>
<td>Diabetic and spouse</td>
<td>Spouses give the diagnosed diabetic active reminders to eat and exercise. Diabetics use those as &quot;sign-posts&quot; to return to healthy behaviors.</td>
<td>Conversations between diabetics and their spouses lead to helpful support and render treatment adherence.</td>
</tr>
<tr>
<td>Diabetic and child</td>
<td>Children of diabetics ask how the parent is doing. They buy medications and place them in pillboxes. They go to and set up physician appointments. They ask and buy food for their parent to ensure that they do not skip meals.</td>
<td>Conversations and actions of children of the diabetic allow for effective treatment adherence and positive health outcomes.</td>
</tr>
<tr>
<td>Diabetic and grandchild</td>
<td>Grandparent shares their diabetes diagnosis with their grandchild. They test in front of child and allow grandchild to help with testing. Grandchildren also tell grandparents to watch what they eat knowing that some foods might affect blood sugar levels.</td>
<td>Grandchildren’s actions and conversations with their diagnosed grandparent act as continuous “reminders” that keep diagnosed on track to healthy outcomes and help maintain treatment adherence.</td>
</tr>
</tbody>
</table>
Diabetic and physician

Diabetics feel comfortable talking with and asking their physicians everything. They have necessary conversations and care about what their physician thinks about their progress. Physicians clearly explain diagnosis going through pamphlets. They trust their physicians implicitly. Treat relationship like one of a teacher/student where diabetics want to do well.

Relationships and conversations between physicians and diabetic lead to consistent treatment adherence by creating safe and effective communication strategies.

Diabetic and co-workers

Diabetics disclose their diagnosis with coworkers. Coworkers help by including the diabetic with lunch options. They serve as quiet supporters watching out for any issues that may arise.

Conversations between the diagnosed and co-workers lead to social support without the need for constant communication.

Diabetic and friends

Diagnosed communicate clearly to their friends the need for their relationship to remain normal. Friends do not make accommodations on behalf of the diagnosed. Friends understand the diagnosis and are better able to be positive supporters not detractors.

Diabetics communicate with their friends about their diagnosis that leads to social support without being branded as the “tough one.” Diabetics surround themselves with likeminded friends, which help them create healthy diabetes outcomes.

Diabetic and social media

Diabetics did not spend too much time on social media and the little that they did was not for diabetes support.

Diagnosed prefer face-to-face communication, which provided deeper support relationships.

Summary and Key Findings

This chapter answered the two research questions posed at the beginning of this inquiry. It identified both intrapersonal and interpersonal communicative acts of the positive deviants that led to more effective diabetes management. The key communicative findings that are replicable were non-stigmatization of diagnosis; making the decision to disclose their diabetes diagnosis to garner social support; mindfulness; record keeping; and prayer.

Beginning with and focusing on PD respondents’ intrapersonal communication decision to disclose their diabetes diagnosis made all ongoing communication and support possible. Disclosure was reported to be easy because no stigma was associated with the diabetes diagnosis. The most motivational category was fear of amputation, blindness, and death; fear of not being able to live long healthy productive lives; fear of not being around for family; and the fear of becoming a burden. Other intrapersonal acts and behaviors informed the other three sections in the chapter: behaviors, strategies and beliefs, and motivators. Specific self-management behaviors were made possible by the mindful creation of routines that became
habits. Self-management strategies and beliefs that are replicable included findings such as quick response to diagnosis, mindfulness, proximity, prayer/meditation/religion, sugar beliefs, personal descriptors, and stress beliefs. The strong positive messages that PD respondents tell themselves to consistently continue toward diabetes management are replicable.

As noted previously, PD respondents reported social support from family, spouse, children, grandchildren, physician, co-workers, and friends. This social support was made possible by disclosure of diagnosis. PD respondents managed and mitigated interpersonal communication with others in to create effective management strategies. Some conversations that were negative required either a discussion to garner positive future outcomes. Other negative conversations PD respondents reported as positive reminders instead of obstacles. The next chapter allows for discussion of the findings, limitations of the inquiry, suggestions for future research possibilities and conclusions.
I am “Yvette.”

I used my story as the featured subject in the introductions to each chapter of this thesis. It was important to show how my story weaves through the processes that made this thesis possible. I was diagnosed as a diabetic four years ago at the age of 37. I rode the roller coaster of lukewarm compliance (more non-compliance) thinking, “I can do this,” trying at least eight different medications, and losing and gaining weight like a yo-yo. I have walked the walk of not being a fully compliant manager of my diabetes and as the discoveries were coming from this research, the transformation began for me. Listening to other peoples’ beliefs and what they do to manage diabetes effectively has made a difference to me. I lost thirty pounds within the past year upon entering graduate school. But recently during the course of this research, I lost an additional twenty and I am off medications. I am happy about where I am now. Learning new methods and ways of thinking as shared by positive deviants made it possible for me.

I take solace in the words of Frank (1995, p. xi): “The ill person who turns illness into story transforms fate into experience; the disease that sets the body apart from others becomes, in the story, the common bond of suffering that joins bodies in their shared vulnerability” (Frank, 1995, p. xi). In fall 2014, the Social Justice Initiative at the Department of Communication hosted Professor Jenny Nelson from Ohio University who spoke about her struggles with Parkinson’s disease, and ways she has found ways to effectively cope and manage. During her presentation on Parkinson’s, one of the slides contained Frank’s 1995 quote listed above. Not only did it make a lasting impact on me, but in some ways has helped shape the subsequent discussion and conclusion in this chapter.
Discussion of Findings

Interestingly, the average length of time maintaining effective diabetes management was about ten years for PD respondents in this study. While literature shows that this long-term lifestyle intervention usually does not happen, PD respondents have defied the odds and made it happen.

