THE SWEET TALE: A PILOT STUDY OF AN INTERACTIVE NARRATIVE HEALTH COMMUNICATION INTERVENTION USING POSITIVE DEVIANCE TO HIGHLIGHT COMMUNICATIVE ACTS THAT LEAD TO EFFECTIVE MANAGEMENT OF DIABETES AMONG HISPANICS

Claudia M. Boyd
University of New Mexico - Main Campus

Follow this and additional works at: https://digitalrepository.unm.edu/cj_etds

Part of the Health Communication Commons, International and Intercultural Communication Commons, Journalism Studies Commons, Other Communication Commons, and the Other Social and Behavioral Sciences Commons

Recommended Citation

This Dissertation is brought to you for free and open access by the Electronic Theses and Dissertations at UNM Digital Repository. It has been accepted for inclusion in Communication ETDs by an authorized administrator of UNM Digital Repository. For more information, please contact amywinter@unm.edu.
Claudia Martinez Boyd
Candidate
Communication and Journalism
Department

This dissertation is approved, and it is acceptable in quality and form for publication:

Approved by the Dissertation Committee:

Dr. Judith White, Chairperson

Dr. Jaelyn DeMaria

Dr. Magdalena Avila

Dr. Arvind Singhal
THE SWEET TALE: A PILOT STUDY OF AN INTERACTIVE NARRATIVE HEALTH COMMUNICATION INTERVENTION USING POSITIVE DEVIANCE TO HIGHLIGHT COMMUNICATIVE ACTS THAT LEAD TO EFFECTIVE MANAGEMENT OF DIABETES AMONG HISPANICS

BY

CLAUDIA MARTINEZ BOYD
B.A, Mass Communication, University of Texas at El Paso, 1995
M.A., Communication Studies, University of Texas at El Paso, 2015

DISSERTATION
Submitted in Partial Fulfillment of the Requirements for the Degree of Doctor of Philosophy
Communication
The University of New Mexico
Albuquerque, New Mexico

July, 2019
DEDICATION

Mom, Dad

Keith

Patrick, Jude, Nicholas
ACKNOWLEDGMENTS

This journey finally concludes. It has been the journey of a lifetime. My university life journey began in 1991 and ends in 2019—28 years later. There were a few life pauses in between, but they all made me and this work what it is today.

In a special way, I thank my graduate mentors from long ago who were the first to believe in me: Dr. Kubo-Della Piana and Dr. Power. My professors and advisors for my master’s degree work at UTEP: Dr. Perez, Dr. Sowards, Dr. Pineda, Dr. Ruggiero, Dr. Yang, Dr. Moya, Dr. Nunez, Dr. Wang, Dr. Trejo, and Dr. Dura.

Essential in my development as a doctoral student was the tutelage of everyone in the department, especially: Dr. Floyd, Dr. Covarrubias, Dr. Collier, Dr. Ginossar, Dr. Briziarelli, Dr. Shields, Dr. Hess, Dr. Avila, Dr. Wallerstein, Dr. Eguchi, Dr. Washington, Dr. Weiss, Dr. Hendry, Dr. Isaacson, Dr. Martinez Guillem, Dr. Rodriguez, and Dr. Milstein. To each of you, thank you for your patience, kindness, and knowledge.

I have been teaching for the past six years and have met so many amazing students, and I thank them for their patience and yearning for learning.

Thank you, Dr. DeMaria for serving on my committee and for giving me essential feedback to make my book the most colorful representation for children that attached the visual and the narrative in creative ways that only you could do. Dr. Avila, thank you for serving on my committee and for showing me the beautiful state of New Mexico through community visits, activism, and corazon. I will always remember how you let my work be enough. Dr. Singhal, thank you for serving on my committee just one more time and taking my work one step forward. I am thankful for all of your insights and serving as my guru. I am grateful that you always encouraged me to look at life over death. I thank you for continuing to include, invite, and involve me so I don’t become complacent.

Dr. White, I will never be able to THANK YOU for taking me on when nobody else would, for cheering for me at every turn, and never once turning your back on me.
You have been the most gracious, present, supportive mentor I have ever had. You have taught me with calm and let me drive my own ship—Gracias, mi güerita!

My fellow graduate student familia: – Thank you for the laughs, tears, and friendship that made this memorable: Jocelyn, Zhao, Andrew, Brooke, Evan, Gabby, Mario, Emily, Chenoa, Sumaira, Noorie, Nina, Ivana, Joseph, Yvonne, Jeff, Samantha, Kim, Audrey and Mariko. Thank you to everyone in the C&J office who helped me navigate the paperwork and insanity: Lore, Jessica, Val, and Adan.

To my friends from home who helped maintain my sanity, Sonia Alvarez and Carolyn Counts Sims, a big thank you to you.

I thank in a special way the children in my study who gave me their time, smiles, questions, and feedback. The children of the El Paso Diabetes Association kids summer camps who have become my friends and research advisers who I adore: Thank you. The director of the EPDA, Sandra Gonzalez, and staff; members of the board; Dr. Concha who have become my second family: Thank you for the opportunity to serve with you all.

My personal endocrinologist, Dr. Benito Maranzini, who has followed me since diagnosis in 2009, one decade ago, and continues to answer all of my questions, even after the 15 minutes has come and gone: Thank you.

Para mi abuelita Maria Luisa Benavente who was my rock. She came to the United States with her two little girls so long ago and taught me love, compassion and humility. I learned my love for telenovelas and life from her. Mil gracias, por todo mi reina.

Thank you to my father Arturo Martinez, Jr. for always working so hard and teaching me how hard work pays off. I know now the difficulties you dealt with healthwise, and I often wonder how hard it was to put on such a brave face. I miss you, and I hope I made you proud, Dad.

Mamasita, you are my anchor, my muse, and my chief mentor. I looked up to you as a little girl, and I still do now. You were my first PhenominalDiva, yes, Ph.D.! All of
your leadership has led me to this place. Thank you for always listening to me, guiding me, and being such a positive and driving influence in my life. To my brothers, Anthony and Gabe, thank you for your support and love through all of my academic endeavors. Your big sister is grateful and proud of your success.

To my sister-cousin, Melissa, I was honored that you took on the task of creating such beautiful artwork for the book featured in this dissertation. I am in awe of your talents as a human and an artist. My family here in El Paso (Martinez, Arellano and Rebeles) and some now in Albuquerque (Gutierrez and Lujan), thank you for your support and love. To my family in Midland (Boyd), Dallas (Boyd and Elliott), and Fort Stockton (McGuairt), thank you for your positive energy from afar.

My eldest niece, Mia, becomes a junior in high school next year, and I promised I would finish this madness so that I could begin to enjoy all of my nieces and nephews as they enter higher education and follow their dreams. In a special way, I dedicate this work to all of my nieces and nephews in hopes that they will begin their journey toward understanding, knowledge, kindness, inclusion, critical thinking, and progress for all.

My friends in the Carmona family have followed me and supported me on this journey from the beginning, and I thank them for pushing me and giving me rest through fiesta so that I could continue this journey. In a special way, I thank my friend, Isabella Carmona, who was the muse for this project. Isa, your words and inquisitive nature helped launch something that I hope will be very special to many children: big love to you, my precious girl.

Life threw me a couple of roadblocks during this process, and I am grateful to those who helped me maneuver through. I underwent four surgeries these past four years, and they changed my life for the better. I thank you Dr. Sonia Rebeles for helping make me whole by taking my uterus out and giving me my life back at 44. My diabetes is a daily struggle, but that struggle does not come close to the debilitation I underwent with my endometriosis. Thank you for taking me on and giving me hope.
To my two children, Nick and Jude, in heaven. I feel you everyday and I know you pushed me and helped me get through this; you are my guiding stars: Thank you. Patrick, my son, for your calm, patience, kindness, and support, I am grateful. No matter where your journey takes you, please know that you are enough. I am extremely proud of the man you have become and hope that you will continue to help me with my message. I love you. Keith, thank you for everything but most especially for moving me to Albuquerque and supporting me through this journey away from home. We spent an awesome year together living in a new place; it was magical and fun. After 23 years, everyday is still a page turn into the unknown, and I hope to get those adventure pages back often.

I thank God and my lady La Virgen de Guadalupe for giving me the strength to get through and the vision remember to be kind to myself in this process.

I thank all of those strong shoulders of those I stood on and who held me to get here. Those who came before me and are with me now, please rest. After a short repose, I will be ready to do some holding myself.

When I was a young girl in elementary school, I volunteered with my teachers during lunch to help them with paperwork because I wanted to be with the adults and not the kids outside. When I was 24, I had the opportunity to go back and teach pre-K at the local Jewish Community Center and later at the El Paso Country Day School. I remember how much I loved my job teaching kids. I could not believe I was getting paid to have fun learning adventures with kids who were discovering, creating, and loving all day. I left to work in the private sector after a few years, and this project and my graduate studies brought me back to my happy place. It was always in plain sight—my love and need to work with children who allow you to plant the seeds of hope, knowledge, and possibilities. I have come full circle—but my journey has just begun.
THE SWEET TALE: A PILOT STUDY OF AN INTERACTIVE NARRATIVE HEALTH COMMUNICATION INTERVENTION USING POSITIVE DEVIANCE TO HIGHLIGHT COMMUNICATIVE ACTS THAT LEAD TO EFFECTIVE MANAGEMENT OF DIABETES AMONG HISPANICS

by

CLAUDIA MARTINEZ BOYD

B.A, Mass Communication, University of Texas at El Paso, 1996
M.A., Communication Studies, University of Texas at El Paso, 2015
Ph.D., Communication, University of New Mexico, 2019

ABSTRACT

In this dissertation, I conducted a pilot study that applied positive deviance (Singhal, 2011; Pascale, Sternin, & Sternin, 2012) findings from my master’s thesis (Boyd, 2015) to an entertainment-education (Singhal & Rogers, 1999) driven intervention in a Hispanic community (Baezconde-Garbanti et al., 2014; Murphy et al., 2013; Wang & Singhal, 2016), using an interactive narrative (Green & Jenkins, 2014) to develop a children’s book. In the current pilot study, I created a children’s book *The Sweet Tale* using extensive formative research and created a framework to aid in the development of future Hispanic children’s books on diabetes. To evaluate *The Sweet Tale*, I conducted in-depth interviews of 15 children aged 5-10 who live in El Paso, Texas. I learned that interactive narrative serves as an effective exploratory instrument for discovering children’s beliefs, attitudes, and knowledge about diabetes. Most of the children chose to disclose the diabetes reality of a character in the children’s book *The Sweet Tale*. Most of the children still believe that diabetes is “bad” and is caused by eating too much sugar.
An active element in the children’s book using the acronym “TELL” was easily recalled by most of the children. The pilot study uncovered tension and connection with identity and relational constructions that are present in diabetes and presented elements from the social framework identified by Cline (2011). Most of the parents of the participants were quick to engage with their children after sitting in on the interviews with their children. Elements of creating culturally relevant children’s books include color and illustration to depict community representations. Teaming up with a local artist and with local children to combine the visual and literal helped the connection. This pilot study can be implemented in a larger study because it did show the potential of narrative for the possibilities of knowledge creation. Planting the seed for future narrative research related to diabetes intervention for a Hispanic community could aid in creating and revealing children’s diabetes knowledge, attitudes, and behaviors. The pilot study revealed that most of the boys interviewed wanted the diabetes content removed from the book. Male adults who are Hispanic have been shown to have higher rates of diabetes and less knowledge about the disease (Vaccaro et al., 2016) further investigation into the correlation into boys’ attitude could prove beneficial. This community-based project serves as a catalyst for creating an entry point in dialogue between children and adults about diabetes.
TABLE OF CONTENTS

DEDICATION ............................................................................................................................................. iii
ACKNOWLEDGEMENTS ......................................................................................................................... iv
ABSTRACT ................................................................................................................................................ viii
LIST OF FIGURES ................................................................................................................................... xii
LIST OF IMAGES ...................................................................................................................................... xiii
PREFACE .................................................................................................................................................. xiv

CHAPTER 1: INTRODUCTION ...................................................................................................................... 1
  Purpose ......................................................................................................................................................... 1
  Study Context ............................................................................................................................................... 2
  Theoretical Frameworks .............................................................................................................................. 5
  Diabetes Context ......................................................................................................................................... 6
  Positionality and Rationale ......................................................................................................................... 10
  Preview ....................................................................................................................................................... 13

CHAPTER 2: REVIEW OF THE LITERATURE .............................................................................................. 14
  Stigma and Disclosure ............................................................................................................................... 14
  Positive Deviance ...................................................................................................................................... 16
  Narrative: Written and Visual ................................................................................................................... 24
  Interactive Narrative .................................................................................................................................. 27
  Entertainment-Education ............................................................................................................................ 30
  Developing a Children’s Book on Diabetes .............................................................................................. 38

CHAPTER 3: METHODOLOGY ..................................................................................................................... 43
  Introduction ................................................................................................................................................ 43
  Justification of Qualitative Methods ......................................................................................................... 44
  Pilot Study Foundations ............................................................................................................................ 46
  Formative Research .................................................................................................................................. 48
  The Sweet Tale: A Children’s Book .......................................................................................................... 49
  Summative Research Procedures ............................................................................................................ 68
    Site of Research .................................................................................................................................... 69
    Selection of Respondents and Procedure for Recruitment ........................................................................ 69
    Privacy and Confidentiality ...................................................................................................................... 70
LIST OF FIGURES

Figure 1: Racial, ethnic, and educational differences in diagnosed diabetes among people 18 or older in the United States. Notice that Hispanics and Blacks are at the highest risk in this grouping. .......................................................................................................................... 7
LIST OF IMAGES

Image 1: Book cover ........................................................................................................ 52
Image 2: Book Page 1 ..................................................................................................... 53
Image 3: Book Page 2 ..................................................................................................... 54
Image 4: Book Page 3 ..................................................................................................... 55
Image 5: Book Page 4 ..................................................................................................... 56
Image 6: Book Page 5 ..................................................................................................... 57
Image 7: Book page 6 ...................................................................................................... 58
Image 8: Book Page 7 ..................................................................................................... 59
Image 9: Book Page 8 .................................................................................................... 60
Image 10: Book Page 9 .................................................................................................. 61
Image 11: Book Page 10 ............................................................................................... 62
Image 12: Book Page 11 ............................................................................................... 63
Image 13: Book Page 12 ............................................................................................... 64
Image 14: Book Page 13 ............................................................................................... 65
Image 15: Book Page 14 ............................................................................................... 66
Image 16: Book Page 15 ............................................................................................... 67
Image 17: Book Back Cover .......................................................................................... 68
PREFACE

I was diagnosed with diabetes nine years ago at the age of 37. I had, as a young woman, witnessed health complications in my father and grandmother, both of whom were living with diabetes. I began with a health communication focus on diabetes upon my return to graduate school in 2013. My work with entertainment-education and positive deviance illuminated the current pilot study. The importance that both bring to seeing, hearing, and doing can be quite a powerful combination.

I was introduced by Professor Arvind Singhal to the positive deviance approach and entertainment-education in the fall of 2013. My M.A. thesis used positive deviance (PD) and focused on the communicative acts and behaviors that people living in the city of El Paso, Texas employed for successful diabetes outcomes.

My M.A. thesis allowed me to shift mental modes and focus my lens on solutions to a problem, as opposed to focusing on the problem. The thesis findings illuminated a plethora of solutions employed by people living with diabetes, most important is the act of disclosure. All the respondents in my thesis disclosed their status and garnered social support that aided in their effective diabetes management.

This pilot project extends my M.A. thesis by using those findings to inform this study. In this pilot project, I couple entertainment-education and interactive narrative in a children’s book that connects the child and parent with the possibility of diabetes knowledge through the communicative action of disclosure. This work continues to be a personal journey for me because I know diabetes can be alleviated through lifestyle actions and knowledge. I hope to put the experience and knowledge I have garnered to continue to make inroads with this deadly chronic disease within my lived community.
CHAPTER 1: INTRODUCTION

“Why does your mom want you to put your shoes on,” Isabella asked. Isabella was a 5-year-old friend of the family who came to celebrate the grand opening of Claudia’s Napa Auto Parts® store. Isabella overheard Claudia’s mother urge her to put her shoes back on. Claudia replied to Isabella, “I am a person living with diabetes, and my mom worries that if I step on something sharp, hot, or dangerous to my feet, I might not feel it and hurt myself.”

Beliefs about diabetes can be derived from cultural, social, and personal understandings. These beliefs either help or hinder outcomes, depending on the content, degree, and strength of those beliefs. Identifying and understanding people’s beliefs gives one a capacity to make correlations between beliefs and outcomes.

Purpose

This pilot study builds on findings from previous thesis research that used positive deviance to investigate uncommon and replicable communicative actions and behaviors of Hispanic1 people living in El Paso, Texas, diagnosed with type 2 diabetes, who have

---

1 “Hispanic” was the term used by most world, national, state, and local health organizations. Some label 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) noted that “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) used the term “Hispanic” to describe persons who self-identify, regardless of race, as Mexican, Puerto Rican, Cuban, Central American, or South American. The Centers for Disease Control and Prevention’s (2018) “Hispanic” label covers: Central Americans and South Americans, Cubans, Mexican Americans, and Puerto Ricans. The shift toward a label of “Latina/o” and now “Latinx” in health communication is being used as an inclusivity marker of anyone with connections to a Latin American country. The term used in this current work is Hispanic because of the label selected by respondents in the first study that informs this study--with acknowledgement of all of the baggage that comes with any label.
been diagnosed with an A1c at pre-diabetic level for at least one year, who took one diabetes medication at a minimum or no oral diabetes medications, who had no insulin intake, and who had not undergone weight loss surgery. Previous research examined the communicative practices of people diagnosed with diabetes and who found solutions to manage their disease. The primary finding of that research was that people living with diabetes who told their family and others they had been diagnosed with diabetes, instead of hiding their diagnosis, became motivated through social support to manage the disease. The positive deviance approach fosters access to positive deviants’ attitudes, beliefs, and perceptions and looks for answers to intractable problems in solutions already present in a community. In this case, the solution found within the community was disclosure among the respondents. I defined disclosure as the communicative act of participants revealing their diabetes status with others.

This chapter provides context to and introduces positive deviance, entertainment-education, and interactive narrative as the frameworks of this research. Diabetes in the United States and in El Paso, is also explored. My positionality is defined and explored. This chapter lays the foundation for subsequent chapters.