A number of studies have confirmed that intensive lifestyle modification is effective in the prevention of diabetes in individuals with impaired glucose tolerance. Although it is well established that caloric restriction and exercise greatly promote weight loss and improve insulin resistance for those at risk for developing Type 2 diabetes, the success of lifestyle intervention over a long-term period is poor. (Cefalu, 2009)

Finding the positive deviants as the literature shows was difficult because the odds are stacked against them. It is extremely significant to have found a few positive outliers that have defeated the odds to find success with their diabetes management. Over 600 people received an invitation to participate, 47 responded and filled the initial qualifying questionnaire, and twelve met all of the criteria of being a positive deviant. It is vital to understand what enabled this group to find success with diabetes management.

Of the intrapersonal and interpersonal communicative PD acts that were discovered, some are more easily “replicable” and applicable to those who are searching for diabetes management. These behaviors began with the intrapersonal communication acts that PD respondents engaged in included how they initially responded to a diabetes diagnosis and how they made and implemented disease disclosure decisions. Although the PD respondents went through a shock and sadness stage, they overcame it to progress towards disease management. They were motivated by fear, not fear of the disease, but of what unmanaged diabetes could
bring. PD respondents feared amputation, blindness and death; not being around for family; not living long and productive healthy lives; and becoming a burden to loved ones. Because they felt fear, but wished to overcome it, they disclosed their diagnosis to their families, friends, and other people in their lives immediately.

Disclosure was the catalyst of change for the PD respondents and led to social support. The simple act of disclosure and how the PD respondents communicated that to themselves and others was immediate and vital. PD respondents managed their diabetes on a daily basis by developing daily routines that became habits. These habits included what time they woke up, what and how they ate, restaurant habits, glucose testing habits, cooking habits, and physicians visit routines. The subtle changes made by PD respondents to their daily routine were simple and in time became the “new normal” for them. These habits were reinforced by ongoing mindfulness and maintained with social support.

The mindfulness of PD respondents allowed them to make flexible food and exercise choices. If they watched what they ate at lunch, or had exercised diligently, they were able to enjoy a small treat for dinner. Mindfulness was also exhibited through keeping healthy foods, glucometers, and such in close proximity.

PD respondents had the need to control and alleviate stress to control their blood glucose readings. Their religion and faith helped support the PD respondents. They prayed and meditated to create a positive environment to stay healthy. Some looked at sugar being “a friend” that has to be carefully watched.

PD respondents repeatedly told themselves “you are worth it” and “put in the work.” They reframed a lot, preferring “health” to “diabetes” and focusing on “oneself” and not “others.” This lens shift was vital because all but one respondent dealt with more than one
chronic disease. They explained that diabetes was the only one of their chronic diseases they could control with little or no medication and lifestyle changes. The other ailments PD respondents suffered from did not give them the opportunity to pro-actively manage them.

Interpersonal communication between diabetics and their physicians, families, co-workers and friends was a key indicator in successful diabetes management. PD respondents were very clear that social support was necessary. They disclosed their diabetes to everyone, creating a space for open conversations surrounded the disease to occur. Family and friends supported them by encouraging and honoring their changed eating habits, and keeping them on medication and exercise schedules. Grandchildren helped PD respondents by pricking their fingers for glucometer testing. The grandchildren also kept a watchful eye on PD respondents regarding their food intake.

Conversations between PD respondents and physicians were critical to effective diabetes management. Many respondents really looked up to and respected their physicians, looking forward to visits. Some eagerly awaited receiving the physicians “gold star” for their managed A1c numbers. PD respondents felt safe in sharing their concerns with their physicians, and felt being part of a “team” in addressing their health challenges.

Most of the intra- and interpersonal behaviors practiced and exhibited by PD respondents are replicable for those struggling with effective management of diabetes. Diabetics cannot do it alone. They need to disclose, ask and receive different kinds of social support, including from their physicians.

**Implications of Findings**

The implications of the current research are significant for researchers, physicians, caregivers, people who might know diabetics, and for diabetics themselves. Because one in
three Americans will have diabetes by 2050, this research is also important to those who have not yet been diagnosed with diabetes. Current research done on diabetes management focuses on best practices and is disseminated in pamphlets and booklets. Current research is preoccupied with what is not working. While rates of diabetes are rising, the overwhelming focus is placed on therapeutic interventions because research suggests that sustained behavior and lifestyle changes are difficult to achieve.

This research has implications for prediabetics so that they can begin to adopt healthy lifestyles from before and in the early stages of diabetes. If prediabetics experience what PD respondents do they can manage their diabetes in a timely and effective manner. By the time a person is diagnosed with diabetes they have almost lost ½ of their pancreas function. Catching them early is key. This research into what is working with diabetics allows us to find viable solutions to existing problems. PD offers solutions that already exist.

Theoretically, insights on how stigma is perceived by the positive deviants are revealing. PD respondents did not feel stigmatized, their disclosure decisions were uninhibited, and strong social support was present for them in controlling their diabetes. The work done by Drummond (2005) on social support manifestations was seen in the conversations with the positive deviants in this study. Positive deviants are able to read negative conversations and decide what they want to do with them. PD respondents remain positive and flip the script by compartmentalizing some conversations as reminders and redirecting others to provide effective management support.

In the conduct of the present study, it became increasingly clear that Hispanic cultural perspectives about diabetes are rooted in genetics. When people are told that they have something because it is genetic, and then are told just take pills, the avenues to explore self-
management are easily disregarded. Traditional and cultural eating norms were a big subject of discussion by participants. Positive deviants were able to change traditional recipes and make healthier versions of them.

Limitations and Next Steps

The issues presented when conducting this research were that very few people met the PD respondent criteria. When I went to physicians’ offices many of them with practices as large as 11,000 patients relayed they did not have any patients that met the criteria. Most of the PD respondents were discovered using the snowballing method. It was extremely difficult to find the positive deviants in this community. And, of the ones I did find, I had limited time to go into too much depth.

The limitation in time did not allow for a second interview with PD respondents to deepen the knowledge they provided. Many of those interviewed were the ones most prone to diabetes (54 to 85 years), but it would be insightful to interview younger participants (20 to 54 years) as well to see if any differences in their approach to their diabetes diagnosis exist. This group could also affect social media findings in this study due to the probability of younger participants’ exposure and use. Further, all PD respondents in this study had medical insurance and hence ready access to a physicians. Future research could be conducting this study on uninsured Type 2 diabetics or Type 1 diabetics. With the largest growth category in Type 2 diabetes diagnosis being reported among Mexican-American women, focusing on this demographic could allow for different conversations both culturally and experientially. Future research will benefit from taking the correlations beyond racial/ethnic categories and focus on class, educational attainment, and access to healthcare.
It is important to continue positive deviance inquiries and programs to identify solutions that are found within a community by the community. As such, this work continues on the path of the others in conducting an inquiry without having designed a PD intervention. Not having community input in sifting which PD behaviors are uncommon and replicable is a limiting characteristic of PD inquiries.

The next step beyond this inquiry in the PD approach is designing an intervention for effective diabetic management. A Diabetes Management intervention as informed by this inquiry would include patients, families, physicians, clinics, EPDA, and community members at multiple levels. In order to scale this effectively all of the actors listed would need to be active participants. The intervention would include sharing the findings with physicians, clinics, and the EPDA so that they could understand some of the discoveries that were made. A PD respondent would spearhead this effort with the support of the facilitator, as long as it was not done as a dissemination of best practices. The importance of the findings and how each group would be able to help Type 2 diagnosed diabetics “act their way into a new way of thinking” would be the focus on replicating communicative PD behaviors.

- Disclosure is key. All groups need to encourage all diabetics to disclose their diagnosis to receive social support.
- Record keeping (e.g. of blood glucose levels) as a communicative act was a strong indicator of effective management. Communicating through “doing” includes actively writing results and progress with diabetes management consistently.
- Religious faith-based practices represented a strong support measure for most PD respondents. Reaching out to local churches and encouraging them to support
diabetics within the community would be useful. Diabetics can also be encouraged to use prayer and meditation as a support mechanism.

- Families should be encouraged by the physician, clinic or EPDA to attend with their diabetic patient a management class with PD management as part of the learning.

- Physicians are making a difference through how they communicate with diabetics e.g. sitting knee to knee, reading pamphlets with them, entertaining questions, and giving them contact information of support groups. Local physicians could create active support groups within their practice to help diffuse positive behaviors to their patients. Physicians could create a scorecard and ask patients to fill it out with glucose readings and bring it back to them for review upon their next visit. They could encourage patients to make appointments before leaving and to mark their appointments on their phone or calendar. Physicians could encourage slow weight loss of 1-2 pounds per month with tracking of progress to be brought to the next visit.

- EPDA would be the primary place of deployment of new interventional strategies. Healthy cooking methods should be practiced, disclosure can be practiced, and family and friends should be encouraged to attend to learn how to show social support.

- Community members could create diabetes support groups in all areas of the city, most especially in low-income areas.

One of the pioneers of positive deviance, Dr. Gretchen Berggren, who worked on malnutrition in Haiti, was at the University of Texas Health Science Center at San Antonio’s
8th Annual Community Service Learning conference in April 2015 where I presented results of this PD inquiry. She told me that the place where she found success was not in “just telling” people what to do once or twice, but showing by “doing” the behaviors repetitively. It would also require people practice to learn a new practice. At least two weeks is necessary to begin developing a lasting habit. So the cooking classes, the dialogue classes and support groups that introduce these new behaviors should be done over a period of some weeks (perhaps even six weeks) for optimal results.

**Conclusions**

Managing diabetes is not easy. The present research shows that some people, against all odds, using simple interpersonal and intrapersonal communication strategies and behaviors managed their diabetes exceptionally well relative to their peers. The power of the PD approach lies in the strategic search for positive outliers, and the tenacity to believe that wisdom is distributed and that one can find in-your face solutions by simple listening. The simplicity of PD is bringing us back to our humanity that has been complicated. In its essence, PD gives a voice to all, inviting everyone to become an active member of the community allowing the spread of solutions from within. PD allowed for the solutions to effective diabetes management to be defined, determined, and discovered. What began as a blank page is now filled with replicable communicative acts and behaviors with ideas for design and discernment.

The next step is to “be the difference that makes a difference” and beginning with myself, I intend to do just that. I am Yvette. I have Type 2 diabetes.
APPENDIX A: Exemption Request (IRB# 598112-1)

PROJECT TITLE: THE SWEET TASTE OF HEALTH: A POSITIVE DEVIANCE INQUIRY INTO COMMUNICATIVE ACTS THAT LEAD TO EFFECTIVE MANAGEMENT OF DIABETES AMONG HISPANICS

1.