Study Context

Health communication has roots in psychology and focuses research on individual behavior change by using the biomedical model. A biomedical model is the shift from the medical model, which focuses on research and medical interventions such as care and treatment-changed outcomes, to public health models, which emphasize behavior change to create outcomes, is essential (Muturi, 2007). The need to focus more efforts on the structural factors at play has brought a much-needed critical voice to the work being done (Dutta, 2008) but focus on structures often marks the end of the discussion. Health
communication can begin to move the mark, focusing on the often-ignored macro structures at play: intersectionality, power, environment, ideology, culture, and disparities. Health communication tends to use labels such as “Hispanic” or “Latinx” to clump a race or ethnicity together for means of cross-cultural comparisons, missing the mark as to the strengths and dynamic offerings that might come from group identification and cultural competence (Zoller & Kline, 2008).

A mixed-methods approach to research provides a balance necessary to elicit the greatest possible meaning from the data collected. Although using empirical methods in health communication research does not require a quantitative arm to validate the findings. However, there are many external issues specifically in chronic disease that cannot be controlled. The benefit of using an interpretivist, qualitative evaluation provides some context that cannot be illuminated using other measures.

The researcher’s needs, agendas and basic definitions of health for a community might not align with those living within the community. I would assert that approaching a social issue from within the community, for the community, might provide, with little to no funding or outside resources, the catalyst to create an environment for social change. Using a critical lens can expose researchers to new ways of thinking about behavior change and social justice, thus providing a realization that the current focus on structures has not made meaningful dents in diabetes realities.

If social justice can be defined as fairness or reasonableness in the way people are treated or decisions are made (Rawls, 1971), then the march to understanding diabetes must continue. There are multiple pathways to social justice, including “poverty, substandard housing, poor education, unhygienic and polluted environments, and social
disintegration. These and many other causal agents lead to systematic disadvantage not only in health, but also in nearly every aspect of social, economic and political life” (Gostin & Powers, 2006, p. 1054). Causal agents cannot be easily remedied by policy changes or structure pivots; they must rely on internal attention for change. Diabetes rates continue to rise (Center for Disease Control and Prevention [CDC], 2018). Research could focus on how social, cultural, and structural factors are harmful, because those factors have created a system that is toxic (Airhihenbuwa, 2007; Dutta, 2008). A recent study conducted in the Boston area (Link & McKinlay, 2009) found that socioeconomic status has a much stronger association with diabetes prevalence than do race or ethnicity. However, the National Institutes of Health (2017) reported a rise in rates of newly diagnosed cases of type 1 and type 2 diabetes among children and teens, with the most rapid increase in racial and ethnic minority groups. In an area, such as El Paso, where much of the population identifies as Hispanic; we must address the issue in a myriad of socially responsible and creative ways. Diabetes research should continue on all fronts. My research focuses the lens on asking questions such as “Why and how do certain narratives that amplify local wisdom attain disease knowledge and behavior change?”

The remainder of this chapter focuses on key constructs that inform this dissertation. I have designed, implemented, and evaluated a pilot study that measured how narrative within a children’s book can illuminate, for Hispanic children aged 5-10 living in El Paso, disclosure associated with diabetes. This research aims to provide a better understanding of diabetes through narrative in hopes that my findings become a conduit to further conversations at home with adult family members facing diabetes
disparities in the El Paso region as well as my findings become a conduit that informs future health interventions within, from, and for the population.

**Theoretical Frameworks**

The positive deviance approach focuses on solutions to intractable problems found within a community, then enables the community itself to replicate those behaviors. The term positive deviance was introduced by Wishik and Van Der Vynckt (1976) in the field of child nutrition, then ordered and codified by Tufts University professor Marian Zeitlin (Zeitlin, Ghassemi, & Mansour, 1990). The positive deviance approach was used in the field to combat childhood malnutrition by Jerry and Monique Sternin on behalf of Save the Children in Vietnam (Bisits Bullen, 2012; Hendrickson, Dearden, Pachón, Hoi, Schroeder, & Marsh, 2002; Marsh, Khanh, Ha, Kiem, Vu & Jones, 2007; Sripaipan, Schroeder, Marsh, Pachón, Dearden, Ha, & Lang, 2002; Trinh Mackintosh, Marsh, & Schroeder, 2002).

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 toward implementation. This dissertation used positive deviance inquiry findings from previous research that identified behaviors of adults within the community and then implemented them in to an entertainment-education project for children. Positive deviance informs this study, but it is driven by entertainment-education.

Entertainment-education is a communication strategy that combines entertainment and education in order to elicit change in behavior and knowledge to create favorable outcomes (Singhal, Cody, Rogers, & Sabido, 2003). Entertainment-education is rooted in Latin America telenovelas and was first employed by Miguel Sabido (Singhal & Rogers, 2012). It has been effectively employed in effective health campaigns that focus on
Hispanic communities (Baezconde-Garbanati, Chatterjee, Frank, Murphy, Moran, Werth, Zhao, Amenzola de Herrera, Mayer, Kagan, & O'Brien, 2014; Murphy et al., 2013; Wang & Singhal, 2016). Interactive narrative creates a space for entertainment-education implantation by allowing the reader to become the navigator of the story by determining the direction of the plot at a key point of the story (Green & Jenkins, 2014). Combining entertainment-education and interactive narrative allows new possibilities in creating innovative programs for effective disease management.

To employ the previously cited communication frameworks, I employed Walter Fisher’s narrative theory, which asserted that humans are essentially “storytellers” (1985, p. 7). Behind every reason is a value: Reasoning is not a “mirror of truth” but is a contingent product of one’s “history, biography, culture, and character” (Fisher, 1985, p. 5). I ground my study in the philosophical assumptions of interpretivism whereby “research should provide deep understanding of human actions, motives and feelings, illuminating how humans use cultural symbol systems to create shared meanings” (Lindlof & Taylor, 2011, p. 7).

**Diabetes Context**

To understand the complexities of diabetes within Hispanic communities, contextualization is necessary. Diabetes is among the fastest growing diseases in the world. One in three Americans will have been diagnosed with diabetes by 2050 (CDC, 2018). In 1958, less than 1% of the U.S. population, 1.58 million Americans, had been diagnosed with diabetes. That number climbed to 7%, or 21.1 million people, by 2010. Figures from 2017, which are the most recent, show that 30.3 million people, or 9.4% of the population, are living with diabetes.

The highest prevalence is found in American Indians/Alaska Natives (15.3%),
followed by non-Hispanic Blacks (9.0%) and then Hispanics (8.4%). Children and adolescents younger than 20 account for .24% of the total diabetes cases in the United States (CDC, 2018). Health complications for people who are diabetic include blindness; kidney failure; heart disease; stroke; and loss of toes, feet, and legs. The total direct and indirect financial medical cost of addressing and treating diabetes in the United States, according to American Diabetes Association (2017) research, was $327 billion. Medical costs for people diagnosed with diabetes are double that of people not living with diabetes (CDC, 2018). Figure 1 shows that the number of people with diabetes rates are high among all social, racial, ethnic, and educational groups; thus, the search for answers and clarity about the disease is critical.

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Rate per 1,000 (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Race/Ethnicity</strong></td>
<td></td>
</tr>
<tr>
<td>Asian, non-Hispanic</td>
<td>6.0 (4.2–8.6)</td>
</tr>
<tr>
<td>Black, non-Hispanic</td>
<td>9.0 (7.4–10.9)</td>
</tr>
<tr>
<td>Hispanic</td>
<td>8.4 (7.2–9.8)</td>
</tr>
<tr>
<td>White, non-Hispanic</td>
<td>5.7 (5.0–6.4)</td>
</tr>
<tr>
<td><strong>Education</strong></td>
<td></td>
</tr>
<tr>
<td>Less than high school</td>
<td>10.4 (8.8–12.4)</td>
</tr>
<tr>
<td>High school</td>
<td>7.8 (6.6–9.2)</td>
</tr>
<tr>
<td>More than high school</td>
<td>5.3 (4.7–5.9)</td>
</tr>
</tbody>
</table>

*Figure 1: Racial, ethnic, and educational differences in diagnosed diabetes among people 18 or older in the United States. Notice that Hispanics and Blacks are at the highest risk in this grouping (CDC, 2018).*

Diabetes is the seventh leading cause of death in the United States. Hispanics are more than twice as likely to have diabetes than White European Americans (White

---

2 “Among Hispanic adults, the age-adjusted rate of diagnosed diabetes was 12.1% for Central Americans and South Americans, 8.5% for Cubans, 9% for Mexican Americans, and 12% for Puerto Ricans. Among Asian American adults, the age-adjusted rate of diagnosed diabetes was 4.3% for Chinese, 8.9% for Filipinos, 11.2% for Asian Indians, and 8.5% for other Asians. Among American Indian and Alaska Native adults, the age-adjusted rate of diagnosed diabetes varied by region, ranging from 6.0% among Alaska Natives to 22.2% among American Indians in certain areas of the Southwest (CDC, 2018).
Americans of European descent) (CDC, 2018).

Hispanic health is influenced by factors such as the language barrier, lack of access to preventative care, and lack of health insurance. The leading causes of illness and death among Hispanics are heart disease, cancer, unintentional injuries (accidents), stroke and diabetes. (Perez & Luquis, 2013, pp. 10-11)

The World Health Organization Commission (2008) stated that “social determinants of health include social, economic, and environmental conditions which are shaped by the distribution of money, power, and resources at the global, national and local levels” (cited in Perez & Luquis, 2013, p. 69). Dahlgren and Whitehead (2007) found that “most health disparities affect groups marginalized because of socio-economic status, race/ethnicity, sexual orientation, gender, disability status, geographic location, or some combination of those factors” (cited in Perez & Luquis, 2013, p. 70). Access to healthy food, good housing, good education, safe neighborhoods, and freedom from racism and other forms of discrimination are social determinants of health (Perez & Luquis, 2013).

The Paso del Norte Health Foundation serves the people living in far West Texas, southern New Mexico, and Ciudad Juarez, Chihuahua, Mexico--a total of 2.5 million people (Paso del Norte Health Foundation [PdNHF], 2019). According to the Paso del Norte Health Foundation, the demographics of El Paso region are: 850,483 population; 82% Hispanic population; a young population, of whom 15% are aged 25-34; 49% male and 51% female; low education, with 69% of the population having some college education, having no college degree, or who have no education beyond high school; families living below the poverty level (19%) which is $25,750 for a family of 4 (U.S.
Department of Health and Human Services, 2019). Thirty percent of residents of El Paso live in a food desert, defined as an area whose residents have little or no convenient access to a grocery, a fact that, coupled with low income, produces 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). The El Paso Department of Public Health reports a lower percentage of people are having a medical facility regularly check their A1c (a three-month measure of cellular glucose level), which could be attributed to “lack of access to preventive care, a lack of health knowledge, insufficient provider outreach, and/or social barriers preventing utilization of services” (p. ix).

The diabetes incidence in El Paso echoes the Institute of Medicine’s landmark report on racial and ethnic disparities in healthcare, which said, “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, 2012, p. 130). Trends in prevalence and control of diabetes, have found the following:

[O]ver 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, Parrinello, Sacks, & Coresh, 2014, p. 517)
Primary contributors to one’s health, according to Paso del Norte Health Foundation, are “50% behavior; 20% genetics; 20% environment and 10% health care” (2016). Hispanic men have a higher prevalence of diabetes (16%) compared to Hispanic women (12%) (Dominguez, Penman-Aguilar, Chang, Moonessinghe, Castellanos, Rodriguez-Lainz, & Schieber, 2015) and less knowledge about diabetes (Vaccaro, Anderson, & Huffman, 2016).

Type 2 diabetes was most often diagnosed and was the most preventable type of diabetes and, therefore, was the focus of the PD study that informed this dissertation. Specifically, the previous thesis study aimed at identifying type 2 diabetes diagnosed people living with diabetes who effectively managed their diagnosis (i.e., the positive deviants) (Boyd, 2015). The positive deviants faced most of the risk factors associated with type 2 diabetes; however, they had found ways to control their diabetes. 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, 2018; IDF, 2014; NIH, 2014).

Positionality and Rationale

As a female Hispanic person living with diabetes, who lives in the El Paso area, I am keenly interested in the structures that help frame healthcare outcomes and how narratives position Hispanics. As such, this research is very personal for me and my reflexivity highlights my specific academic and class privileges including access to health insurance that might obscure my elucidation of the research. A children’s book intended to be of value to Hispanics living in the El Paso region was conceived and created because of the cultural makeup and identity of a border city whose Hispanic population
has a high rate of diabetes. Literature does not often serve the borderland population. The children’s book was written for children living in the Hispanic community of El Paso who will inevitably play a strong role in their health outcomes.

This research contains my epistemological, ontological and methodological assumptions “paradigm” (Guba, 1990, p. 17) “or interpretive framework,” (Denzin & Lincoln, 2011, p.13) the “basic set of beliefs that guides action” (Guba, 1990, p. 17). In this research, I adopt the interpretive constructivist paradigm that “assumes a relativist ontology (there are multiple realities), a subjectivist epistemology (knower and respondent co-create understandings), and a naturalistic (in the natural world) set of methodological procedures” (Denzin & Lincoln, 2011, p. 13) which are hermeneutical/dialectical. I assume the production of reconstructed understandings of the social world. Constructivism is associated with quality criteria of “trustworthiness and authenticity, including a catalyst for action” (Denzin & Lincoln, 2011, p. 99). Ethically, the process is intrinsic and gives voice to the “‘passionate participant’ as facilitator of multi-voice reconstruction” (Denzin & Lincoln, 2011, p.99).

Consistent with the previously cited assumptions some structures that I believe might emerge are (a) children who will not disclose a diabetes diagnosis of the character in the story, (b) positioning economically challenged people living with diabetes as chronically poor and lazy and the cause of their own diabetes, (c) perpetuating the myths of the causes of diabetes and the idea that diabetes is inherently bad. However, the possibility exists that some children are would choose to disclose a diabetes diagnosis of the character in the story and thus experience a revelation of knowledge, causes, and beliefs.
This dissertation focused on the Hispanic population because of the high incidence of diabetes in that ethnic group. Various determinants in play with first-generation Hispanics diagnosed with diabetes include biologic, social, and cultural elements (Calzada & Mora, 2011). Cultural factors that affect diabetic outcomes in the Hispanic population include language barriers; beliefs regarding weight, acculturation, and changes in diet; lack of access to healthcare; integration of traditional and folkloric beliefs; negative attitudes toward medications; and herbal remedies. Social factors illustrate the following:

[T]he impacts 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)

The demographic makeup of El Paso magnifies disease incidence and prevalence. This dissertation used the previous PD inquiry, which discovered positive deviants living with diabetes within El Paso, and identified the behaviors allowing for their effective diabetes management, namely, disclosure.

Also important is to address the call from previous research to measure the efficacy of interactive narratives that allow readers opportunities to decide the direction of the narrative at a key plot point (Green & Jenkins, 2014), especially in populations with low health literacy and in minority populations (Adams & Bell, 2016). Also needed are guidelines created to provide a framework for using entertainment-education tools to
inform development, operationalization, and implementation for the use of interactive narrative in health campaigns.

This study was warranted because of the importance of health communication research on attitudes, beliefs, and behavior (Cline, 2003). A PD inquiry researching social support and self-management strategies achieved through communicative acts was conducted (Boyd, 2015) and revealed the importance of disclosure within the El Paso community. This pilot study was relevant in understanding how these behaviors factor into children’s attitudes, beliefs, and actions regarding diabetes. This innovative proposal includes creating a children’s book as an instrument to illustrate children’s attitudes towards diabetes and if the use of a simple communicative message to disclose or “tell” about a diabetes diagnosis could change children’s health outcomes for the better. Further, children sharing the book at home with an adult engages in important familial diabetes conversations.

**Preview**

The remainder of this dissertation focuses on how I used my positionality and my paradigmatic and ideological constructs to create the pilot study, which was focused on the diabetes realities of children and their families. I designed, implemented, and evaluated a pilot study as an entertainment-education intervention that employed interactive narrative in a children’s book to measure how narrative can illuminate disclosure beliefs associated with diabetes in Hispanic children. Further, I examined how the children’s book can help Hispanic children aged 5-10 living in El Paso become catalysts for effective diabetes knowledge for themselves, their families, and all people in the region facing diabetes by helping to create a model for effective children’s book health interventions for future generations.
CHAPTER 2: REVIEW OF THE LITERATURE

Isabella was confused by what Claudia had told her, so she asked, “What is diabetes?” “It is when the blood in your body has too much sugar in it” Claudia replied. “Why does the blood have too much sugar?” Isabella asked. “Sometimes your body is not processing the sugar because your pancreas is not working properly, and if you eat too much sugar, don’t take your medication, and don’t exercise, you end up with too much sugar in your blood,” Claudia told the little girl.

The daily complexities for a person living with diabetes are many. This chapter offers a lens into the pilot study by unpacking the mechanisms at play for some people living with diabetes, such as stigma and disclosure. Also explored are positive deviance approach, entertainment-education, narrative, the interactive narrative, and a rationale and justification for the study. The chapter concludes with research questions that helped guide the research.

Stigma and Disclosure

Stigmas associated with disclosure of a chronic disease diagnosis are at the forefront of silence (Ashforth & Kreiner, 1999; Coleman, 1986; Goffman, 1963; Meisenbach, 2010). Erving Goffman’s evolutionary thoughts on stigma began with the ancient Greeks. He posited that the body exposes signs of unusual and bad moral status of the affected person (1963). 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” (Bock, 2012, p. 155). Goffman argued that stigma is more related to a spoiled identity and is not linked to the body. However, diabetes becomes a site where both types of disclosures converge--it is something that is bodily but is not seen until it is disclosed. 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 become restrictive and prevent individuals from obtaining healthcare services (Bock, 2012).

According to Fife and Wright (2000), stress and social burden associated with a chronic disease, manifested as stigma, can put a psychological and/or social burden on an individual. This has led to stigma becoming the leading impediment to health promotion treatment and support (U.S. Department of Health and Human Services, 2019).

“Tailoring the message 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) is critical.

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 current pilot study aims to uncover stigma if it exists within children as it relates to diabetes. The study focused on whether children would or would not disclose a diabetes diagnosis creatively using interactive narrative. If a child is stigmatized, what might this tell us? If a child chooses not to disclose, why are they making that choice and what informs their decision?

Disclosure engenders social support. Social support has been studied in health communication by scholars, and functions of support have primarily been classified into four types: emotional, informational, appraisal, and instrumental. The study of social support is vast in the literature (Barrera, 1986; Campos, Schetter, Abdou, Hobel, Glynn, & Sandman, 2008; Heaney & Israel, 2008; Helgeson, 1993; Langford et al., 1997). Social
support is garnered through social communities and immediate family groups. Further, the importance of social support in illness management is essential to achieve successful outcomes. People who do not have this support often fail at managing illness and suffer more health complications. The need of health communication research to ensure “open dialogue and provide accurate education information . . . can serve to potentially eliminate any myths or misdirected knowledge that both parties might have gained from other inaccurate information channels” (Cooke-Jackson, 2011, p. 251).

Interpersonal communication in health communication constructs is instrumental. The importance that is given to “just ‘plain talk’ has health-related functions (Lynch, 1985). Although there is “scant literature on the role of everyday interpersonal communication in health reinforces the primacy of identity and relational goals over instrumental goals” (Cline, 2011). As a way of understanding health-related roles of everyday interpersonal communication Cline proposes a framework:

influences of everyday communication on health (a) are anchored more in the social reality and social norms of participants than in health knowledge, health information, and traditionally defined health beliefs and behaviors; (b) are embedded in social situations that can be understood only through the realities of the participants; (c) may be positive or negative; and (d) may be planned or incidental. (2011, p. 379)

Positive Deviance

The positive deviance approach is inherently bound by a simple theme: in plain sight. The positive deviance approach finds solutions to complex, intractable yet adaptable problems, from assets found within a community. The positive deviance
approach focuses on community resources used by individuals (Singhal, Buscell, & Lindberg, 2010; Pascale, Sternin, & Sternin, 2012). The focus is on what works.

“Positive deviance 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).

The first researchers to work with the concept of positive deviance were Wishik and Van Der Vynckt (1976) in the field of child nutrition. Positive deviance “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 at Tufts University School of nutrition, in 1989, pioneered positive deviance inquiries by labeling positive deviants for the first time (Zeitlin, Ghassemi, & Mansour, 1990) as “well-nourished children from poor families, ‘positive deviants’” (Pascale, Sternin, & Sternin, 2012, p. 24).

Singhal (2011) identified key markers of the positive deviance approach:

[S]olutions 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)
Harnessing the solutions found within local wisdom can be more advantageous than bringing in outside solutions and then waiting for diffusion to occur (Durá & Singhal, 2009; Pascale & Sternin, 2012; Singhal, Sternin, & Durá 2009).

The shift from knowledge, action, and practice-KAP model, to practice, action, and knowledge model-PAK in positive deviance is necessary: “The positive deviance 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).

Positive deviance is a successful approach to issues affecting poor communities, it provides “the potential for the approach to help communities to gain better health or other social benefits is vast and largely untapped” (Marsh, Schroeder, Dearden, Sternin, & Sternin, 2004, p. 1177). The success of positive deviance adoption comes from its inherent positioning within a community. Allowing for replication and amplification 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). This takes away the outsider and diffuses the solutions through trust.

The positive deviance approach observes the non-normative actions of positive deviants (outliers) because “their behaviors are highly uncommon but effective in delivering desirable positive outcomes. These individuals represent what we call ‘positive deviants,’ and the (micro) behaviors they engage in are positive deviant practices” (Singhal, 2014, p. 176). The observations of these non-normative actions are made via observations and conversations with community members.
The process of identifying positive deviants requires a focused understanding of the problem. The positive deviance approach contains foundational process requirements. It can be implemented when the following are true: (a) the problem is complex and requires behavioral or and social change; (b) the problem is intractable, and other solutions have not worked; (c) positive deviants exist, making solutions possible; and (d) leadership commitment exists to finding solutions (Positive Deviance Initiative, 2010).

The basic principles that are present in most positive deviance inquiries’ and programs include the following criteria, according to the Positive Deviance Initiative (2014): the community owns the entire process; all individuals or groups who are part of the problem are also part of the solution, and hence the positive deviance process involves all parties who affect the problem. Based on the premise of don’t do anything about me without me; the community designs ways to practice and amplify effective behaviors and strategies and unleashes innovation; community members recognize that someone just like them can achieve results, even in worst-case scenarios (social proof); positive deviance emphasizes practice instead of knowledge—the “how” instead of the “what” or “why.”

The positive deviance 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”; the community creates its own benchmarks and monitors progress; positive deviance process facilitation is based on deep respect for community, its members, and its culture, and focuses on interactive engagement and capacity for the community led interventions; and the positive deviance process expands existing networks and creates new ones.

Positive deviance methodology operationalization requires five steps to implement. 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 have. Fourth, the community disseminates the wisdom it has discovered within its channels. Fifth, the community will discern the effectiveness of the intervention.

Some current research on positive deviance shows the various communication perspectives it has taken on: boosting metacognitive skills (Kwitonda & Singhal, 2018); practice-based evidence and inside-out diffusion (Singhal & Svenkerud, 2018); health risk messaging (Singhal & Dura, 2017); identification and amplification of tacit knowledge (Slettli & Singhal, 2017); and health disparities (Foster, Aquino, Mejia, Turner & Singhal, 2018). The positive deviance approach has been used in three studies to better understand diabetes.

One of the studies considered medical home practices that yielded better diabetes care outcomes (Gabbay, Friedberg, Miller-Day, Cronholm, Adelman, & Schnieder, 2013) by focusing on organizational practices. Another study examined HEB Supermarket employees in two Texas cities, San Antonio and Houston, who were members of Blue Cross Blue Shield of Texas 78 low-income Hispanic adults living with diabetes and who were determined to be positive deviants. Eligibility criteria were ethnicity and income. Focus groups and individual in-depth interviews were conducted in Spanish and English from which seven themes were discovered: (a) motivation, emotions, and support (the two core motivators were fear and family); (b) diabetes education with the need to have diabetes classes offered by HEB (employer), the doctor, or BCBS; (c) diet changes of increasing intake of fruits, vegetables, water, and decreasing portion size; (d) exercise
was the main motivator to feeling good and improving appearance; many people in the study exercised with a significant other; (e) attending doctors’ visits and receiving blood tests; (f) medications became part of daily routines related to time of day, preparing for bed or work, and use of a pill box; and (g) self-monitoring and management which aided in having a positive attitude. The positive deviants pointed out the need for more time while visiting their physician to better understand what was being communicated. The extra time with the physician gave the positive deviants the opportunity to provide more narrative. Positive deviants reported needing motivation that was created through TV, diabetes classes, or videos. Schroder identified seven archetypes of the positive deviants: caretaker, realist, young parent, teacher/leader, social butterfly, pretty woman, and soldier (Schroeder, 2011).

The third positive deviance study about diabetes (Boyd, 2015) was conducted with 12 positive deviance respondents aged 20-82 who were identified based on seven inclusion criteria: Hispanic, resident of El Paso, 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 positive deviant respondents were used to collect data.

Overall, intrapersonal behavior, the communication that one has with oneself, revealed in the study (Boyd, 2015) that positive deviant respondents did not characterize diabetes, including its diagnosis, as a stigma. Positive deviants were likely to embrace it. Not feeling stigmatized, positive deviant respondents disclosed their diagnosis to family, friends and co-workers, which engendered social support from all quarters. Other study
findings included self-management behavior, strategies, beliefs, and motivators. The study also revealed interpersonal acts and social support behaviors with family, spouse, children, grandchildren, physician, co-workers and friends, via social media and advice to other people living with diabetes. The significance of the findings in the study is that although disclosure was key; the interpersonal acts and behaviors found were just as important and necessary for effective diabetes management among the positive deviants in the study.

Positive deviance is aligned with community-based participatory research. Such research is a “collaborative approach to research, it equitably involves all partners in the research process and recognizes the unique strengths that each brings. Community-based participatory research begins with a research topic of importance to the community with the aim of combining knowledge and action for social change to improve community health and eliminate health disparities,” (Minkler & Wallerstein, 2003, p. 4). Community-based participatory research has historical roots in action research, that challenges the gap between theory and practice aimed at solving practical problems through community planning, community action, and investigation of said efforts (Lewin, 1948/1997). Principles of community-based participatory research as outlined by (Israel, Eng, Schulz, & Parker, 2005) included but were not limited to these elements: acknowledges community as a unity of identity; builds on the strengths and resources within the community; facilitates a collaborative, equitable partnership in all phases of research, involving an empowering and power-sharing process that attends to social inequalities; fosters co-learning and capacity building among all partners; integrates and achieves a balance between knowledge generation and intervention for the mutual benefit of all
partners; focuses on the local relevance of public health problems and on ecological perspectives that attend to the multiple determinants of health; involves systems development using a cyclical and iterative process; disseminates results to all partners and involves them in the wider dissemination of results; and involves a long-term process and commitment to sustainability. The ethical considerations that come to play with formulating the research question and with who is selected to represent the community are issues that Minkler (2004) pointed out were critical in the initial design of the community-based participatory research process.

Extensive research on community-based participatory research and on diabetes has been conducted: indigenous community research (Macridis, Garcia Bengoechea, Mccomber, Jacobs, & Macaulay, 2016); implementation of mHealth methods (Bolin, Fulton, Hora, Martinez, Prochaska, & Ory, 2007; Ory, Forjuoh, Reis, Couchman, Mononket-Lanning, & Prochaska, 2007); testing culturally adapted coping skills (Chesla, Chun, Kwan, Mullan, Kwong, Hsu, & Waters, 2013); diagnostic tool for health beliefs (Washington & Ming Fang, 2009); operationalization of community-based participatory research (Bardwell, Morton, Chester, Pancoska, Busch, Cecchetti & Branch, 2009; Pancoska, Buch, Cecchetti, Parmanto, Vecchio, Groark & Branch, 2009; Branch & Chester, 2009; Eriksen & Rothenberg, 2012); research study recruitment (Horowitz, Brenner, Lachapelle, Amara, & Arniella, 2009; O’Donnell et al., 2009); community health worker interventions (Islam, Riley, Wyatt, Tandon, Tanner, Ratnam-Mukjerji, & Trnh-Shervin, 2014; Shah, Ghatate, Bobelu, Sandy, Newman, Helitzer, & Zager, 2014; Katz, Martinez, & Paul, 2011); digital storytelling (Njeru, Patten, Hanza, Brockman, Ridgeway, Weis, & Myers, 2015); building on community-based participatory research
partnerships (Hogan, Bengoechea, Salsberg, Jacobs, King, & Macaulay, 2014); how to conduct community-based participatory research (Trickett, 2011; Prochaska, Ory, Griesenbeck, Hora, & Bolin, 2007; Branch & Chester, 2009; Berge, Mendenhall, & Doherty, 2009; Mier, Millard, Flores, Sánchez, Medina, & Carbajal, 2007); treating obesity (Yeary, Cornell, Prewitt, Bursac, Tilford, Turner, & Harris, 2015); and treating cardiovascular health (Ivey, Patel, Kalra, Greenlund, Srinivasan, & Grewal, 2004). The methods utilized in the studies included empirical study, interview, focus groups, and quantitative and qualitative measures. This current study does not adhere to a community-based participatory research protocol because it did not include the community in the entire process of formation, program design, implementation and outcomes assessment. This project does align with the need for a strong link with the people of El Paso in having shaped the children’s book around the community.

**Narrative: Written and Visual**

The relationship between the visual narrative and written narrative is strong. Hispanic cultures have a rich history of oral storytelling. In stories the images allow the listener to identify with the characters and be transported if they closely resemble or remind them of something they know (Green & Brock, 2000; Green, Brock, & Kaufman, 2004). If the character representations are too unfamiliar, counter-arguing and zoning out can happen. This relationship between the visual and written narratives critical to maintain attention of the receiver of the message and create a possibility of behavior change.

In oral conversations, children build on each other’s thoughts and create knowledge and identities for themselves. In written narratives, however, others’ thought
processes, memories, and images are communicated and create connections in the child’s mind without the child’s direct, embodied (lived or mental) response. If the author creates narratives that engages the it silences the back and forth of embodied conversations intensifies their experience to the author’s thoughts, images, and feelings. The most significant change that children’s literacy introduces children to is the amplification of the symbolic order which is the meaning making of symbols using codes. As soon as children master alphabetic decoding, connecting letters with the symbols that identify that letter; they open a world of ideas and experiences not their own, which can powerfully shape their minds (Simms, 2011).

Literate cultures know that they need this world and that they must colonize it. Through this process, on a massive scale, literate cultures reproduce themselves over the generations by establishing canons of texts that must be read and internalized by children. Cultural memory is transmitted by texts. We call this process education. (Simms, 2011, p. 25)

Hispanic children’s picture books are a literary form that speaks to cultural experiences through written and visual texts. By experiencing, connecting, inspecting, questioning, noticing, and naming details of the print and illustration together, children can explore the relationship between the two (Martínez-Roldán & Newcomer, 2011). As readers of Hispanic-specific literature, children can infer events in the story in English and/or in Spanish, can notice and interpret cultural motifs, or can speculate about the meanings conveyed by the authors and illustrators in their use of aesthetic elements and literary bilingualism (Rudin, 1996). Sipe (2000) suggested that text and illustrations relate synergistically, each contributing to a whole that is more complex than the effect of its
components alone. Young children just learning a language pay close attention to the illustrations to make the unfamiliar connections familiar (Martínez-Roldán & Newcomer, 2011).

To better illustrate this in action, a story retelling is called for. Dr. Ada tells a tale of Mexican children gathering around her to hear a story but only a few spoke Spanish, and as she began to tell the story in English, one of her listeners asked her to tell it the “other way” (in English) even though she could not understand Spanish her mother sounded. “Identification with our mother tongue begins before birth as we listen to the cadence of our mother’s voice through the amniotic fluid that surrounds us” (Ada as cited in Clark, Flores, Smith, & Gonzalez, 2016, p. x).

Connection to the community is key to bridging literature and meaningful messaging “these books need to be written by authors who can portray those realities authentically, from their own lived experience, their own intimate association with a particular culture, and their own continued learning” (Ada as cited in Clark, Flores, Smith, & Gonzalez, 2016, p. x). The value of testimonios (testimonies) gives children a sense of “cultural pride. It’s not uncommon when I visit schools in farm-working communities in California, for students to raise their hands when I ask who has relatives who are farm workers. But when I tell them that I have written a book in celebration of the valuable work that farm workers do . . . there is hardly a student whose hand does not go up, as they proudly begin to share their experiences in the fields” (Ada as cited in Clark, Flores, Smith, & Gonzalez, 2016, p. xi).

“Due to a long history of social oppression and marginalization that continues into the present, a growing number of Latinos today do not speak Spanish” (Ada as cited in
Clark, Flores, Smith, & Gonzalez, 2016, p. xvii). Hispanics who do “commonly engage in highly sophisticated communicative activities like translanguage and language brokering, without the benefit of any formal training. They intuitively use English or Spanish, deciding which of their languages is more appropriate for a given situation” (Clark, Flores, Smith, & Gonzalez, 2016, p. xxiii).

Narratives might help to identify contributors to linguistic isolation for patients (Shin, 2003); intercultural incompetence (Kleinman, 1980); (Kleinman & Benson, 2006); (Keinman & Good, 2004); and health communication incompetence (Kreps, 1988). Narratives can bring an opportunity to build understanding of how diabetes realities are constructed. Lopez-Robertson (2004/2012 as cited in Martinez, Roser, Zapata, & Greeter, 2016, p. 224) conducted studies with Hispanic children using *platicas literarias* (literature discussions) as a guide to help them use “their cultural traditions of storytelling to make connections with their lives and families and to events they had experienced either directly or indirectly . . . researchers found that the children were able to empathize with characters who faced challenging realities similar to their own experiences, including loss, separation from family, and experiences with the border patrol” (p. 224).

**Interactive Narrative**

Answering the call for method building waged by Singhal and Roger’s (2012), many entertainment producers have reinvented and discovered new uses of entertainment-education. Interactive narratives are based on Walter Fisher’s (1985) narrative theory, which posits that we are all storytellers. Humans tell stories to share their collective and lived realities to understand the world around them and as a way of knowing. Narrative is used as a *meaning maker* in the retelling of stories. Narrative has the possibility in health narratives to make a difference in populations where
socioeconomics, race, literacy, and other factors of health make change difficult (Houston, Allison, Sussman, Horn, Holt, Trobaugh, & Pearson, 2011). Narrative provides a space for interventions where more culturally appropriate storytelling is possible. Storytelling is a way that we make sense of our worlds and is one of the oldest communicative forms. Building on narrative, interactive narrative makes the audience a more active participant by placing an active choice of deciding the direction of the story, usually in a key plot point (Green & Jenkins, 2014).

Green and Jenkins (2014) created a theoretical construct for interactive narratives, which uses interactivity (Liu & Shrum, 2002; Wojdynki, 2011); entertainment-education (Singhal & Rogers, 2002); persuasive narratives (Appel & Richter, 2007; Moyer-Gusé, 2008); self-perception (Kaufman & Libby, 2012; Klimmt, Hefner, Vorderer, Roth, & Blake, 2010; Sestir & Green, 2010) and possible selves (Dijikic, Oatley, Zoterman, & Peterson, 2009; Green, Tesser, Wood, & Stapel; 2005). Escalas (2007) posited that it is easier to learn from a story than from a lesson. The ability of interactive narrative to provide various outcomes gives rise to possibilities (Dahlstrom, 2012).

Interactivity creates a space for people to have imagined responses to life situations. Active participation in a story in which health decisions are made is a way to examine outcomes. The stakes of interactive narrative are lower than in a lived experience. Interactive narrative provides the user the ability to imagine certain scenarios by using the decision tool of choice within the narrative. The user is given the ability to consider various outcomes with a greater chance of being moved by the story and in turn giving more power to the narrative. Interactive narrative provides the ability to put oneself in a disease narrative in which one might not comfortably want to imagine
themselves. In interactive narrative because the interactivity with the narrative requires active participation, it can create a stronger effect on identification and imitation.