2. Principal Investigator(s)/Co-PI Contact Information

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- Faculty [ ] Staff [ ] Student [x] Other: [ ]

Name (Last Name, First Name, MI) | Highest Earned Degree |
---------------------------------|-----------------------|
Boyd, Claudia Martinez           | B.A.                  |
University Title                |                        |
University of Texas at El Paso  | Communication         |
Campus Phone No.                 | E-Mail Address         |
915-747-5000                    | cyboyd@miners.utep.edu |

- Faculty [ ] Staff [ ] Student [x] Other: [ ]

If PI is a student, list Faculty Advisor or Committee Chair

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<td>915-747-5129</td>
<td><a href="mailto:asinghal@utep.edu">asinghal@utep.edu</a></td>
</tr>
</tbody>
</table>

3. Type of Project (check all that apply)

- [x] Thesis
- [ ] Dissertation
- [ ] Class Project
- [ ] Capstone Project
4. Check if applicable

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Does the protocol include children (see exception 45 CFR 46.101(b)(2) below)</td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>2. Does the protocol include prisoners, fetuses, pregnant women or human in vitro fertilization?</td>
<td>✔</td>
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<tr>
<td>3. Does the protocol involve more than minimal risk?</td>
<td>✔</td>
<td></td>
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<tr>
<td>4. Does the protocol involve deception?</td>
<td>✔</td>
<td></td>
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<tr>
<td>5. Does the protocol include cognitively impaired participants?</td>
<td>✔</td>
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</tbody>
</table>

If you answered yes to any of the above, the submission does not qualify for exemption. Please fill out IRB Form 12-IRB Application Template for Expedited Review.

5. Exempt Research Categories (Please read through the six allowable categories and check the applicable category below)

<table>
<thead>
<tr>
<th></th>
<th>1. Research conducted in established or commonly accepted educational settings, involving normal educational practices, such as (i) research on regular and special education instructional strategies, or (ii) research on the effectiveness of or the comparison among instructional techniques, curricula, or classroom management methods. [45 CFR 46.101 (b)(1)]</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>a. Will the researchers use their current students or trainees as participants?</td>
</tr>
<tr>
<td></td>
<td>□ Yes</td>
</tr>
<tr>
<td></td>
<td>□ No</td>
</tr>
<tr>
<td></td>
<td>b. Have you received permission from the instructor, department head, or facility where the participants will be recruited?</td>
</tr>
<tr>
<td>□ Yes</td>
<td></td>
</tr>
<tr>
<td>□ No. I will seek permission before initiating the research.</td>
<td></td>
</tr>
<tr>
<td>□ N/A. Please explain:</td>
<td></td>
</tr>
</tbody>
</table>

| **2.** | Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior, unless: (i) information obtained is recorded in such a manner that human subjects can be identified, directly or through identifiers linked to the subjects; and (ii) any disclosure of the human subjects’ responses outside the research could reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, or reputation. [45 CFR 46.101 (b)(2)] |

| a. | Will you or any investigators use your current students or trainees as participants? |
| □ No |
| □ Yes. Please explain what additional measures will be taken to ensure participants do not feel pressured or coerced during recruitment for or participation in the research: |

| b. | Will your research involve children in survey procedures, interview procedures, or observation of public behavior when the investigator(s) participate in the activities being observed? |
| □ No |
| □ Yes This study does not meet the criteria for exemption. This application will be forwarded for Expedited or Full Board review. |

| c. | Will you record information in a way that human subjects can be identified, directly or through identifiers linked to the subjects? |
| □ Yes □ No |

| d. | Could any disclosure of the subjects’ responses outside the research reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects’ financial standing, employability, insurability, or reputation? |
| □ Yes □ No |

If you answered Yes to BOTH (2c) and (2d), the study does not meet the criteria for exemption and this application will be forwarded for Expedited or Full Board review.
3. Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior that is not exempt under category 2 above, if either:

(i) the human subjects are elected or appointed public officials or candidates for public office; or

(ii) Federal statute(s) require(s) without exception that the confidentiality of the personally identifiable information will be maintained throughout the research and thereafter. [45 CFR 46.101(b)(3)]

4. Research involving the collection or study of existing data, documents, records, pathological specimens, or diagnostic specimens, if these sources are publicly available or if the information is recorded by the investigator in such a manner that subjects cannot be identified, directly or through identifiers linked to the subjects. [45 CFR 46.101(b)(4)]

a. What is the source of the data?

- [ ] Publicly available database (include link)
- [ ] Commercially Obtained (state from where samples/tissue obtained)
- [ ] Student Records
- [ ] Medical or Private Records

Please note that HIPAA prohibits the collection of specified identifiers such as name, street address, telephone/fax numbers, e-mail address, URLs & IP addresses, social security numbers, certificate/license number, vehicle/serial identifiers and full face photos. Information such as admission, discharge & service dates, date of death, age and zip codes are allowed. For further information on HIPAA/PHI regulations, please see [http://privacyruleandresearch.nih.gov/pr_08.asp](http://privacyruleandresearch.nih.gov/pr_08.asp)

- [ ] Another PI/Researcher collected it in the past

If the data was collected by someone else, do you have permission to use this data?  [ ] Yes-describe how or attach documentation indicating permission

- [ ] No

Will this data be stripped of any identifiers?
6. Taste and food quality evaluation and consumer acceptance studies, (i) if wholesome foods without additives are consumed or (ii) if a food is consumed that contains a food ingredient at or below the level and for a use found to be safe, or agricultural chemical or environmental contaminant at or below the level found to be safe, by the Food and Drug Administration or approved by the Environmental Protection Agency or the Food Safety and Inspection Service of the U.S. Department of Agriculture. [45 CFR 46.101 (b)(6)]

☐ None of the above categories apply to the proposed research

6. Summary of Research Activities

Attach copies of all written materials that will be used in the interaction with the participants.