This is a new area of study with few criticisms. Green and Jenkins (2014) discuss issues that might arise with interactive narrative. The active participatory space created might decrease the transportation aspect of the messaging and therefore decrease persuasive effects. Traditional narratives are appropriate for moral lessons and those lessons that might hold stronger cultural implications. The decision-making process in some interactive narrative can be so strong that it disconnects the transportability of the user. Although interactive narrative was created for gaming and lacks empirical attention, it is an innovative way into health communication not yet explored. If the story becomes too real, such as when the interaction calls for negative attributes such as stealing and lying and the user chooses one, the user might feel guilt and therefore might feel disconnected from the intended message. It is similar in many ways to what Sabido (Singhal & Rogers, 2012) envisioned with entertainment-education in that it has a values and morals component. Much attention to formative and summative research in entertainment-education. Interactive narrative uses entertainment-education as one of its theoretical constructs (Singhal et al., 2003). The looser narrative in interactive narrative because of participatory malleability creates great possibilities for understanding of the reader, listener, viewer’s understandings. How that translates into a people’s psychological behavior change is a critical question. The process of identifying with the audience’s decision making is the critical of understanding that decision. If the narrative transports the audience, then the self is no longer imitating but is acting. Interactive narrative provides a new space to explore the possibilities of narrative to transform health
knowledge, attitudes, and beliefs. Examples could be the transformative. Interactive narrative could be used to show effects of a narrative on smoking or the consequences of texting and driving.

**Entertainment-Education**

Entertainment-education is a communication strategy that has been a powerful tool in social and behavior change within communities. It draws its strength from media entertainment, such as from television, newspapers, radio, and books, which tell us how to act, behave, and think (Brown, Gillian, & Yule, 1983). Entertainment-education provides a way into communities that would otherwise not be possible. It has been combined with many theories to accomplish its nonlinear multivariate effects. Pioneers of entertainment-education, Singhal, Rogers, and Sabido, among others, considered entertainment-education to be a theoretically grounded approach rather than a theory (Singhal et al., 2003). I agree that entertainment-education’s malleability has allowed for much theory and method building and is more accurately labeled as a method.

Entertainment-education has been described by the words intraeducate, infotainment, and edutainment. The main purpose of all entertainment-education is to combine entertainment and education in a way that elicits change in behavior and knowledge to facilitate more-favorable outcomes. Entertainment-education processing occurs in two ways: (a) It creates a change in a person’s thinking and beliefs on an individual level, and (b), it works at the structural functional level to affect group or systems change; this occurs at the external environment level. Here, it works at the sociopolitical level to make the group-level or system-level change possible (Piotrow, Kincaid, Romon, Rinehart, & Samson, 1997; Piotrow, Meyer, & Zulu, 1992; Singhal & Brown, 1996).
Entertainment-education is a strong tool because it uses innovative campaigns to address issues facing a community. Interventions are often disseminated in communities with similar issues, constraints, and needs. Entertainment-education blurs fantasy and reality but always has the impact possibilities of placing change-making messaging within entertainment media to create socially desirable outcomes (Singhal & Rogers, 2012). Entertainment-education works best in cultures and communities that have a strong oral history, such as in Mexican and Hispanic populations.

Entertainment-education is informed by five interdisciplinary theories. The first, Rovigatti’s circular theory of communication (Sood, Menard, & White, 2004), takes Shannon’s model of communication (communicator, medium, message, recipient, and response) and changes it from linear to circular. The second, Bentley’s dramatic theory (1964), focuses on theatrical elements such as mood, character, and tone and the importance they play in stories. The third, Jung’s theory of the collective unconscious (2014), posits that we learn from our surroundings. Humankind looks for meaning making from our surroundings; our realities are made up of our exposures, which in turn make up our ontological assumptions and worldviews. The fourth, MacLean’s theory of the truine brain, shows that our brains have three parts—the neo-cortex, where intelligence is processed, the visceral, where emotions are processed, and the reptilian, where physical desires, such as sex, are created (MacLean & Kral, 1973). Sabido believed that the neo-cortex had to be in constant connection with both the visceral and reptilian brain modules for lasting behavior change to be possible (Nariman, 1993).

The fifth theory, which is the one most used with entertainment-education, is Bandura’s (1977) social learning theory, which later became known as social cognitive
theory. The social learning theory posits that people model behavior seen in others. In entertainment-education, a person models behavior of the actors portrayed in the stories created by the media. For this to happen, people must strongly identify with the character and believe they too can perform the acts portrayed by the character (self-efficacy). There are times when the connection between the person and the character in the story is so strong that the audience member believes the communication is as real as an interpersonal face-to-face relationship, which would be known as para-social interaction (Horton & Wohl, 1956). For example, if someone identifies with a character in the story and they believe they too can act in the same way as the modeled behavior, then they do. The person take their newfound actions into their lived environments in order to collect feedback. If the feedback is positive or is not questioned, then it becomes part of a routine and then part of a lived truth.

The blurring of fantasy and reality must be strong. If a person feels transported by the story and the characters, then the counterargument process ends, and full immersion in messaging is possible (Igartua, 2010). This process of counterargument comes from the questioning of what is being modeled. If during the modeling process, the person is not immersed, then the person begins to question the validity of some of the messaging. This questioning confuses and takes away the persuasive possibilities of the messaging. Miguel Sabido created six constructs for an effective entertainment-education campaign: (a) create a moral framework and values grid; (b) conduct extensive formative research, including research of people who live in the community that will be affected by the campaign; (c) implement an campaign based on social science and behavior change theories; (d) include transitional characters in the story that represent “good” and “bad”
positioning; (e) conduct a summative evaluation that will show the effects of the campaign; and (d) collaborate and create the campaign with a credible source with production expertise. A campaign also must have a moral framework that can be created within the community, with clear and actionable directives that must be followed. In other words, one cannot say “People should not smoke” or “Texting and driving might be dangerous.” Instead, the clarity in the directives would look more like “smoking is bad” and “texting and driving is dangerous.” Each of Sabido’s constructs is vital for behavior change. Entertainment-education has been creatively and effectively used in many innovative research projects.

*East Los High* was a drama program created for the Hispanic community, focusing on sexual decision making (Wang & Singhal, 2016). *East Los High* used all of the tenets of entertainment-education and proved to be successful. It was the first entertainment-education campaign to use transmedia storytelling to connect to the audience. In the formative process, producer and creator Katie Elmore-Mota included the community to build the characters and plot. The stronger the connection to the characters, the higher the level could be of possible effective behavior change (Nariman, 1993). The program used many characters to exemplify multiple life “choices.” *East Los High’s* summative evaluation innovatively used web fingerprinting to monitor viewership and used just-in-time feedback from social media to monitor audience attitudes. Web tracking allowed for researchers to view Planned Parenthood foot traffic to substantiate affects (Wang & Singhal, 2016) during the pilot season release. This program is only one example of successful entertainment-education programming in the United States.
Entertainment-education is created by the intentional or unintentional placement of messages that elicit knowledge outcomes. It requires that entertainment and education are used strategically; one without the other is not entertainment-education—that is, a program without a message intentionally placed to educate would be only entertainment. Entertainment-education was used early on by director Norman Lear in 1970 in his character Archie Bunker in the hit television show *All in the Family* to illustrate racial and social prejudices in society at the time (Singhal & Rogers, 2012). Lear also entered the abortion debate with a few episodes of *Maude* in 1972. For purposes of my research, I focused on entertainment-education examples created for children and the Hispanic population: *Sesame Street, Simplemente Maria, Cancion de la Raza, and Que Pasa, U.S.A.?* These shows used entertainment-education successfully (Singhal & Rogers, 2012).

*Sesame Street* was created by the Children’s Television Workshop in 1969. It was viewed by 12 million people per episode, 6 million of whom were children (2-5 year olds in the United States). The show’s producers first spent 18 months conducting formative research before the first episode aired in 1969. *Sesame Street* followed Piaget’s (1952) principle of knowledge acquisition, which states that to teach something new to someone, it must be related to something they already know. The show made children active participants in the show. Further, the show used various formats to keep the attention of the child, such as use of music, Muppets, and animation (Singhal & Rogers, 2012). *Sesame Street* proved successful when summative evaluation showed that children who watched the show scored higher in curriculum skills than nonviewers (Children’s Television Network, 1988).
Simplemente Maria (Simply Mary) a Peruvian telenovela created in 1969 by Miguel Sabido, had unintended consequences and created what entertainment-education is today. Miguel Sabido, as a young boy, was exposed to many intellectuals who were friends of his parents, beginning his love for theater and the arts. Sabido vowed to one day rescue Mexican culture from Westernized influence (Singhal & Rogers, 2012). The leading character of Simplemente Maria was Maria, who modeled the value of hard work to overcome strife rampant in the social structures at of her time. This connection was one of the reasons that Simplemente Maria was so successful (Singhal & Rogers, 2004). The effectiveness of the telenovela was demonstrated by viewership, increased literacy class enrollment, and sales of Singer sewing machines which were used by the main character (Singhal & Rogers, 2012).

Cancion de la Raza (Song of the Culture) focused on the issues that faced Mexican-Americans in Los Angeles. The issues the show confronted were family connections, literacy, ethnic and racial prejudices, and social welfare. Viewers reported more active engagement in community and newfound strength to seek services (Mendelsohn, 1971). Que Pasa, U.S.A.--What’s Happening, U.S.A. was a bilingual sitcom that took on social issues facing Cuban American teens in the United States and attempted to bridge cultural gaps. The show focused on cultural identity, intergenerational conflict, peer pressure, English language acquisition, and racial and ethnic issues. Que Pasa, U.S.A.--had positive effects on the target audience, one of which was increased enrollment in English classes (Singhal & Rogers, 2012).

Hall’s (1980) theory of coding and decoding posits that unintended consequences of media shows originate from a messaging break between the producer and the audience.
The audience takes the coded message and decodes it in a way that was not intended by
the producer of the message. This unintended consequence is also known as the
boomerang or Archie Bunker effect (Singhal & Rogers, 2004). The unintended
consequence could be positive or negative, as illustrated by the previously cited
successful shows, each of which had unintended effects. *All in the Family’s* central
character, Archie Bunker, was created by Norman Lear to personify social and racial
prejudices and what was “wrong” in society, but much of the audience related to and
liked the Archie character. *Simplemente Maria* fed into the capitalist ideology and
increased Singer sewing machine sales because women wanted to be Maria. *Que Pasa, U.S.A.* unintentionally taught Spanish to many viewers who spoke only English. *East Los high* coincided with a decrease in teenage pregnancy rates, and increased the use of
condoms, trips to Planned Parenthood centers, and use of Plan B a pregnancy prevention
drug increased. This last example shows some of the moral questions and frames some of
the criticisms of entertainment-education: What is “good,” for whom and by whom?

Producers of entertainment-education should be careful because of the possibility
that unintended consequences their intervention issue can create can be transformative
(Dutta & Basnyat, 2008). One of the critiques of entertainment-education is that it was
created by Westerners who enter communities in which they had no previous engagement
to spread their Eurocentric, globalized worldviews that are often neo-liberal, capitalistic,
globalized, and whiteness centered (Dutta, 2008). These researchers’ ontological
assumptions label the communities as “third world” and “lucky” to receive the aid.
Further, researchers define “health” and “truth” for people without considering cultural
norms, beliefs, desires, and traditions of the spaces and places in which they conduct their research.

Another criticism of entertainment-education is that the change it calls for is focused on the individual and self-efficacy (Airhihenbuwa, 2007; Cho & Salmon, 2007; Dutta, 2007). Critics argue that health was not created in a vacuum, is not static, and that to ignore its complexities of structural, cultural, and economic realities does not address the real issue and will never provide lasting change. Further, true lasting behavior change must be at a system and group level to be successful. Focus must be placed on people’s social and material realities (Airhihenbuwa, Makinwa, & Obregon, 2000). An individual might make strides, but changes not supported by environmental realities will fade in time. Tufte (2005) argued that if audience and community members become more active participants in the process, then all of the above critiques would be erased. I agree that entertainment-education is not appropriate for every campaign; cultural sensibilities also must be considered. However, to move forward, entertainment-education must be created in a participatory space to continue to garner proven positive effects. The call for a more-innovative use of theory and method building within entertainment-education has been heard.

A mirroring of a recent study on HPV narrative (Baezconde-Garbanati et al., 2014) will be critical to the creation of this study. The study used entertainment-education storytelling to create a short film that focused on Hispanic women and HPV health. Storytelling to promote colorectal cancer screening in Hispanic women has also been successful (Larkey, Lopez, Minnal, & Gonzalez, 2009). Health communication narratives on diabetes are few, which means framing the research using a previous model
is vital. Studies by Baezconde-Garbanti et al. (2014) and Murphy et al. (2013) found that fictional narrative was stronger than non-narrative forms and that nonfictional/non-narrative forms of information dissemination to elicit health behavior change and knowledge.

**Developing a Children’s Book on Diabetes**

This pilot study is rooted in Walter Fisher’s narrative theory (1985), which posits the most essential form of human communication is that of storytelling through narrative and that people are persuaded by and give meaning to life through narratives (1985). The telling of stories via narratives, whether fictional or nonfictional, creates meaning in the lives of the people telling them (Fisher, 1985). One of the first language skills children acquire is narration (Langellier, 1989).

The tension created within diabetes is found in the master narrative, “stories that underlie, reflect, and perpetuate predominant cultural values and assumptions about how the world is constituted and how society functions is not aiding in disease management and outcomes; it is perpetuating the norm” (Thompson, Parrott, & Nussbaum, 2011, p. 40). The call to create a diabetes narrative in which the main protagonist is supported by other characters who help to “co-construct, narrate, and enrich this account,” gives voice to people living with diabetes as well as to those affected by it, relating to stigma, fears, and uncertainties and creating options for effective self-efficacy by connecting actions and ideas (Thompson et al., 2011, p. 37).

Children’s books can reach through and beyond the boundaries of cultures and languages. Well-selected picture books deserve a central place in classrooms, due to their potential to engage children in aesthetic and literary reading (Sipe, 2000) that fosters critical thinking, stretches visual understandings, and elicits cultural connections (Zapata,
Valdez-Gainer, & Haworth, 2015). Overcoming a child’s misunderstandings is as important as helping the child learn the facts about the illness (Perrin, Valvona, & Sloan, 1986).

The process I used to review books available about diabetes for children had various steps. First, I Googled all children’s books on diabetes for purchase or free of charge. I found no free books online about children’s diabetes. The American Diabetes Association sells books but does not offer any for free. The Juvenile Diabetes Research Association, in collaboration with a pharmaceutical company, offers one title for free for children living with diabetes; it’s Rufus Comes Home (Gosselin & Ravanelli, 2005). Rufus Comes Home was also one of the books available for sale so I obtained a copy. Second, I purchased all 18 of the books available: The Bravest Girl in School (Gaynor & Murphy, 2008); The Dinosaur Tamer (Mazur, Banks, & Keegan, 1995); Rufus Comes Home, (Gosselin & Ravanelli, 2005); The Best Year of My Life (Block & Block, 1999); Sugar Linings (Sandison, 2015); Lara Takes Charge (Lang & Huss, 2004); Even Little Kids Get Diabetes (Pirner & Wescott, 2013); Taking Diabetes to School (Gosselin & Friedman, 2004); I have diabetes (Anderson, 2009); Ballerina Dreams (Karz & Eeghen, 2013); Hank and his Cranky Pancreas (Gray, 2015); Caillou: Emma’s Extra Snacks (Paradis & Sevigny, 2015); Jacob’s Journey (Klieman, 2012); Even Superheroes get Diabetes (Ganz-Schmitt & Chambers-Goldberg, 2007); The Little Red Sports Car (Troutt & Price, 2007); My sister has diabetes and how that makes me feel (Rooney, 2015); I am Ari (Smith, 2015); The Great Katie Kate (DeLand & Zivoin, 2011). I read each of the books to examine their primary audience, use of characters, illustrations, and primary message, specifically looking for Hispanic references.
Most of the books addressed children living with Type 1 diabetes, familial understandings, coping with the disease, and helping friends and family understand the basics of diabetes. Most of the books contain Hispanic representations such as characters, dialogue, or context, except for the “Eagle Books” series: *Through the Eyes of the Eagle* (Perez, Rolo, & Fifield, 2004); *Knees Lifted High* (Perez & Rolo, 2005); *Plate Full of Color* (Perez, 2008); and *Tricky Treats* (Perez, 2006), which was created in conjunction with the CDC and other community organizations to address the realities of Native American diabetes. In *Tricky Treats*, I found vibrant use of color, imagination in the storyline with the wise eagle leading the children to discover the basics of diabetes, and a need for movement. The use of brown bodies and cultural examples was clear in the entire book series.

The books used imaginative text and colorful illustrations. The importance of having no more than 15 pages and simple word use was clear. All of the books were Westernized in the sense that they assumed that the reader has access to healthcare, with the numerous illustrations of doctors being illustrative of that. In the books that exist there is no question of “telling”; the characters disclose their diabetes status. The lack of Hispanic representation or voice in these selections compelled me to look at other titles that did focus on this audience but not on diabetes. Some titles reviewed were *Juan the Bear and the Water of Life: La Acequia de Juan del Oso* (Lamadrid & Arellano, 2013), which brought a folk tale to life with rich illustrations; *Just a Minute: A Trickster Tale and Counting Book* (Morales, 2003), which seamlessly mixed English and Spanish; Carmen Lomas Garza’s (2001) use of flattened figures in her art *Family Pictures: Cuaderos de Familia*, which invoked the importance of illustration and invited the reader
into the story and culture; and *Abuelita’s Heart* by Amy Cordova (1997) that married words and phrases with tradition and colors of the earth. Colorful depictions, the use of brown bodies, language, and culture come together in these examples, as well as in a myriad of others I looked at.

Some worldly additions to the field include an interactive eBook created for newly diagnosed children with Type 1 diabetes by researchers in Ireland (Tsvyatkoa & Storni, 2019). A mother in Minneapolis, Kimberly Munson, is writing a series of books for children with type 1 diabetes after her daughter was diagnosed at age 4 (Duan, 2017). Dutch psychologist Cobi de Jong arranged for a cartoon book, *Snuffles, the Rabbit with Diabetes*, written by her 26-year-old diabetic daughter, to be translated for South African children (Bateman, 2007).

Clark et al. (2016) did an excellent job laying out in praxis the most effective use of the picture book format for Hispanic children’s books. Such books highlight the importance of page turns and design elements, including fonts and color, to establish moods and to convey character emotions and personality traits. Brilliant and lively colors are reminiscent of traditional Mexican folk art. Color shifts are important to signal moving from one place to another. Fonts are important for shifts that are not always linear. Martinez et al. (2016) noted that “cultural authenticity can also be reflected in the linguistic diversity and content of picture books and it can contribute to powerful portrayals of strong bilingual characters, landscapes and themes along with craftily incorporating languages artfully in order to establish intimacy between family members in a scene or to establish and develop a character’s history” (p. 223).
By using entertainment-education and interactive narrative, I am better situated to incorporate the lessons from positive deviance and insert them much more comfortably into a children’s book that will help initiate dialogue within this community. This project features the collective community input in this research. Chapters 1 and 2 have provided context and justification for this research and this children’s book, at this time and in this place. It is the innovative next step to disseminating local wisdom to young change makers. The following are the research questions that inform this pilot study.

Research question 1: How does the use of interactive narrative provide insight into the primary audience’s (Hispanic children aged 5-10) perceived diabetes realities or knowledge?

Research question 2: What lessons were learned from this process that can be applied to the development of culturally appropriate narrative health communication texts related to diabetes knowledge among Hispanic youth that can impact their health behavior?
CHAPTER 3: METHODOLOGY

Isabella’s mother, Patricia, approached Claudia and said, “Isabella just came up to me and said, Claudia has the bee-tees. That means she has too much sugar in her blood, and she needs to take care of herself!” Claudia smiled and replied, “I was telling her about it because she wanted to know why I had to wear shoes. I was surprised that Isabella didn’t know what diabetes was. I assumed everyone, including kids, knew what it was.” “No, but she is very interested in it now. She wants to talk about it and is asking me these questions. See what you started,” Patricia replied.

Introduction

Operationalizing a research study with the possibility of meaningful and effective behavior change as the primary goal requires solid methodological grounding. There is a gap in research and books focused on Hispanic children and diabetes. In this pilot study, I used qualitative methods as defined by Denzin and Lincoln as “a situated activity that locates the observer in the world. Qualitative research consists of a set of interpretive, material practices that make the world visible. These practices transform the world” (2011, p. 44). I employed in-depth interviews in this study in which the world becomes a series of representations (Denzin & Lincoln, 2011). I approached this qualitative study in the definition set forth by (Creswell, 2011)

To study this problem, qualitative researchers use an emerging qualitative approach to inquiry, the collection of data in a natural setting sensitive to the people and places under study, and data analysis that is both inductive and deductive and establishes patterns or themes (p. 44).

Creswell also said qualitative research “includes the voices of participants, the reflexivity of the researcher, a complex description and interpretation of the problem and its
contribution to the literature or a call for change” (2011, p. 44). The importance is placed on the process. This pilot study puts together more than six years of research and is still developing—it is a process. My interest was to research and to write a children’s book focused on uncovering children’s perceived knowledge about, and basic realities of diabetes. The overall goal of this research was to document the development and application of an entertainment-education intervention that used interactive narrative to create insight into Hispanic children’s perceived diabetes realities and knowledge about diabetes.

**Justification of Qualitative Methods**

Most health communication research is operationalized using quantitative methods. I have moved away from using quantitative measures or mixed methods in this research because I am not trying to predict and control “patient attitudes and behaviors in designing and assessing intervention to achieve desired outcomes” (Freimuth, Massett, & Meltzer, 2006, as cited in Lindolf & Taylor, 2011, p. 19), which tend to reproduce hierarchical authority. I aligned my research with Lindolf and Taylor’s (2011) assertion that the qualitative approach to health communication emphasizes the situated performances that form the referent of variables such as “self-efficacy . . . which emphasizes the role of gender, class, and racial identities in the co-construction of profound—and often conflicting—cultural meanings for embodied conditions of illness, pain, suffering and death” (Lindolf & Taylor, 2011, p. 19).

In this study, I used entertainment-education theoretical constructs informed by positive deviance findings (Boyd, 2015) from previous research to create a children’s book for Hispanic children, aged 5-10, living in El Paso. This research will help to explain how storytelling can reveal attitude and knowledge about diabetes. The book I
created used realism, identification (Murphy, Frank, Moran, & Patnoe-Woodley, 2011), transportation (Green & Brock, 2000), and interactive narrative (Green & Brock, 2012) to assess these beliefs. This innovative way of teaching through interactive-narrative storytelling through a children’s book focused on diabetes aids in aligning cultural and regional realities with healthcare. The way diabetes knowledge is communicated to young people, through children’s books, could prove crucial to changing disease outcomes.

I designed, implemented, and evaluated this pilot study to measure how narrative, developed in culturally specific ways, can work as a communication tool for behavior change. Specifically, this study illustrates how narrative can illuminate disclosure associated with diabetes in Hispanic children aged 5-10 living in El Paso. Creating a culturally grounded intervention utilizing innovative theoretical connections in entertainment-education is a promising addition to the health communication tool belt.

This pilot study answered the call for more-culturally competent education and outreach where interventions are needed to help Hispanics learn about diabetes and adopt diabetes-preventive habits (Whittemore, 2007). The pilot study also answered the call for entertainment-education research to use qualitative and participatory research methods to probe the process through which entertainment-education has an effect (Singhal, 2005).

The remainder of the chapter reveals research questions; the book and how it was created; and finally, the pilot study protocol.

In the remainder of this chapter, I discuss elements that are foundations to this qualitative study, such as positive deviance and diabetes, interactive narrative, and entertainment-education. The remainder of the chapter also discusses the formative
research, reveals the children’s book *The Sweet Tale*, and unpacks the elements used to create the book. The chapter ends with the study methods protocol.

**Pilot Study Foundations**

In the United States, Hispanics are the third most affected population by diabetes. Nonetheless, some Hispanics diagnosed with diabetes who have found solutions, against almost all odds, to manage their disease. A positive deviance study conducted by Boyd (2015) focused on the intrapersonal and interpersonal acts and behaviors of positive deviant people on the U.S.-Mexico border in El Paso, who effectively managed their diabetes. They are referred to as positive deviants because they accrue positive outcomes by deviating from the norm.

Study findings revealed intrapersonal communication messages of no stigma and interpersonal communication messages of disclosure. That is, positive-deviant respondents did not characterize diabetes, including its diagnosis, as a stigma; they embraced their disease. Not feeling stigmatized, positive-deviant respondents disclosed their diagnosis to family, friends, and co-workers, engendering social support from all areas. Study findings demonstrated the importance of studying approaches such as positive deviance for diabetes management to uncover and amplify the existing wisdom in their communities. Information learned from the Boyd (2015) study informs some of the messaging used in the children’s book. While positive deviance informs this study, entertainment-education is the driver.

Entertainment-education is the process of purposely designing and implementing a media message both to entertain and to educate, to increase audience members’ knowledge about an educational issue, to create favorable attitudes, and to change overt behavior (Singhal & Rogers, 1999). Entertainment-education can be delivered through
multiple media formats, including television, radio, and the print media (Unger, 2009). Entertainment-education strategy has been used in many health campaigns focused on the Hispanic population, including *East Los High*, a television program about sexual decision making (Wang & Singhal, 2016); *The Tamale Lesson*, a 12-minute film on cervical cancer screening (Baezconde-Garbanati et al., 2014); and *Sweet Temptations*, a fotonovela comic book about diabetes in the Latino community in Los Angeles (Unger, 2009). *Sweet Temptations*, from pre-test to post-test, showed a statistically significant increase in diabetes knowledge and intentions to exercise, to eat fruits and vegetables, and to talk with doctors and family members about diabetes. Results indicated that the fotonovela (comic book) is a useful and effective medium for diabetes education among Hispanic adults (Unger, 2009).

This pilot study is rooted in Fisher’s narrative theory (1985) that found that people are essentially storytellers. Storytelling is one of the oldest and most universal forms of communication; individuals approach their social world in a narrative mode and make decisions and act within this narrative framework. An interactive narrative is a story in which the reader has opportunities to determine the direction of the narrative, often at key points in the plot (Green & Jenkins, 2014). Usually created for entertainment purposes, interactive narratives can serve as a form of entertainment and education. Narratives can be particularly successful in changing behavior among vulnerable populations, such as those with low income, low education, and low literacy levels, who also tend to be those who suffer the greatest health disparities (Baezconde-Garbanati et al., 2014).
A restating of the research questions:

Research question 1: How does the use of interactive narrative provide insight into the primary audience’s (Hispanic children aged 5-10) perceived diabetes realities or knowledge?

Research question 2: What lessons were learned from this process that can be applied to the development of culturally appropriate narrative health communication texts related to diabetes knowledge among Hispanic youth that can impact their health behavior?

Formative Research

Entertainment-education requires formative research to be conducted while an activity, process, or system is being developed or is ongoing to improve its effectiveness (Singhal & Rogers, 2001). The formative work in this study was comprised of the following two stages.

The first stage was to create a moral framework and values grid. The framework defined my assumptions that all human beings have the right to be healthy and for information to be provided to them to help in that endeavor. The values grid is derived from the moral framework and contains positive and negative statements. The values grid specifies the exact behavior changes that are to be encouraged or discouraged in the entertainment-education project (Singhal & Rogers, 2001). The values grid outlined my assumptions that it is good that people disclose diabetes diagnosis to others, that people test for diabetes, test for sugars regularly if they are diagnosed with diabetes, eat reasonably sized portions of food that include a mix of healthy options, exercise regularly, listen to others about their diabetes stories, and love others so they feel supported.
Second, formative research included creating a children’s book that used findings from previous positive-deviance inquiry research (Boyd, 2015) on disclosure. Creating the book included research in children’s literature focused on the Hispanic population, existing children’s books on diabetes, and narrative-based intervention strategies. The following section describes the processes employed to develop *The Sweet Tale*, the children’s book used in this pilot study.

**The Sweet Tale: A Children’s Book**

The focus of this pilot study was the development of a tool (as detailed in Chapter 2 of this dissertation) that focused on literacy and children that informed, educated, and advanced knowledge. Entertainment-education uses storytelling to create a medium that can be effective in creating better health outcomes. Further, using all of the previously discussed communication theories, methods, and approaches helped align cultural representations innovatively in which an impact on children’s understanding of diabetes can be made possible. In this day and age of internet and phones, the socio-economic constraints making this book digital might have created roadblocks to participation and deemed unnecessary for this initial pilot study. Instead, I used the book in print form because such a tool would be most accessible to me and to my participants and would have little or no complexity.

The narrative health message created for this health pilot study was a 14-page Hispanic children’s picture book, *The Sweet Tale*, printed in English, that tells the story of diabetes through the eyes of the children in a school class. The story is illustrated with bright colors, and the text is presented in green holographic Arial font. The book tells the story of Hispanic children arriving back from a holiday weekend and sitting at circle time
to tell each other how they spent their vacation. A few children tell stories with local cultural flair such as attending a quinceañera or visiting the local zoo and splash pad.

The story reaches the interactive narrative on Page 5 where Luisa, who has diabetes, wonders whether she should tell this to Miguel—because he told her that his mother had been in the hospital for treatment of her own diabetes. The reader is then prompted to decide if they believe Luisa should or should not disclose her diabetes to the class. If a child decides to disclose a medical condition, such as diabetes, then that is a marked decision—and it is also a prompt that the reader should continue with the book. If a child decides not to disclose the medical condition, the reader is asked to turn to the last page of the book where the children are released for recess.

If the children make the decision to disclose, the story reveals how many of the children in the story are affected by diabetes in different ways, with family members and friends of different ages. The book reveals healthy behaviors, such as exercise and creative eating, that were also found in the positive deviance study. The book discusses the basics of diabetes on Page 11, dispels some diabetes myths on Page 12, and uses a creative acronym of the chief message “TELL” on Page 13. Placing this message with the specificity of target behavior is crucial to message design in narratives (Fishbein, 1980; Noar, 2006; and Frank, Murphy, Chatterjee, Moran & Baezconde-Garbanati, 2015). The storyline, illustrations, and characters were deliberately and carefully crafted to promote involvement (Frank et al., 2015) with the narrative and employ interactive narrative to reveal children’s realities about diabetes.

The book was created after conducting extensive formative research into diabetes within the local community. The findings from the positive deviance research on the
importance of disclosure was the primary message theme of the book. Stigma and nondisclosure of a diabetes diagnosis in adults living in the study city were used as perceived barriers and marked the importance of perceptions of people living with diabetes. The formative research continued by exploring models about creating Hispanic children’s literature, with a focus on the primary intended audience of children aged 5-10 living in the study city. The model of creating Hispanic children’s story books was detailed in the literature review in Chapter 2 of this dissertation. In addition to these foundations in formative research, the book illustrator collaboration was a key element in translating what was found in the research and in creating a masterpiece of art. I teamed up with local El Paso artist and educator Melissa Arellano, who created pages and illustrations with a flair for the culture, vibrant colors, and representations of a region. Each cover and page of the book is labeled, and the text appears under each illustration.
The front cover with title of the book, *The Sweet Tale*. 
Page 1: All of the children arrived back at school after a long holiday weekend and were sitting down for circle time.
Page 2: Miss Martinez asked the children to share stories about their weekend. Luisa told about a quinceañera she attended.
Page 3: Mia told her classmates about how much fun she had at the zoo and the splash pad.
Page 4: Miguel talked about going to the hospital with his mom because she has diabetes and had low blood sugar and needed a shot.
Page 5: Luisa sat and listened; she has diabetes too. Do you think she should tell her class that she is a kid living with diabetes? If you think she should, then turn to Page 6. If you think she shouldn’t, turn to Page 14.
Page 6: Luisa TELLS the class that she too is living with diabetes and that sometimes it is easy to control and sometimes it is hard.
Antonio says: “My grandma Cuca is also a person living with diabetes, and she lets me test her sugar with her.” I love helping her.
Page 8: Alessandra shouts out, “I go on walks with my sister Mariah who is also living with diabetes because exercise keeps her sugar down.”
Page 9: “My Aunt Melania makes tacos with lettuce instead of tortillas and cooks really good, healthy food so she can control her diabetes. She says that how much you eat and what you can eat is important,” Patricio said.
Page 10: Sophia said that she has two friends in school who have diabetes and that it’s important to listen to their stories.
Jessie asked, “What is diabetes?” Luisa replied, “It’s when you have too much sugar in your blood because your body isn’t working right.”
Page 12: Diabetes is not something someone does to themselves. You can control diabetes. People living with diabetes are not lazy; sometimes their diabetes makes them tired. We can all make a difference with ourselves and others if we just TELL. Some people keep it to themselves, but telling people will get more people to help you.
Page 13: **T**: Test to check if we have diabetes, and if we do, test our blood sugar levels often. **E**: Exercise daily. Just walking is good, and learning what we can eat helps keep our blood sugar in control. **L**: Listen to those who might want to share stories about their diabetes—not to tell them what to do or what they are doing wrong but just to listen. **L**: Love everyone, especially those around us who need our support.
Ms. Martinez closed the circle, and the kids ran outside for recess, each of them knowing a little more about each other and their sweet connections!
The back cover of *The Sweet Tale* shows the book’s main theme, “TELL.”

Storyline and characters are vital to health communication interventions in narrative message design: “[T]he need to ensure that persuasive narratives are relevant to the lives of the intended audience, because if not, they will fail” (Frank et al., 2015, p. 161). With the creation of the book completed, the following is an outline of the summative research procedures used to evaluate the pilot study.

**Summative Research Procedures**

This pilot research is intended to continue to gather information to inform future work with this children’s book. Specifically, it is meant to test the usefulness of the children’s book to elicit children’s beliefs, knowledge, and behavior towards diabetes. Second, it is meant to aid in informing future iterations of Hispanic children’s book
interventions. The project deliverable of this dissertation is the children’s book with room to grow. The remainder of this chapter describes the research protocol that was used.

**Site of Research**

I used a purposeful sampling approach (Creswell, 2013) in my qualitative research analysis for this pilot study. This use of purposeful sampling begins with study site selection. A myriad of important variables went into selecting El Paso as the site of research: It was the study site of the previous positive deviance research conducted in this location that informs this pilot study; the El Paso demographic of 82% Hispanic population; the primary location for the researcher and illustrator in this study; and the predominant focus of this study was children who live in the community. Purposefully selecting “individuals and sites for study because they can purposefully inform an understanding of the research problem and central phenomenon in the study” (Creswell, 2013, p. 156) is crucial.

**Selection of Respondents and Procedure for Recruitment**

Respondents for the pilot study were selected using the purposive sampling strategy of snowball or chain as defined by Miles and Huberman (2014) in which I identified “cases of interest from people who know people who know what cases are information-rich” (p. 28). A list of the respondents and their basic information can be found in Appendix D. Adhering to institutional review board (IRB) protocols, this participant population was Hispanic children aged 5-10 living in the El Paso area. Any child meeting those three criteria was eligible to participate. This proposed pilot study used purposive snowball sampling to reach out to possible respondents. One respondent was selected at the study’s inception as an eligible participant. After the first interview,
each respondent was asked if they knew anyone their age I could interview, and the list of possible respondents developed from there. After children were identified as potential respondents, the child’s guardian was contacted in a telephone call. If the guardian agreed to their child being interviewed, the guardian asked the child if they wanted to participate; when a child agreed, I made arrangements to meet at their home for a formal, in-depth interview. With their guardian present during the entire interview, the children were a children’s book. Children who were wards of the state or of any other agency were not included in the study. Only a legal guardian provided consent for a child to participate in the research. No advertising or recruitment materials were used in this study. The screening process included questions to the guardian asking if their child was aged 5-10, Hispanic, and willing to have a book read to him/her, followed by an interview of 30-45 minutes. If a child did not meet the inclusion criteria, they were not interviewed.

Privacy and Confidentiality

The child’s rights and welfare were protected at all times by the presence of their guardian during the interview, and careful attention was given to information contained in the book as well as to verbal and nonverbal feedback from the child throughout the encounter driving safety. To prevent coercion or undue influence on the child, the child was told they did not have to be a part of the study and could stop at anytime. The rationale behind focusing exclusively on children aged 5-10 was because little attention has been given to diabetes that affects younger populations. As such, there are no children’s books that have targeted the Hispanic population where education is key and vital to disease change outcomes.
All of the electronic data recordings, paper notes, and research materials were held in a closed safe in my home. The data were permanently deidentified at the time of transcription and were destroyed, upon completion of the study. I secured and stored the data by locking paper records in a safe in my home; electronic records were stored on a password-protected computer on my home desktop computer. I used VeraCrypt storage encryption to protect the research data. I stored identifiers separately from consent forms and from project data. For identifiable data, I coded data for storage without identifiers, and the link was stored separately from all other project records in a locked file cabinet in my office. This information was destroyed via shredder prior to the conclusion of my research. Identifiable data and consent forms were stored in a different safe in my home. A portable recorder was used, and items were protected until transcription and destruction of information upon study completion. Data was not transferred to collaborators outside of UNM and was destroyed once the project was completed. All paper records were shredded and deleted, and audio recordings were cleared with system resets on recording modules. Confidentiality of project data was maintained through total disidentification of all participants and careful safe holding.