6.1 Briefly state the purpose of this research/project and your research question(s):
The purpose of this research project is to identify Hispanics in El Paso, who have been diagnosed with diabetes who have managed to get and keep their A1c at prediabetic levels while taking one or no medications or undergoing any medical procedures.

RQ 1: What are the communicative intrapersonal acts and self-behaviors that enable positive deviants to manage their diabetes effectively?
RQ 2: What are the communicative interpersonal acts and social support behaviors that enable positive deviants to manage their diabetes effectively?

6.2 What is the goal of the investigation?
The goal of this investigation is to discover positive deviants, that is, Hispanics, diagnosed with Type 2 diabetes, with managed diabetes. Discovering intrapersonal and interpersonal behaviors that make these positive deviants successful. The discoveries will allow an understanding into what enables positive deviants to garner positive, replicable outcomes that elude so many diabetics. The findings will lay the framework for future studies and lead to the discovery of solutions for the El Paso Hispanic diabetes population.

Anticipated Start Date: 11/1/14 Anticipated Date of Completion: 12/31/14

6.3 How will the research be conducted?
- In person (interviews, surveys, focus groups)
- Online – dissemination of call for participants
- Telephone – to arrange interviews
- Observational – during in depth interviews
7. **Research Participants and Recruitment Procedure**  
*Include all study materials that will be used in the interaction with participants with your submission.*

7.1 **Maximum number of participants**: 12

7.2 **Expected Age Range**: 18-70

7.3 **Participant Recruitment Procedure**

- Advertisement
- Verbal scripts for face-to-face meeting
- Letters to potential participants
- Telephone Script
- E-Mail (publicly available)
- Web-Based (social media)

7.4 **How many participants from UTEP will be included?**: 0

7.5 **Will participants be recruited from other locations?**
- **Yes**
- **No**

If yes, state the site(s) and number of participants anticipated at each site:

- El Paso community. Utilizing the EPDA mailing list, mailing call to participants with my contact information.

7.6 **Describe the criteria for inclusion and exclusion of subjects in this research study:**

- Hispanic ethnicity
- Diagnosed with diabetes Type 2
- A1c level below 6.4
- Taking little to no medications
- No outside medical interventions (surgery)

7.7 **Does your survey, interview, or questionnaire deal with sensitive and private aspect of behavior, such as sexual preference, substance abuse, or illegal conduct?**

- **Yes**
- **No**

If yes, please describe and include a copy of survey, interview questions, or questionnaires.
7.8 Describe the task(s) subjects will be asked to perform. Describe the frequency and duration of procedures, psychological tests, educational tests, and experiments; including screening intervention, follow-up, etc. *Reminder:* No personal or sensitive information can be sought under Minimal Review guidelines. (If you intend to pilot a process before recruiting for the main study, please explain.)

They will call or email me from information found on flyer. I will call them and do an initial screening on the telephone, which will take no more than 5 minutes. If selected, I will conduct an in-depth interview with the participants, which will take no more than 2 hours. I will ask them to sketch/photograph what diabetes means to them which will take no more than 15 minutes.

7.9 Explain how participants will be fully informed of this research prior to their participation (through use of a study information sheet, letter, e-mail invitation, etc.) **Note:** Please SUBMIT a copy. The call for participants (attached) will be sent via email or mail. They will be given Informed consent prior to their in-depth interview.

7.10 Will you be audio or video recording?

☐ No
☒ Yes. Please ensure to complete the Confidentiality Section below.

7.11 Will identifiers or links to an identifier of the participants be recorded?

☒ Yes  ☐ No

If yes, what information that could be linked to the participants will be recorded? Participants will be given a code that can be linked to participants that only the PI will have access to.

7.12 Will the participants be paid?

☐ No  ☐ Yes. State the type and amount of compensation:

7.13 Are the risks to the participants associated with the research known? What is your estimate of the risks? Answering questions dealing with their diagnosis may be uncomfortable. I estimate the risks are minimal to participants.

7.14 How will you help to minimize potential risks that individuals may be exposed to while participating in the research? Potential risks may include psychological, social, legal, physical, etc.

Participants will be able to stop the interview and participation in the study at anytime. Further, they will not have to answer any questions they are not comfortable answering.

Masters Thesis and Doctoral Dissertation

8. **Confidentiality**

8.1 Describe provisions that will be taken to maintain confidentiality of data. Will they contain subject names or images? (e.g., surveys, video, audio tapes, database):

The identity of each participant will coded in order to help secure his /her information. No subject names or images will be taken. The audiotapes will only have the coded label as the identifier and no names.

8.2 Could the information obtained or recorded about subjects place them at risk of criminal or civil liability or be damaging to the participants' financial standing, employability, insurability, or reputation?

☒ No  ☐ Yes. Please explain:

8.3 Describe the security plan for data, including where data will be stored, and for how long, noting that you may not keep identifiable data indefinitely (i.e., password protection, encrypted, locked filing cabinet, etc.):
The files, databases, interview tapes, transcriptions, sketches and information on all participants will be kept secured, and only available to the principal researcher. The data will be stored on PI’s laptop, which contains password protection. All sketches and paper copies of any research will be kept in PI's locked file cabinet.

8.4 Will identifiable data be made available to anyone other than the PI?

☐ Yes  ☒ No

If yes, explain who and why they will have access to the identifiable data?

8.5 With whom will the results of the project be shared?

The results will be shared with the 3 members of the thesis committee and with the director of the EPDA. It may also be shared at various communication/health conferences.

ASSURANCES

With this submission I certify that:

I agree to fully comply with the ethical principles and regulation regarding the protection of human subjects in research.

I agree that the information provided in this form and all other supporting documents and forms are accurate and complete.