The child and guardian had control of the circumstances of the interviews. During the interviews, the only people present were the guardian, the child, and me. All study procedures took place in a private space in the home of the respondent. During recruitment, the need for privacy was discussed with the guardian. Safety precautions for both the researcher and respondents were taken. No information was collected about participants other than what is included in the Interview Guide (Appendix C). The state of Texas requires all persons to report suspected abuse or neglect, regardless of their
profession (https://www.dfps.state.tx.us/Contact_Us/report_abuse.asp). Because I visited participants’ homes, it is possible that I would see evidence of abuse or neglect and thus would have been required to report it. This did not occur.

**Data Collection**

This pilot study drew from 15 in-depth interviews. Once respondents were identified, I set up an individual meeting with the guardian. A digital recorder was set up to record the interviews. The guardian was then asked to read and fill out an IRB Consent Form (see Appendix B) for themselves and to sign. I asked for verbal assent from the child and marked it on the parents’ Consent Form (see Appendix B). The child (with their guardian present) was read the 14-page children’s book, *The Sweet Tale*. The child was asked on Page 5 if the character in the book should disclose their diabetes diagnosis to the class. If the child said yes, then I turned to the next page. If the child said no, I turned to the last page of the book. When I finished reading, I asked the child about the book. I used an Interview Guide (see Appendix C) to aid in the organization of the conversation. I recorded the entire encounter on an audio recorder and made notes of observations and of the conversation.

Interviews began with open conversation and continued with questions taken from the Interview Guide (see Appendix C) that was developed to help answer research questions. The in-depth interviews lasted less than 30 minutes. The interviews yielded demographic information such as first name and age. Upon conclusion of the interview, respondents were asked for suggestions and modifications to the children’s book. The data collection and analysis was custom built and revised (Huberman & Miles, 2014), and as I created the project, I “learned by doing” (Dey, 2003, p. 6).
**In-Depth Interviews**

The 15 research respondents were interviewed upon completion of the IRB Consent Form (see Appendix B). Interviews provide 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 pilot study used summative interviews as a primary method of data collection, which helped clarify, explain, define, and compartmentalize attitudes for better understanding of the respondents’ understanding of diabetes. I conducted 15 in-depth interviews with children with their parent/guardian present to elicit feedback on the children’s book, *The Sweet Tale*, to determine their knowledge, attitudes, and beliefs about diabetes. I asked for their input on the book’s characters, word usage, illustrations, and messaging. I paid special attention in the book to the disclosure messaging using “TELL” and used interactive narrative while reading the book to the child. This stage also (a) identified key age connections the book should address; (b) determined the best ways to deliver the health information in a culturally competent manner; and (c) identified key factors, such as language use, to ensure the book was culturally relevant. Unfortunately, before-after measurements cannot eliminate the possibility that the measured effects result from contemporaneous changes, that is, from communication activities other than the entertainment-education intervention of study (Singhal, 2005); however, measurements do mark a starting point of possibilities.

The in-depth interviews I conducted with respondents aided in answering the proposed research questions. Here is a recap of in-depth interviews conducted one child at a time:

1. All children with a guardian present were read the book, which had an
interactive narrative component. The direction of the narrative was their decision. Special attention was paid to the interactive narrative component, that is, did the child select to disclose the character’s diabetes to their classmates. The decision made at the interactive narrative point informs this entire study.

2. After the completion of the reading, I conducted the in-depth interview with the child.

3. After finishing the interview, I allowed for and recorded interactions with the child and guardian regarding the book, focusing on the interactive part of the book. I recorded the answers and dialogue.

**Interview Guide Design**

The Interview Guide (see Appendix C) was created with the desire to keep the guiding research questions in mind. The questions from the Interview Guide (see Appendix C) helped ensure the respondents had the opportunity to freely discuss the book, its contents, and their beliefs. (can we be more specific than just ‘beliefs’?) The goal was to allow for open conversation with guiding questions. The Interview Guide (see Appendix C) questions were meant to maintain flow and not as a conduit for the entire process. The questions on the Interview Guide (see Appendix C) were created to inform the two research questions.

Research question 1: *How does the use of interactive narrative provide insight into the primary audience’s (Hispanic children aged 5-10) perceived diabetes realities or knowledge?* Was informed by the following questions:
• You decided to let Luisa tell her friends. Why? What made you feel she should share? Or, you decided not to let Luisa tell her friends. Why? What made you feel she should not share?

• Do you think diabetes is good or bad?

Research question 2: What lessons were learned from this process that can be applied to the development of culturally appropriate narrative health communication texts related to diabetes knowledge among Hispanic youth that can impact their health behavior? Was informed by the following questions:

• Did you like the book?

• Did some of the people in the book look like your friends?

• What did you think about the illustrations in the book?

• Did the book make sense?

• Do you know anyone who has diabetes?

• What do you think diabetes is?

• What do you think causes diabetes?

• Could you tell me what you remember “TELL” stands for? (If they disclosed their diabetes, they got to this part of the book.)

• If you could change the book, what would you change? What would you keep the same?

• Would you share this book with your friends and family?

• What did you learn?

• Anything else you want to share?

**Transcription Thematic Analysis of Data**

In-depth interviews were digitally recorded and then transcribed. The recording and the transcript allowed for detailed review of each interview. Following the method used by
Agar (1980), I “read the transcripts in their entirety several times. Immersing myself in the details, trying to get a sense of the interview as a whole before breaking it into parts” (p. 103). The transcriptions were later coded and analyzed, identifying themes and intricacies in behaviors and beliefs guided by the work of Miles, Huberman, and Saldana (2014). The transcription and data analysis of the interviews were coded and analyzed from the discourse in the in-depth interviews to help answer the research questions. Specifically, I analyzed responses of the target audience to the narrative and their response to the interactive narrative on perceived diabetes realities and knowledge.

I used numeric counts as an indicator of frequency or occurrence although Creswell (2013) has argued against that, “because counting conveys a quantitative orientation of magnitude and frequency contrary to qualitative research” (p. 185). I felt including the count was necessary in some areas to convey realities of the codes found. Miles, Huberman, and Saldana (2014) found value in compartmentalizing findings to allow for more-effective analysis. The conceptual categorizing of themes that emerged from the respondents after coding helped with meaning making of the data collected in the summative research of this pilot study. Detailed review of the transcriptions of the interviews and observations were the foundation of the findings. Interviews revealed new understandings that could inform the final iteration of the children’s book through this pilot study, which used entertainment-education and interactive narrative as its primary component.

**Researcher Role and Ethical Considerations**

I have followed the ethical guidelines of conducting qualitative research, (APA, 2010; Creswell, 2010; Lincoln, 2009; Mertens & Ginsberg, 2009 as cited in Creswell,
2013, pp. 58-59) including acquiring IRB approval; following department standards; receiving permission from guardians; spoke only to respondents without vested interest in outcome; disclosed purpose; did not pressure respondents to participate; was sensitive to needs of the vulnerable population—children; respected their home; did not deceive; worked on power imbalances; will provide them with results; did not side with respondents; did not disclose only positive results; respected privacy of respondents; did not falsify or plagiarize findings; did not disclose information that would harm participants; communicated in clear ways with appropriate language; I intend to share the data without piecemealing or duplicating existing research, and I completed a compliance of ethical and conflict of interest protocol with UNM.

The confidentiality and safety of the study’s respondents were paramount throughout the experience. Disclosure represents a personal decision that has ethical underpinnings that were vital to consider. Throughout the research project, all ethical considerations to make respondents feel safe, heard, understood, and protected were maintained by providing the opportunity to exit from the study at any time. The book addresses disclosure, with language and characters representing the entire community, not just children living with diabetes.

I have wonderful childhood memories of growing up in El Paso, a community of life, vibrancy, and color, and resplendent with culture. I grew up with my grandmother and father, who were people living with diabetes but I remember them not talking about it much. I consider myself a social justice advocate and philanthropist. I have volunteered with the local El Paso Diabetes Association to help raise awareness and to provide support for all people living with diabetes in the El Paso area. I volunteer for the week-
long children’s Camp Lydia Mann held every summer by the El Paso Diabetes Association for children living with diabetes and their siblings. The El Paso Diabetes Association was created in the garage of Estelle Goldman in November 1968 today continues as an accredited, local, and independent diabetes organization. The association reports that “in the last few years, unnecessary diabetes emergencies have consistently cost our community an excess of 100 million dollars” (EPDA, 2019). I was made a member of the board of directors of the El Paso Diabetes Association on March 1, 2019. I see the realities of diabetes in my community and know the need for collaboration by all is needed if change is to be possible.

I am very clear about my role and how it creates bias of the work that I do because sometimes it is difficult not to do something fast. It was also important to shift my lens as a leader or facilitator who would let my community grow. I became a participative member in the work. This work began six years ago when I discovered positive deviance for the first time, and about two years ago, I created the first iteration of the book. I remember talking about it with the children at the summer camp, and they loved sharing stories about books that helped them, and some of the children even had ideas of a book about themselves. I do this work as a graduate student completing a dissertation project. But I do this as a human being with deep ties to the subject matter, people, and region I study. I hope the voices of the children were captured in this work as theirs; that my adherence to all of the protocols in this chapter, including creating a moral framework and values grid at the beginning, remained clear as I evaluated the children’s words; and that this study helps move the mark for lived diabetes realities for many. The next chapter reveals the findings of the study.
CHAPTER 4: FINDINGS

Claudia picked up Isabella from school. As they drove home, Claudia told her little girl that she was writing a children’s book about diabetes. Isabella told her to remember that if the kids in the book “think you can have no sweets, you can tell them you can have a little bit of sweets.” Isabella said, “You have to make lots of books, and you make your own little bookstore, and we can go there together.” Claudia reflected on Isabella’s inquisitive nature about diabetes. To create a program or intervention focused on children, with strategies uncovered for adults in the same community and including them in a children’s book, would be ideal. Claudia wondered what the kids would think about the book.

Introduction

The “overarching theoretical positioning of culture based health communication influences the ways in which health communicators go about developing health communication applications, and the ways in which they evaluate the success or failure of these applications” (Dutta, 2008, p. 41). Culture is not static, and those who identify as Hispanic might differ in health orientations based on sex, socioeconomic status, income, education, religion, age/generation, undocumented or documented status, and occupation. Taking these factors into consideration when I created this narrative health communication campaign was optimal, because, according to Moran, Frank, Chatterjee, Murphy, & Baezconde-Garbanati (2016):

[1]ndividuals with low health literacy are less likely than those with adequate health literacy to benefit from health communication interventions, [and] it is
especially important to develop an evidence base supporting the use of narrative health education materials in low-literacy populations. (p. 40)

A purposive sample of 15 children aged 5-10 and living in El Paso was recruited for the pilot study using snowball sampling procedures. The first child was selected as meeting all of the criteria and supplied connections to the subsequent respondents until all 15 were acquired. All respondents gave verbal assent to be a part of the study after having received the consent of their guardian. The respondents were read the children’s book *The Sweet Tale* and were asked questions from the Interview Guide (see Appendix C) by me after the reading.

This chapter presents the findings and answers the two research questions posed in this study. The chapter was organized by research questions and themes. The first research question contained the themes of disclosure, and realities and knowledge of diabetes. The second research question contained the themes of the book elements and feedback.

**Research question 1**

Research question 1: *How does the use of interactive narrative provide insight into the primary audience’s (Hispanic children aged 5-10) perceived diabetes realities or knowledge?*

The respondents were eight girls and seven boys whose average age was 8.4. As stated in Chapter 3, I use numbers in my reporting even though this pilot study uses qualitative measures because the data showed many items were evenly split, the significance of which was critical in understanding the findings.
Disclosure

Thirteen of the 15 participants decided that the book’s main character should disclose her diabetes to her classmates. The respondents gave reasons such as revealing her diabetes would allow friends to help and support her; so that others could learn; and Respondent No. 4 said, “So you can hear from a friend, not something else.” Respondent 1 said, “I would tell if I had diabetes. My mom would tell my doctor so you can get better. You always have to tell.” The feedback from the children on the decision to disclose Luisa’s diabetes diagnosis or tell the class about it aligns with the Boyd (2015) positive deviance study that informed the children’s book and was the anchor of the interactive narrative. The Boyd (2015) study revealed how intrapersonal communication messages of disclosure to family, friends, and co-workers engendered social support that in turn can serve to achieve successful health outcomes (Cooke-Jackson, 2011).

Of the members of the class who agreed that the book’s primary character should tell her classmates about her diabetes, some were hesitant because they said it was “personal, and telling the class you don’t know how they are going to be.” Respondent 3 said, “You never know because people may know people that have diabetes and that you shouldn’t be scared.” Respondent 10 said the question made her think: “I was wondering what would happen if you told someone you had diabetes, if you hid it then what would happen? If you hid it, (it) wouldn’t be as good.” Respondent 12, said, “No, then yes. Then I changed my mind because they could help her.”

I kind of felt that when you keep secrets, it kind of like, it just builds up, and you become more afraid of what people will think, but if you just tell, then you can
see how people respond, and then you can decide if you should tell or not to tell.

(Respondent 13)

Some of the respondents who decided Luisa should disclose her diabetes to the class used the third person and the character as the reason for their decision. Respondent 6 said, “Because she wanted to.” Respondent 7 said, “Because it is going to help her.”

The one respondent who changed his reply from no to yes and the other two who said no were boys. The two who said no asked if I could read the book to them when they learned that the interactive narrative instructed me to turn to the end of the story. They said they wanted to hear the story anyway. After I read the story, I asked if they would have decided to disclose Luisa’s diabetes now, and both answered no. When asked why, they said, “so that they won’t know to be mean to her,” Respondent 2 said, and “because nobody likes hearing about how they got diabetes” Respondent 12 said.

The hesitancy the children showed in the decision to tell, their use of the third person, and the decision by some to not tell even after having a second opportunity emphasizes the engagement of the children to the story. They were connected to the story at the interactive narrative plot point and identification and transportation occurred as a consequence (Green & Jenkins, 2014). All of the children made the choice whether to disclose Luisa’s diabetes and turn the page or not and gave a rationale for doing so. The children’s responses to their choice of disclosing Luisa’s diabetes were examples of interpersonal communication tensions in identity and relational goals and of the importance of everyday talk (Cline, 2011) in children’s lives. The influences of interpersonal “talk” in health were exemplified in the children’s reality construction and were positive and negative at the same time, underlying the tensions the messages create.
The responses to the interactive narrative where most of the children chose to turn the page initially would seem to indicate that most of the respondents did not view Luisa as stigmatized by her diabetes and therefore decided to disclose her diabetes to the class. In watching the children’s nonverbal shifts and pauses, I think it was easier to make a decision for a character in a book and how that decision might translate in real life might be different. Referencing Cline’s social influence framework (2011), it is conceivable that identity and relational goals might be competing. The importance of social influence to health realities for children shows the need to focus on community based participatory research that focuses on community identity (Israel et al., 2005). Although most of the children’s responses would seem to elucidate a state of disclosure, the children’s responses to the next question were revealing.

One question was whether the children thought diabetes was good or bad. Thirteen of the respondents described it as bad; some had enough knowledge about diabetes to justify their answers; “but it’s common,” Respondent 3 said. It “doesn’t need to be a bad thing,” Respondent 4 said. Two children, Respondents 7 and 8, said that diabetes makes one “tired and sleepy.” “It’s not bad all the time, but it can be bad like for your heart or something,” Respondent 13 said. Respondent 10 said, “If you have too much of something, then it is probably bad.” Two respondents said having diabetes was good because then the person living with diabetes would know how to better take care of oneself, and Respondent 9 said, “[Y]ou can be healthier and more active.” Two of the respondents told stories of each of their friend’s parents using diabetes as a fear tactic, saying, “[T]hey tell my friend that she eats too much sugar, so you are going to get diabetes.”
The responses for Luisa to disclose her diabetes yet labeling diabetes as “bad” clearly showed the tension that exists with the realities of diabetes. “Everyday interaction plays a significant role in labeling illness. . . . In fact, deciding whether one is ‘ill,’ and the timing of that labeling, often are influenced by social interaction” (Cline, 2011, p. 378). How the labeling by the children will impact their framing of diabetes in their own lived realities is vital to understand. “Language surrounding a particular disease not only labels it, but also frames the disease in larger perspectives and builds relationships with other concepts, yielding networks of meaning” (Cline, 2011, p. 380).

The connection with what has been socially constructed around diabetes as being “bad” becomes a shared reality (Berger & Luckmann, 1966). The socially constructed reality of diabetes being “bad” has been embedded in the minds of the respondents, and they continue to make these associations even though Luisa’s decision to tell her classmates about her diabetes showed it was not “bad” enough to keep the secret. I would argue that this illustrates the competing goals and tensions present.

That children believe that diabetes is a “bad” disease yet also understand the importance of disclosing it to garner social support might be evident, but the interpersonal communication acts that surround the framing of diabetes require further investigation. More context related to why the children believed diabetes was “bad” would have helped understand why they chose that label. The children could have been describing something that was not inherently bad but could hurt someone they loved. The use of interactive narrative did not hinder its effectiveness because the children did not connect the negative attributes of diabetes being “bad,” which might have made the children feel differently and thus might have disconnected them from the intended
message. Instead, they made a decision that Luisa should disclose her illness to her classmates.

A content question created to help answer research question 2 asked respondents what they would change about the book. The responses created an unintended consequence (Hall, 1980) regarding findings for research question 1 from five of the boys, who said they would “take out the diabetes from the book.” This was a significant finding because most of the boys thought diabetes was bad and did not need to read a book to learn that. The rates of diabetes among Hispanic adult males are higher (16%) compared to Hispanic women (12%) (Domínguez et al., 2015), and studies have found that men are less knowledgeable than women about diabetes (Vaccaro et al., 2016). Have these diabetes realities in men as adults been embedded since their early childhood? The idea of not talking about diabetes and deleting it from the book speaks to the social realities that these boys, in a group of children age 5-10, have constructed for themselves. The networks of meaning that have been created by these boys have made it clear that this discourse has no space in their lives and gives credence to the findings that the “primary frameworks of meaning that drives participants’ behaviors are social rather than health-related” (Cline, 2011, p. 392).