Copies of all required documentation of Consent (if applicable) and any data related to this research are securely stored at Utep Communication Department Office in Cotton Memorial Room 301.
APPENDIX B: Informed Consent

University of Texas at El Paso (UTEP) Institutional Review Board Informed Consent Form for Research Involving Human Subjects

PROTOCOL TITLE: THE SWEET TASTE OF HEALTH: A POSITIVE DEVIANCE INQUIRY INTO COMMUNICATIVE ACTS THAT LEAD TO EFFECTIVE MANAGEMENT OF DIABETES AMONG HISPANICS

Principal Investigator: Claudia Martinez Boyd UTEP [Communication]: Graduate Program

1. Introduction

You are being asked to voluntarily take part in the research project described below. Please take your time making a decision and feel free to discuss it with your friends and family. Before agreeing to take part in this research study, it is important that you read the consent form that describes the study. Please ask the study researcher or the study staff to explain any words or information that you do not clearly understand.

2. Why is this study being done?

You have been asked to take part in a research study of communicative behaviors that assist Hispanics in achieving success with managing their diabetes diagnosis. Approximately 12 people diagnosed with diabetes will be enrolling in this study. You are being asked to be in this study because you have reported being diagnosed with diabetes, with A1c at prediabetic levels (6.4 or below), are a resident of El Paso County, Texas, take one oral diabetes medication at a minimum dosage or no medications for diabetes control, have not undergone any surgical interventions for diabetes control, and have maintained diabetes management
without additional resources. Because there are a large number of people diagnosed with diabetes in El Paso the El Paso Diabetes Association has helped us to make a call out to everyone on their mailing list to help identify you and people like yourself.

If you decide to participate in this study, you will be given a screening survey, and if chosen to participate in an interview, your involvement will last about one to two hours. Your part in the study is confidential and none of the information will identify you by name. Interviews will be recorded with voice recorders and audiotapes of the recordings will be transcribed.

3. What is involved in the study?

If you agree to take part in this study a screening survey will be given to you to see if you fulfill the criteria. If chosen, the research team will interview you and ask you to answer some questions about the relationship with your parents, peers, and mentors. The research team will also ask you to describe difficult situations in which your diagnosis affected you through different periods of life and how you overcame those situations. This interview was designed to be approximately one to two hours in length. However, please feel free to expand on the topic or define related issues that might relate. If you do not feel comfortable answering a question, please tell me and I will stop the interview or move on to the next question, whichever you prefer. Who will have access to the recordings? No one besides the principal researcher and her advisor will have access to the recordings.

4. What are the risks and discomforts of the study?

Due to the sensitivity of the issue, some participants might find some of the questions uncomfortable. The researcher will be asking you to recall memories that could be potentially painful and there might be some unpleasantness for the participant, although the risk is minimal, you may ask me to stop or skip questions at any time. Further you may end your participation in the study in its entirety at any time.
5. What will happen if I am injured in this study?

The University of Texas at El Paso and its affiliates do not offer to pay for or cover the cost of medical treatment for research related illness or injury. No funds have been set aside to pay or reimburse you in the event of such injury or illness. You will not give up any of your legal rights by signing this consent form. You should report any such injury to Claudia Boyd, 915-549-0224 and to the UTEP Institutional Review Board (IRB) at (915-747-8841) or irb.orsp@utep.edu.

6. Are there benefits to taking part in this study?

There will be no direct benefits to you for taking part in this study. This research may help us to understand how positive communicative behaviors can motivate the El Paso, Hispanic diabetes population to achieve success and maintain healthy A1c levels.

7. What other options are there?

You have the option not to take part in this study. There will be no penalties involved if you choose not to take part in this study.

8. What are my costs?

There are no direct costs. You will be responsible for travel to and from the research site and any other incidental expenses.

9. Will I be paid to participate in this study?

You will not be paid for taking part in this research study.

10. What if I want to withdraw, or I am asked to withdraw from this study?

Taking part in this study is voluntary. You have the right to choose not to take part in this study. If you do not take part in the study, there will be no penalty.

If you choose to take part, you have the right to stop at any time.
However, we encourage you to talk to a member of the research group so that they know why you are leaving the study. If there are any new findings during the study that may affect whether you want to continue to take part, you will be told about them.

The researcher may decide to stop your participation without your permission if he or she thinks that being in the study may cause you harm.

11. Who do I call if I have questions or problems?

You may ask any questions you have now. If you have questions later, you may call Claudia Boyd at (915-549-0224), cyboyd@miners.utep.edu. If you have questions or concerns about your participation as a research subject, please contact the UTEP Institutional Review Board (IRB) at (915-747-8841) or irb.orsp@utep.edu.

12. What about confidentiality?

Your part in this study is confidential. None of the information will identify you by name. All records will be stored in a secure location at UTEP in Cotton Memorial and heard only for research purposes by the researcher and her advisor. Audiotapes of the interviews will be coded so you will not be personally identified.

Audiotapes will be retained for possible future analysis. We may wish to present some of the tapes from this study at conferences or as demonstrations in classrooms.

Please sign below if you give permission for the audiotape made for this research study to also be used for educational purposes.

_____________________________ Signature
_____________________________ Date

13. Authorization Statement
I have read each page of this paper about the study (or it was read to me). I know that being in this study is voluntary and I choose to be in this study. I know I can stop being in this study without penalty. I will get a copy of this consent form now and can get information on results of the study later if I wish.