**Diabetes Knowledge**

When asked what they thought diabetes was and what causes it, most of the children said it was having a lot of sugar in the blood, information they said they learned from the book. Respondent 5 described diabetes as a result of “eating too much sugar.” Respondent 5 blamed diabetes on “eating too much food.” Respondent 12 said diabetes was “an allergic reaction.” All of the children cited eating excess sugar as the cause, and
one, Respondent 4, said, “Isn’t it genetic or it could be you just eat a lot of sugar.”

Respondent 13 blamed diabetes on “when you eat too much sugar, and it clots in your veins.” The same myth of excessive sugar in the diet contributing directly to becoming a person with diabetes was reported by six of the respondents. That is important because the element of sugar intake was not discussed in the book.

Six of the respondents reported knowing someone living with diabetes. Two of them asked their parents during the interview to elaborate. For example, Respondent 12 asked, “Does Nona have diabetes?” to which his mother replied, “She’s borderline.” Respondent 1 went into detail: “She carries her tester in her bag to check her blood sugar everyday. I feel scary to watch her because she has to cut herself. She’s my cousin, but she lives somewhere else.”

The purpose of embedding the acronym TELL in the story was two-fold. The first was a verification or manipulation check (Baezconde-Garbanati et al., 2014), and the second was as an easy guide for recall on the “tell” messaging of the book. I asked all of the children if they remembered what TELL stood for in the book: T for test, E for exercise, L for exercise and eat, and L for love. When the participants were asked what TELL meant, two of them could recall none of the four letters or their meaning; two recalled one letter or its meaning; three recalled two letters and their meaning; six recalled three letters and their meaning; and two of the children recalled all of the letters and their meaning. The breakdown of which letters the respondents remembered the most was: T, with five; E, with nine, (the illustrated symbol in the book showed exercise while the text said exercise and eat; all nine recalled exercise; L, 11; and L, 10.
This exemplified the positive impact of the acronym, with most of the respondents able to recall the meaning of some of the four letters. The strong ties of the visual to the narrative are clear in that the respondents recalled that the letter E represented exercise, illustrated in the book by a person on a treadmill, yet none of the children remembered that it also represented healthy eating. The amplification of symbolic order created by the acronym relied on children’s meaning making of symbols using codes (Simms, 2011). The TELL exercise showed how children in this study correlated the letters and pictures they were asked to recall.

**Research Question 2**

Research question 2 asked: *What lessons were learned from this process that can be applied to the development of culturally appropriate narrative health communication texts related to diabetes knowledge among Hispanic youth that can impact their health behavior?*

**Book elements**

Respondents were asked about liking the book, if it made sense, connections with characters, and illustrations. Almost all of the respondents reported liking the book; two said they thought it was “OK” (Respondent 2 & Respondent 11). Only respondent 12 did not like the book, saying, “They were talking about diabetes.” Respondent 12 was also the only child who said the book did not make sense. He said he didn’t know how the narrative transitioned from vacation stories to diabetes.

Eight respondents said the characters in the book did not look like their friends. Some of the respondents said they had issues with the story characters’ hairstyles, dress, and height differences from their friends. The seven who identified with the characters
said their skin color, hair, and clothing were similar. Respondent 1 said the main character, Luisa, “the little girl that had the bee-tees she kind of looked like Sophia my bestie.” Half of the children identified with images, those children were transported because the characters closely resembled or reminded the viewer of something they knew (Green & Brock, 2000; Green, Brock, & Kaufman, 2004). The other half of the children found the character representations too unfamiliar. However, responses to the interactive narrative in the book showed that children were engaged with the text. Simms (2011) noted that when an author creates narratives that are engaging, then the back and forth of embodied conversations (transportation) are silenced (Green & Brock, 2000; Green, Brock, & Kaufman, 2004) and their experience with the story is intensified.

The respondents said they liked the illustrations and described them as “water painted” (Respondent 1); “colorful” (Respondent 2); and “look like paintings” (Respondent 7). Some described the illustrations of the participants in the story: “They looked like they were telling her kind stuff” (Respondent 14) and “No matter what, it doesn’t matter what you look like, we all look the same” (Respondent 10). The relationship of transportation and identity are critical to maintain attention of the child and the promise of behavior change for the child. As such, the connection with the book’s art was clear, and the cultural representations resonated with the children. Martínez-Roldán & Newcomer (2011) noted that Hispanic children’s picture books are a literary form that speaks to cultural experience through the written and visual elements. The strong tie with the illustrations elucidates how young children pay close attention to the illustrations to make the unfamiliar connections familiar (Martínez-Roldán & Newcomer,
In this study, the children were read the book and connected with the visual, thus allowing transportation to take place.

Some of the children said they did not know what diabetes was before the book was read to them and cited the definition given in the story when asked. In some ways, the book used entertainment-education and Piaget’s (1952) principle of knowledge acquisition, respondents’ relating something new to something they already knew (Singhal & Rogers, 2012). They knew the area of El Paso, they knew the foods present in the community, they identified with circle time at school, they knew about recess—all of which were present in the book via the illustrations and all of which proved to have a strong connection with the respondents. Just as humans tell stories to make meaning and share their collective lived realities, the narrative becomes the meaning maker (Fisher, 1985).

**Book feedback**

The children gave feedback about sharing the book, about the elements of the book that they would change or preserve, and about what they learned. This section concludes with a subsection of parental feedback collected during the interviews with the children.

All but one of the respondents reported wanting to share this book with friends and family. As described earlier in the chapter, five boys said they would change the diabetes part of the book by deleting it. Some respondents wanted changes to the story: Respondent 1 wanted to change the ending so that their parents would pick them up at the end, and they would discuss the story with them. Respondent 15 wanted a new teacher; Respondent 13 said the title *The Sweet Tale* should have been *Luisa’s Tale* because he
didn’t know what the title had to do with diabetes. Some children said they thought the story had “too many words” (Respondent 9). Many of the children said they liked the interactive narrative in the book and that the idea of having a choice to let Luisa tell the class about her diabetes was fun.

When asked what they learned and if they had anything else to share, most of the respondents said they learned about diabetes and talking about diabetes. The two youngest respondents said they forgot what they learned. The remainder were more specific. Respondent 3 said diabetes affects everyone, from young children to adults. Type 2 diabetes has a history of being an adult disease. But it is quickly becoming a disease that affects younger and younger people. The rates of newly diagnosed cases of type 2 diabetes among children and teens is rising, with the most rapid increase in racial and ethnic minority groups (National Institutes of Health, 2017).

Feedback from respondents on the next iteration of the book was insightful. Respondent 1 said, “Diabetes doesn’t spread; it is not like a cold or flu. How do you get it?” Respondent 4 said, “Maybe you could have a thing where you can show a kid checking their sugar.” These are good ideas to include because they expose taken-for-granted information that the book lacks.

Respondent 7, a boy, said, “Coke has sugar, and Grandma drinks a lot. Grandma’s body works good.” That response showed the child listened to the book; on page 11 it references the body not working optimally. The boy’s connection with his grandmother and her eating habits introduces the elephant in the room—the children’s guardians—at each of the interviews. The guardians sat listening and observing and ready to share their
ideas on the book and familial diabetes information with their children as soon as I finished the interview.

Immediately after the interviews, 12 of the 15 guardians reminded the children of family members living with diabetes. To that, most of the children replied, “Really?” Guardians then began sharing how important they thought the research I was doing was, and some shared stories. Respondent 3’s mother said, “I thought it was an old-age disease because of my grandma. I thought it was only for grandmas. You really don’t think of kids with diabetes.” Respondent 4’s mother said:

I had a student with diabetes when she was in sixth grade. She didn’t know she had it. I had brought cookies for national cookie day. I took them to the class and asked if anybody was allergic. I didn’t know she had diabetes. She asked if she could have one. She ate it all, and she had to go to the nurse’s office because she felt sick, but I had not ever come across a child with diabetes.

Respondent 5’s mother said when she was in fourth grade, I had a friend who was out of school for a month, and when she came back, she was going to have orange juice, and so the teacher made it into a lesson about how much sugar was in orange juice and what diabetes was.

A week after conducting my interviews, I received a call from the mother of one of the respondents, who told me her daughter was watching a television show upstairs and ran down screaming that the main character has diabetes, just like the character in my book. This particular child had concerned me because she seemed disconnected and not engaged. The mother’s reaction gave me hope. The seed had been planted.
These exchanges exemplified one of the rationales for the book: conversations between child and adult. A good way for adults to introduce the topic of diabetes to their kids is by showing them the book, because it can prompt interaction and conversation. If the child brings home the book, it can also bring on the conversations. Such conversations call attention to the importance of how “just plain talk has health-related functions” (Lynch, 1985, as cited in Cline, 2011, p. 378). At this point, the discussion comes full circle with positive deviance. Positive deviance requires that the behaviors be disseminated by the community for the community. In this case, the children’s story finally returns to the adult through the child, and the conversations that might help the child are propelled into the life of the adult through a children’s book.

The questions asked to respondents were limited because understanding the impact, behavior, and cultural implications of health interventions is complex, and this pilot study’s primary goal was to inform future iterations of the book. The book should also be able to translate into communities such as El Paso. Lessons learned from this process can be applied to the development of culturally appropriate interactive narrative health texts related to diabetes knowledge among Hispanic youth that can impact their health behavior:

- Formative research is required and is extensive and lengthy.
- Storytelling in printed books is still a strong medium for children, even with the preponderance of electronic media in children’s lives.
- Innovative design combining entertainment-education and interactive narratives is successful.
Strong attention to illustrations to increase identification and transportation is necessary. Collaboration and informed iterations will be necessary.

Messaging must be tailored for the audience. Creative verification manipulation checks to see if children are listening must be utilized.

Attention to language in the book. Select the language throughout for consistency.

This is plant-the-seed research: Be kind to yourself; this qualitative research might not show behavior change or knowledge acquisition or lens framing constructs for years to come.

The purpose of this dissertation was to see how children would react to the interactive narrative on diabetes disclosure and to help inform Hispanic communities about how to develop projects like this in the future. In Chapter 5, I conclude my discussion of this entertainment-education interactive narrative pilot study by summarizing the contributions of my research and by providing final thoughts about the future of the project.
CHAPTER 5: DISCUSSION

I read to Isabella the book she inspired me to create and asked her the questions I had asked my respondents. I asked, “Do you know anyone who is a person living with diabetes. She replied, “No.” My heart smiled. My little Isabella, who knows so much about diabetes now, who inspired the book, who asks about the progress every time she sees me, replied, “No.” Isabella did not mark me as a person living with diabetes. I felt good because as much as I care, talk about, and research diabetes, it is not all of who I am. Diabetes is just a part of my identity. In that moment, with Isabella, I was just a human being. Thanks, Isa!

Project Summary

This research project answered a call for more research to determine precisely how specific aspects of The Sweet Tale and the audience interact to promote desired health knowledge and outcomes. Research via interactive narratives is likely to yield theoretical benefits and practical benefits. Current models will help future research fill gaps in knowledge for this understudied form of media entertainment and entertainment-education. This pilot study could help to inform future diabetes interventions for children in the El Paso area, as well as inform possibilities for replication in other Hispanic communities.

The pilot study was a two fold process. First, was the creation of a children’s book through extensive formative research. Second, it was the evaluation of the book itself. This study focused on the process of developing a health communication children’s book which used entertainment-education and interactive narrative for effective behavior change. The pilot study was conducted to inform of the extensive creation process of The Sweet Tale and to inform the editing of The Sweet Tale for more effectiveness as well as
to answer the basic question of what worked and what needs work with the book. This final chapter covers contributions to the field, theoretically and methodologically; provides recommendations and limitations; and concludes with closing thoughts.

**Contributions**

This pilot study that served as my final dissertation project generated insight into theoretical and methodological contributions to the field of communication as well as to personal transformation. The book as a medium creates a space to connect and communicate about diabetes. It is an innovative approach to creating children’s books that go beyond reading; such books plant the seed of knowledge and create a mode of interaction. This project can be described as organic original research that stands on fundamental communication foundations. It makes the complex—easy and in plain sight—visible. Populations trying to advance knowledge and make change possible in the health context without economic investment could benefit from interventions such as these.

**Theoretical**

This research was grounded by entertainment-education and all of its theoretical foundations (Singhal & Rogers, 1999). Entertainment-education provided the vehicle for this research to take Sabido’s theory (Singhal, Cody, Rogers, & Sabido, 2011) from telenovelas to a children’s book. This work builds on other entertainment work that focused on Hispanic communities: *East Los High* (Wang & Singhal, 2016); *Simplemente Maria* (Singhal & Rogers, 2012); *Cancion de la Raza* (Mendelsohn, 1971); and *Que Pasa, U.S.A.—What’s Happening, U.S.A* (Singhal & Rogers, 2012).

The foundational entertainment-education work in this pilot study was found in
The Tamale Lesson (Baezconde-Garbanti et al., 2014; Murphy et al., 2013), which found that fictional narrative was more effective than non-narrative forms and nonfictional/non-narrative forms of information dissemination in eliciting health behavior change and knowledge. Baezconde-Garbanti et al. (2014) created a framework and listed three needs for creating campaigns of effective narrative health intervention: theoretical grounding, interdisciplinary team, and extensive formative research. This pilot study followed that blueprint. The researchers of that study wrote, “One area of interest is whether narrative maintains its superior effectiveness in print form” (p. 89). They were looking to determine “what forms of narrative communication are most effective for whom under what conditions in order to optimize their use” (p. 89). This unpacking and teasing out might be answered by a full operationalization of this study.

Green and Jenkins (2014) provided a theoretical framework in entertainment-education efforts that called for increased user control and looser narrative structures. The researchers found that “readers of interactive narratives appear to be identifying with the characters by putting themselves in the character’s shoes, rather than by trying to understand and act on the unique motivations of that particular character, and this form of identification is associated with attitude change” (p. 486). This was exemplified in this study, in which only half of the respondents identified with the characters in the illustrations but identified with the illustrations of the place and space—which might be a significant addition to the framework. Green and Jenkins’ (2014) framework used self-referencing (Escalas, 2007); reminding (Strange & Leung, 1999); and self-relevance and self-protection (Dunlop, Wakefield & Kashima, 2010).
This pilot study uncovered much about identity and relational constructions that are a large part of individual identity formation. Adding the social framework could prove beneficial to future campaign development. Social framework created by Cline (2011) pointed out that there is “scant literature on the role of everyday interpersonal communication in health and that reinforces the primacy and identity of relational goals over instrumental goals” (p. 378). How do identity and relational goals compete with health-related instrumental goals?

**Methodological**

There is a clear need for reflexivity in moving forward, “despite the clear significance of behavioral outcomes in health communication research, the research may be neither feasible to measure nor may they be appropriate” (Stephenson, Southwell, & Yzer, 2011). In the case of this study, I believe the research was feasible and appropriate and should continue.

Positive deviance inquiry provided the method for finding the message. The main message was that disclosure or telling others leads to social support. The messaging was made possible through the extensive formative research that positive deviance provided. However, by its nature, this pilot study could not be the second arm of the positive deviance approach with which I began with my thesis because it focused on a different population and was not created by the positive deviants, which the approach requires. I would offer this innovative design that implemented positive deviance and provided inventive and creative program design as an addition to the positive deviance tool belt. The malleability that it took to shift the lens from the adult to the child and then back to the adult again could be a unique way to immerse oneself into the psyche of a closed
population, and the next steps of this study could provide meaningful additions to the positive deviance approach.

This pilot study operationalized looks like this:

**Formative research**

1. It defined the problem.
2. It determined if there were positive deviants.
3. It discovered positive deviant behaviors.
4. It designed a children’s book that modeled the behaviors found in the previous element.
   a. It discovered what children’s literature is.
   b. It discovered the literature regarding diabetes that exists for children.
   c. It discovered entertainment-education and interactive narrative potential.
   d. It discovered what Hispanic children’s literature is.
   e. It discovered elements of effective children’s story books.
   f. It discovered and made contact with a collaborative artist to illustrate the book.

**Summative research**

5. It discerned the effectiveness of the project.
   a. Pilot study.
   b. Final study.

The formative research began with a positive deviance inquiry (Boyd, 2015) that looked for uncommon and replicable communicative acts and behaviors of Hispanic people living in El Paso, Texas, diagnosed with type 2 diabetes, who had been diagnosed
with A1c at pre-diabetic levels for at least one year, who took one diabetes medication at a minimum or no oral diabetes medications, who had no insulin intake, and who had not undergone surgery for weight loss. The primary finding was that people told their family members and others that they had been diagnosed with diabetes—and instead of hiding their diagnosis, this “telling” led to social support and effective management of their diabetes. As such, that messaging of disclosure was translated into this pilot study as the primary messaging of the children’s book *The Sweet Tale*.

The book created for this study, *The Sweet Tale*, was produced as the medium for the entertainment-education intervention. After a review of children’s books on diabetes available for purchase or free of charge, only 18 books were identified. I read, studied, and codified all of the books to find that most of them addressed children living with type 1 diabetes, familial understandings, coping with the disease, and helping friends and family understand the basics of diabetes. Only one series, the Eagle Book series, was created for and by Native American communities. These books illuminated the need for a first book featuring diabetes and written for Hispanic children.

The direct embedding of disclosure and other diabetes messaging in the book was strategic. This study then used interactive narrative to implant the disclosure message in a key point in the story (Green & Jenkins, 2014) to elicit children’s beliefs of a character’s stigmatized state in the story. The story and its messaging were carefully and creatively crafted using children’s diabetes tales and literature on how to create effective narrative and illustration for Hispanic children’s books.

The Hispanic culture has a strong relationship with storytelling and visual and written narrative (Simms, 2011). The importance of oral conversations, which are
knowledge builders for children, aided in the construction of the book. The importance of the synergistic text and illustrations in making connections for children (Martínez-Roldán & Newcomer, 2011) also helped in the creation of the book. The decision to write a children’s book was made because of the rich history of storytelling in the Hispanic culture and of the possibilities for impact on children’s knowledge. I have a strong connection to the material, community, and the call to write: “these books need to be written by authors who can portray those realities authentically, from their own lived experience, their own intimate association with a particular culture, and their own continued learning” (Ada as cited in Clark, Flores, Smith, & Gonzalez, 2016, p. x.).

The storyline for the children’s book storyline was created using the basics of storytelling—beginning, middle and end—and was informed by research into Hispanic children’s picture books. The story was created with the tenets of testimonios (testimonies), which give children a sense of cultural pride, and platicas literarias (literature discussions) (Lopez-Roberson, 2004/2012 as cited in Martinez et al., 2016, p. 224) that were found to be significant in Hispanic children’s books. These foundations helped guide the story creation. The story was framed as “circle time storytelling” after a long holiday weekend where all of the characters in the story all shared stories. The stories the children told in the story included one by a character Patricio, who shares he had been in the hospital with his mother who had experienced a diabetes complications. Patricio’s revelation led to the main character Luisa’s need to decide on whether to reveal to her classmates that she was a person living with diabetes. That decision point by Luisa marks the interactive narrative (Green & Jenkins, 2011) that gave the respondent’s
decision-making power and story direction on whether she should disclose her diabetes to her classmates.

Elements that went into the creation of The Sweet Tale included the importance of page turns, design elements, font choice, and color to help establish mood and character emotions (Clark et al., 2016). All of the messaging in the book was positive, and the colors correlated with that of Mexican folk art. The local illustrator who was contracted to created the paintings in the book contributed to “powerful portrayals of strong bilingual characters, landscapes and themes along with craftily incorporating languages artfully” (Martinez et al., 2016, p. 223).

The summative research then asked the questions of effectiveness of interactive narrative and implications of future iterations of the children’s book, both of which informed theoretical and methodological suggestions above. What I learned from this process was that it was necessary to put in two years of formative research on positive deviance to yield the disclosure findings and another two years in the development of the book The Sweet Tale; clearly, patience was a necessity. After all of that, I have learned that there is still a lot to learn about storytelling in children—more of their voices can be effective in the story building. Feedback from them on story creation is necessary. Just as I commissioned an illustrator, it would be equally important to hire a children’s book specialist to aid in co-construction of the story. The holographic green letters that I chose to use took eighty hours to print, cut, and place in the book and ultimately were not especially effective.

The learned aspects of my work include that most of the illustrations in the book are universal, showing themes of socialization, cultura and fiesta, down time, elders, and
developing friends. The book creates universality. The book has a positive tone and depicts happy and healthy children. *The Sweet Tale* is culturally relevant, unlike books try to fit into communities that do not mirror the story or the people in the book. This is a book of heroism. Stigma is a fear, and we fear illness, and sometimes we don’t understand it. In this book, I portrayed the concepts of illness and wellness to children in a way that the reader is able to understand via the colors and the pictures. Children communicate and learn through a language that is different from the language of adults, and this book allows them to be heroes to Luisa and for themselves. Just like the testimonios and platicas, it takes courage for a child to sit in a circle of other children and then speak. The book can also work without words because it is not intimidating, and many children’s stories can be told using *The Sweet Tale* with illustrations only as a tool. Finally, the focus on morbidity and mortality rates are important to understand and often are overused in health research. It is important to focus on the positive that is elucidated in *The Sweet Tale*, such as the leading causes of life and what leads to well-being and disclosure. This current research moves the needle from death measures to life measures.

**Limitations & Recommendations**

As wonderful as I think *The Sweet Tale* is and this research was and the value of the directions in which it might take us, much remains to be learned. This pilot study used qualitative measures for research evaluation. All of the research I cited for entertainment-education and interactive narrative used quantitative evaluations. Quantitative measures use scales, such as the Green and Brock (2000) scale, to measure transportation into the narrative. The scales could have provided information about how the change from reading the narrative to being read the narrative impacted the effectiveness of the
intervention. This study does not provide longitudinal data to determine how the children might be affected in the future by the narrative. This study could have employed quantitative measures to provide a larger sampling and to study narrative persuasion measures. Surveys that focus on creation and feedback could have provided a more scaled and intense examination by data using dependent variables on long-term knowledge acquisition. Limitations of the study included exposure variables not controlled and accounted for, not enough exposure to the content or intervention because it was a short book, and the lessons might have been too easy and lacked sufficient depth.

Other limitations include the book being written in only one language that would have to change in future iterations to bilingual or two languages, English and Spanish. The study used a small snowball sampling, and the research is not generalizable in its current form. My positionality, no matter how objective it was with my background as a member of a privileged, higher socioeconomic class, exposed to higher education and from El Paso, was evident in the study. That is, the way that I believe a children’s book might affect a majority of the population of El Paso when that population is changing daily as a city on the U.S.-Mexico border with immigrants flooding through the area and living in tent cities, might be very off the mark and skewed. The reality of the people desperate to enter the country, having left behind their family support, much be approached with sensitivity, not with broad strokes or one size fits all. This flips the need for the researcher to know the community they are studying when the community make-up is shifting and social realities are rewritten.

Children are not empty recipients of this knowledge; discovering their level of knowledge about diabetes is critical to understanding how in their minds and lived worlds
the chronic disease of diabetes is constructed. That is why they spoke and I listened.

Future iterations will include:

- Many voices—including those of children—in the book’s illustrations and text. The stories from children who live in El Paso should be added to the book. I moved forward on the project and found that the biggest voice missing was that of the children.

- Translations into Spanish and/or into a bilingual book. Some children will not be able to read it if it is not written in their first language. If the story is written in only one language, then would-be readers who know only another language would not be able to benefit from the book. It is important to remember that this book is meant to be read to a listener so that it can serve as an effective conduit for conversation. Making important both the reader’s and the listener’s language is critical.

- Layout changes where the pages are mirrored, and one language is used on one page and another language on another page.

- A digital format of the book as an application.

- Another electronic version, short film, or conversion to gamification for children.

- No words, just illustrations with a story guide for the parents.

This research is important and needs to be done. The research opens theory building for future research and the possibilities for diffusion to various areas outside of the El Paso area. For example, how different or similar might the book be for people in Albuquerque or New York City? Communities with a multitude of languages and cultures might be more similar than perceived, and some communities might interpret the
messaging differently. This project has laid the groundwork for creation and dissemination of future campaigns, “yet other steps must follow including publication, dissemination and awareness by those who can help these books reach the hands of children” (Ada as cited in Clark et al., 2016, p. xi). With so much emphasis on culture and regional understandings, this kind of book would be valuable in the hands of children of all backgrounds.

My final two recommendations might be the most important from this work. Each summer, I volunteer for a week-long children’s camp in El Paso that focuses on children living with diabetes and their families. I sit, run, hike, swim, and discover with these beautiful children for a week—but mostly, I listen. The children who attend the camp tell amazing stories and have great advice for other kids like them who are living with diabetes and the rest of the world around them. There must be a voice for them in this work. These children deal with insulin injections and low blood glucose at a very young age, and knowing more of what is working to help them manage their diabetes inspires me to conduct a positive deviance inquiry with them.

My second and final recommendation is aimed at boys in the Hispanic community. I was shocked to hear the majority of male respondents in this study say that they wanted to eliminate the diabetes angle from The Sweet Tale. How this correlates with the issues with diabetes in Hispanic adult men is important. Work is being done by an innovative researcher, Dr. Jeannie Concha, who has addressed the issue of men’s higher incidence of diabetes and the lack of diabetes knowledge in El Paso by creating a diabetes “garage” for men. Collaborating with the El Paso Diabetes Association, Dr. Concha has created a manual for men by using car metaphors, which she believes will
connect with El Paso’s male population. We need to create something for the young boys in our community so they have a better chance in dealing successfully with diabetes and so that their knowledge, attitudes, and beliefs related to diabetes in the borderland can be better understood.

**Closing thoughts**

Isabella, in our first encounter, called what I have the bee-tees, and then later a respondent in the study used the same term. I remind myself everyday that I too have the bee-tees—but the bee-tees don’t have me. It has been a long journey to reach this point, and the best part has been my time with the children. I am reminded when I spend time with them of their curiosities, ingenuity, creativity, wonder, love, and simplicity. The children and the research helped me make connections within this project and in my living with diabetes that I could not imagine. This project serves as a catalyst for personal growth and change. It was a blessing and a privilege to bring my etic and emic together in my professional work. One of my mentors said this is “not a judgment but a journey” and reminded me that “the book is the deliverable. . . . It will go on and make change possible. . . . It’s always about the book.”
Books let me fly,
    they let me soar.
Books open windows
    and magic doors.
Sometimes they whisper,
sometimes they roar.

Sometimes I find
someone who looks like me,
    feels like me,
    thinks like me,
    dreams like me.

Sometimes I find
more of who I want to be.

Books let me fly,
    they let me soar.
They open windows
    and magic doors.

Sometimes they whisper,
sometimes they roar.

-- Alma Flor Ada, 2015
Appendix A: IRB

DATE: March 1, 2019

IRB #: 00519

IRBNet ID & TITLE: [1378720-3] THE SWEET TALE: A PILOT STUDY OF AN INTERACTIVE NARRATIVE HEALTH COMMUNICATION INTERVENTION FOR CHILDREN USING POSITIVE DEVIANCY TO HIGHLIGHT COMMUNICATIVE ACTS THAT LEAD TO EFFECTIVE MANAGEMENT OF DIABETES AMONG HISPANICS

PI OF RECORD: Judith White, PhD

SUBMISSION TYPE: Response/Follow-Up

BOARD DECISION: APPROVED

EFFECTIVE DATE: March 1, 2019

EXPIRATION DATE: N/A

RISK LEVEL: MINIMAL RISK

PROJECT STATUS: ACTIVE - OPEN TO ENROLLMENT

DOCUMENTS:
- Letter - letter responding to IRB 030119 (UPDATED: 03/1/2019)
- Protocol - Protocol v030119 (UPDATED: 03/1/2019)

Thank you for your Response/Follow-Up submission. The UNM IRB has APPROVED your submission. This approval is based on an acceptable risk/benefit ratio and a project design wherein the risks to participants have been minimized. This project is not covered by UNM’s Federallywide Assurance (FWA) and will not receive federal funding.

The IRB has determined the following:

- Informed consent must be obtained and documentation is required for this project. To obtain and document consent, use only approved consent document(s).
- Children may be involved as participants in this project under Subpart D 404 and permission from one parent/guardian is required and signature is required.
- Child assent must be obtained and documentation of assent has been waived for this project. To obtain assent, use only approved assent document(s).

This determination applies only to the activities described in the submission and does not apply should any changes be made to this research. If changes are being considered, it is the responsibility of the Principal Investigator to submit an amendment to this project and receive IRB approval prior to implementing the changes. A change in the research may disqualify this research from the current review category. If federal funding will be sought for this project, an amendment must be submitted so that the project can be reviewed under relevant federal regulations.

All reportable events must be promptly reported to the UNM IRB, including: UNANTICIPATED PROBLEMS involving risks to participants or others, SERIOUS or UNEXPECTED adverse events, NONCOMPLIANCE issues, and participant COMPLAINTS.

If an expiration date is noted above, a continuing review or closure submission is due no later than 30 days before the expiration date. It is the responsibility of the Principal Investigator to apply.
for continuing review or closure and receive approval for the duration of this project. If the IRB approval for this project expires, all research related activities must stop and further action will be required by the IRB.

Please use the appropriate reporting forms and procedures to request amendments, continuing review, closure, and reporting of events for this project. Refer to the OIRB website for forms and guidance on submissions.

Please note that all IRB records must be retained for a minimum of three years after the closure of this project.

The Office of the IRB can be contacted through: mail at MSC02 1665, 1 University of New Mexico, Albuquerque, NM 87131-0001; phone at 505.277.2644; email at irbmaincampus@unm.edu, or in-person at 1805 Sigma Chi Rd. NE, Albuquerque, NM 87106. You can also visit the OIRB website at irb.unm.edu.
Appendix B: Consent/Assent Form

THE SWEET TALE: A PILOT STUDY OF AN INTERACTIVE NARRATIVE HEALTH COMMUNICATION INTERVENTION FOR CHILDREN USING POSITIVE DISTANCE TO HIGHLIGHT COMMUNICATIVE ACTS THAT LEAD TO EFFECTIVE MANAGEMENT OF DIABETES AMONG HISPANICS

Informed Consent for In Depth Interview
02/21/19

Claudia Martinez Boyd, from the Department of Communication and Journalism, is conducting a research study. The purpose of the research is to see what Hispanic children aged 5-10 think about diabetes and how we can create future books for them with what we learn. You are being asked to participate because you have a child that is Hispanic, aged 5-10, and lives in El Paso, Texas.

Your participation will involve me reading a book to your child with you present, then me asking your child some questions about the book. The interview should take about 30-45 minutes to complete. The interview includes questions such as “did you know what diabetes was before I read the book”, “Did you like the characters in the book?” “Why did you decide to turn the page?” This is voluntary, and you may choose not to participate. You can tell me that you don’t want your child to answer any of the questions at any time. There are no names or identifying information connected with child’s answers. There are no known risks in this research, but you or your child may feel uncomfortable or that information is private when answering questions. The interview will be recorded, typed out, and deleted once I am done with the research study. All identifiable information (e.g., your name, date of birth) will be removed from the information collected in this project. After we remove all identifiers, the information may be used for future research or shared with other researchers without your additional informed consent. A limit to confidentiality will be Texas law that I report suspected abuse or neglect that I might come across once in your home.

You may choose to withdraw from this study at any time if your child gets sick, you or your child no longer want to continue to be in the study, your child is not focused at the time of the study. If you withdraw, I will not continue. Because we are de-identifying information some or all the information collected may be used in the study.

What I find with this project will help me understand how Hispanic children aged 5-10 living in the El Paso, Texas area feel about diabetes. The research will also help come up with future books for Hispanic kids about diabetes. If my research is published, what I find will be summarized and quotes will have participant numbers not names.

If you have any questions, concerns, or complaints about the research, please feel free to call Claudia Martinez Boyd at 915-549-0224. If you have questions regarding your or your child’s rights as a research participant, or about what you should do in case of any harm to you, or if you want to obtain information or offer input, please contact the UNM Office of the IRB (OIRB) at (505) 277-2644 or irb.unm.edu.

By signing below and participating in an interview with your child you will be agreeing to participate in the above described research.

Name of Child given permission to participate in interview (written by Parent)

Name of Adult Participant

Signature of Adult Participant

Date

Name of Research Team Member

Signature of Research Team Member

Date
THE SWEET TALE: A PILOT STUDY OF AN INTERACTIVE NARRATIVE HEALTH COMMUNICATION INTERVENTION FOR CHILDREN USING POSITIVE DEVIANCY TO HIGHLIGHT COMMUNICATIVE ACTS THAT LEAD TO EFFECTIVE MANAGEMENT OF DIABETES AMONG HISPANICS

Assent to Participate in Research
02/21/19

You are being asked to join a research study by Dr. White and Claudia Boyd from the University of New Mexico. This project is to help me learn more about how kids think about diabetes and help us to write books about diabetes for kids in the future.

If you join the project, I will read you a children’s book then ask you some questions about it.

If you join, you might not want to talk about it or answer some of my questions you will just have to let me know and I will stop. There may also be good things too, you could help me understand kids like you so that we can write better books for kids about diabetes.

If you do not want to join the project, you can let me know and I will not read the book or ask you questions.

I am keeping all of the information you give me private and I am changing your name in my notes so nobody will know what you shared with me.

We asked your parents if you could be a part of the project and they said yes. One of your parents will be with you the entire time I am reading the book and asking you questions.

If you have any questions at any time, please ask your parent to contact us they have our phone number and email.

You do not have to be in this study. If you do choose to be in the study, you can change your mind at any time. I won’t care if you change your mind or if you don’t want to join this study.

Would you like to be a part of this study?
Child agreed/ did not agree to join this study. (Verbal)

Researcher Signature (to be completed at time of informed consent)

I have explained the research to the participant and answered all of his/her questions. I believe that he/she understands the information described in this consent form and freely consents to participate.

__________________________________________  ______________________________________  ________
Name of Research Team Member  Signature of Research Team Member  Date
Appendix C: Interview Guide

Did you like the book?
Did some of the people in the book look like your friends?
You decided to let Luisa tell her friends… Why? What made you feel she should share?

OR
You decided not to let Luisa tell her friends… Why? What made you feel she should not share?
What did you think about the illustrations in the book?
Could you tell me what you remember “TELL” stood for? (If they disclosed they got to this part of the book)
Did the book make sense?
Do you know anyone who has diabetes?
What do you think diabetes is?
Do you think diabetes is good or bad?
What do you think causes diabetes?
If you could change the book, what would you change?… What would you keep the same?
Would you share this book with your friends and family?
What did you learn?
Anything else you want to share?
BIBLIOGRAPHY


Dominguez, K., Pennman-Aguilar, A., Chang, M. H., Moonesinghe, R., Castellanos, T.,
prevalence of diseases and risk factors, and use of health services among
weekly report, 64*(17), 1-10.

Duan, C. (2017, August). Kids’ book offers sweet way to relate to diabetes; A
Minneapolis woman is writing a series of books for children with type 1 diabetes.
*Star Tribune, 8*(6).

and experiential responses to health-promoting mass media
messages. *Communication Research, 37*(1), 133-164.

Durá, L., & Singhal, A. (2009). Utilizing a positive deviance approach to reduce girl's
trafficking in Indonesia: Asset-based communicative acts that make a difference.
*Journal of Creative Communications, 1*-17.


Dutta, M. J. (2007). Health information processing from television: The role of health

centered approach to participation. *Health Education & Behavior, 35*(4), 442-454


554. doi:10.1093/her/cys066


Liu, Y., & Shrum, L. J. (2002). What is interactivity and is it always such a good thing? Implications of definition, person, and situation for the influence of interactivity on advertising effectiveness. *Journal of advertising, 31*(4), 53-64.


MacLean, P. D., & Kral, V. A. (1973). *A triune concept of the brain and behaviour*. Published for the Ontario Mental Health Foundation by University of Toronto Press.


Miles, M., Huberman, A. & Saldana, J. (2014). *Qualitative data analysis: A methods*
sourcebook (Third ed.). Sage Publications.


Murphy, S. T., Frank, L. B., Chatterjee, J. S., & Baezconde-Garbanati, L. (2013). Narrative versus nonnarrative: The role of identification, transportation, and
emotion in reducing health disparities. *Journal of Communication, 63*(1), 116-137.


Rooney, G. (2015). *My sister has diabetes and how that makes me feel*. Self-Published. Middletown, DE.


strategy for social change. Routledge.


Stephenson, M. T., Southwell, B., & Yzer, M. C. (2011). Advancing health communication research to the next level: Issues and controversies in