I Agree to be contacted for an interview if I am chosen

______________________________

I DO NOT agree to be contacted for an interview if chosen

______________________________

** I understand that if I am chosen to take part in an interview, the interview will be recorded and transcribed.

Participant Name:____________________

Phone Number (_____)___________-

_________________________ Participant Signature:

Consent form explained/witnessed by:

Printed name: Claudia Boyd

Date: Time:

Date:

_________________________

Time:

_________________________

Signature

_________________________

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Hello, I am Claudia Martinez Boyd, a Master's student in the Department of Communication at UTEP. I was diagnosed with diabetes type 2, three years ago at the age of 38. I am studying health communication and decided to research something that is very personal to me. I am searching for people diagnosed with type 2 diabetes, which have found solutions to this diagnosis. The focus of my thesis is on interpersonal and intrapersonal behaviors and beliefs that have allowed for success in controlling and maintaining a healthy A1c to prediabetic levels. I am looking for participants for my thesis study and am asking for your help. Please see if you fit the following criteria:

- Hispanic
- Diagnosed with type 2 diabetes
- A1c level 6.4 or below for one year or more
- Taking only one oral medication at minimum dose daily for diabetes management OR no diabetes medications
- No insulin intake

Study Details:
- Study is completely confidential and participants will be given a code, by which, they will be referred to in the study.
- Audio recordings will be stored in a locked file cabinet that will only be accessible to the researcher.

Please contact me if you fit the criteria. If you don’t fit the criteria, but know someone who might, please forward this flyer to them!

Claudia Martinez Boyd
cyboyd@miners.utep.edu  (915) 549-0224
APPENDIX D: Initial Questionnaire to Determine Eligibility

SCREENING CRITERIA

Questionnaire NUMBER:_________________________

Please answer the following questions:

1. Are you a resident of El Paso, County? Yes/No
   If yes, for how long?__________

2. What is your zip code? ___________

3. How would you identify yourself? (circle)
   Hispanic
   Latino
   Mexican
   Mexican American
   Chicano
   Other (please list)______________

4. Have you been Diagnosed with Type 2 Diabetes? Yes/No

5. Do you know your HbA1c Level? Yes/No
   If Yes, Please List here:_____________

6. Do you take medication for Type 2 Diabetes? Yes/No
   If yes,
   How many medicines/daily____ Dosage _____
   Insulin?____
   If no diabetes medicine,
Is that because you chose to stop taking your medication____

My doctor said my HbA1c was in prediabetic levels and I no longer required medication____

None of the above____

7. Do you take other medications for something other than diabetes? Yes/No

8. Have you had gastric bypass/sleeve surgery? Yes/No

9. Do you belong to a diabetes support group? Yes/No

10. Do you work? Yes/No

11. What was your furthest education level? __________

12. What was your month and year of birth? __________

13. What is your sex? F/M
APPENDIX E: Interview Guide

Hello and Thank you again for taking the time to meet with me for this interview. Let us begin, today is______________________________.

MY NAME IS CLAUDIA BOYD, I AM HERE WITH PARTICIPANT NUMBER

________

TO CONDUCT AN INTERVIEW FOR THE PROJECT:

THE SWEET TASTE OF HEALTH: A POSITIVE DEVIANCE INQUIRY
INTO COMMUNICATIVE ACTS THAT LEAD TO EFFECTIVE
MANAGEMENT OF DIABETES AMONG HISPANICS

1. Tell me about your self.
2. When were you diagnosed with diabetes?
3. What was your first experience with the word diabetes.
4. Did you ever feel fear? Uncertainty, stigma?
5. How do you define diabetes. Diabetes in your life?
6. How has diabetes affected your life?
7. Discuss your beliefs about diabetes.
8. How have you managed your diabetes?
9. Discuss how your diabetes affected you through the years, has it been different? Why?
10. How did you cope with your diagnosis at the beginning, through the years and now? How have you reacted to adversity with diabetes diagnosis?
11. Is anyone else in your family (immediate or not) diabetic?
12. How did they affect how you view diabetes?
13. How does your family encourage your success with diabetes?
14. What do your family members do specifically to motivate you to succeed? Talk about the relationship you have with your friends and peers. How do they treat your diabetes? How and what do your friends do to encourage your academic success?
15. Talk about the relationship with others in your life, teachers, coworkers, mentors etc. What do they do specifically to encourage you with your diabetes?
16. Who was your strongest support if any?
17. How has social engagement helped your diabetes?
18. Talk about the role that religion or spirituality play in your self-esteem and self- motivation.
19. Tell me about your self management of your diabetes
20. Tell me about your diet
21. Tell me about how often you eat and how much
22. Do you have any self remedies
23. What do you think of sugar? Do you eat it? How often?
24. Tell me about your exercise
25. How often do you see your doctor? Are they an endocrinologist?
26. Tell me about what you tell yourself the most about your diabetes?
27. Give me a day in the life.
28. How do you track your sugar levels? What intrapersonal communication skills do you engage in to help you succeed?
29. How have you utilized outside services, doctor, etc.? How have they helped you? How has engagement with these resources helped you?
30. How do you think other diabetes succeed/ how do they fail?
31. How do you self motivate? What do you tell yourself? What do your family members, friends, and teachers tell you specifically?
32. What would you tell someone to do about their diabetes
33. What would you say is your key to success
34. Who or what made your success possible?
35. Anything else you would like to share?
36. Would you please take a photograph/draw a picture of what things illustrate your diabetes....
APPENDIX F: Interview Guide (Spanish)

1. ¿Me podría decir de su vida?
2. ¿Cuando les diagnosticaron con diabetes?
3. ¿Recuerda el día que les diagnosticaron con diabetes?
4. ¿Sentieron miedo, incertidumbre o estigma ese día?
5. ¿Quién es su más fuerte apoyo con su diabetes?
6. ¿Cuál es su tipo de relación con su médico?
7. ¿Le informaste a su familia que le diagnosticaron con diabetes? ¿Cómo te apoyan? ¿Qué te dicen?
8. ¿Describe un día de su vida diaria. ¿A qué hora despierta, va al baño? Te arreglas? Desayunas? etc. Lo más detallado que puedas. ¿Está esta rutina diaria?
9. ¿Tomas tus niveles de azúcar seguido? ¿Cuándo? ¿Qué te dicen tus resultados, en otras palabras, cambias lo que haces si el número es alto o bajo? ¿Qué números estás buscando?
10. ¿Usas o practicas remedios culturales?
11. ¿Qué opinas de la azúcar?
12. ¿Haces ejercicios?
13. ¿Tienes buen descanso? ¿Cuántas horas?
14. ¿Tienes cuenta social como Facebook, Twitter?
15. ¿Cuántas horas ves televisión?
16. ¿Cómo te describirías a ti mismo? es decir, egoísta, independiente etc.
17. ¿Qué opinas del estrés?
18. ¿Qué te motiva con tu diabetes?
19. ¿Te ayudó tu fe con tu diabetes?
20. Usas cotizaciones o lecciones que te dices a ti misma?
21. ¿Por qué crees que algunos diabéticos tienen éxito y algunos fallan?
22. ¿Yo soy diabética, qué consejo me darías?
23. ¿Qué hace tu éxito posible?
24. Ejercicio: dibuja para mí algo que signifique el éxito contra diabetes, o toma una fotografía que simboliza el éxito de la diabetes.
APPENDIX G: IRB Letter of Collaboration

IRB Letter of Collaboration
October 26, 2014
UTEP Institutional Review Board
ORSP Admin-209
El Paso, TX 79968

Dear UTEP IRB:

The purpose of this letter is to grant Claudia Boyd a graduate student at the University of Texas at El Paso permission to conduct research at the El Paso Diabetes Association. The project, “The Sweet Taste of Success: A positive deviance inquiry of communicative acts and behaviors that lead to healthy A1C levels in Hispanics diagnosed with diabetes” entails using the mailing list of the EPDA contacts, fair participants and all visitors to events held by EPDA and emailing/mailing them a participant flyer to be a part of the study. If they decide to participate they will contact Claudia Boyd via the contact information conducted on the flyer. The number of subjects will depend on response, but will be at least 12 and as many as 15. The purpose of this research is to identify Hispanics within the El Paso area that have controlled prediabetic A1c levels taking one medicine at minimal dosage or no medicine for diabetes management. Once identified the behavioral practices (interpersonal and intrapersonal communication) and beliefs will be discovered via in depth interviews conducted by Claudia Boyd. The El Paso Diabetes Association was selected because it is the NPO in El Paso specifically geared to help the diabetes population of El Paso. I am currently a volunteer with the organization. Upon completion of this research a final copy of the research will be forwarded to the EPDA. I, Henry Bratus, do hereby grant permission for Claudia Boyd to conduct her thesis: The Sweet Taste of Success: A positive deviance inquiry of communicative acts that lead to healthy management of diabetes among Hispanics.

Sincerely,

Henry Bratus
Executive Director

Promoting the awareness of diabetes and its complications through education, prevention, detection and access... since 1968.
### APPENDIX H: Case Matrix of PD Respondents

<table>
<thead>
<tr>
<th>Participant</th>
<th>Translation</th>
<th>Occupation</th>
<th>Years since diagnosis</th>
<th>Years lived in El Paso</th>
<th>Zip</th>
<th>Identify as</th>
<th>Sex</th>
<th>Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Retired</td>
<td>9</td>
<td>69</td>
<td>79905</td>
<td>Mexican American</td>
<td>Male</td>
<td>69</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Retired teacher</td>
<td>15</td>
<td>40</td>
<td>79902</td>
<td>Hispanic</td>
<td>Female</td>
<td>61</td>
<td></td>
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<tr>
<td>3</td>
<td>Retired housewife/chef</td>
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<td>81</td>
<td>79936</td>
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<td>Retired sewer</td>
<td>5</td>
<td>32</td>
<td>79902</td>
<td>Mexican</td>
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<tr>
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VITA

Claudia Yvette Martinez Boyd is a native of El Paso, Texas. She will earn her master’s degree, while maintaining a 4.0 grade point average in Communication Studies with a focus in Health Communication. Claudia earned her B.A. in Mass Communication from UTEP in 1996 then worked in the private sector as a Pre-Kindergarten teacher for two years before becoming a CFO for twelve years. She returned to graduate school two years ago.

Her gleanings while in graduate school have opened understandings in positive deviance, liberating structures, building healthy communities and communication theory. The intersections between culture and health communication will drive her future work in diabetes research. During her time at UTEP she worked as a graduate assistant at the Center for Institutional Evaluation Research and Planning and was both a research and teaching assistant in the communication department. She taught nine course sections of Introduction to Public Speaking, which fueled her passion for paying forward what she has learned. She attended both the NCA and ICA conferences where she served as a student volunteer, opening the door to new research possibilities. She presented her work at three conferences in El Paso and one in San Antonio. She is a volunteer with the EPDA where she helps at local fairs and participates in diabetes outreach programs within her community.

Claudia founded the UTEP Communication Graduate Student Association to help build community and scholarship among graduate students in the communication department. She was selected as UTEP outstanding graduate student of the year in communication (2014-2015). Claudia has been accepted into the University of New Mexico’s doctoral program where she will continue her pursuits in health communication research in the fall of 2015.
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This thesis/dissertation was typed by Claudia Yvette Martinez Boyd.