**Title**

Trabajando Juntas: Mexican immigrants with type 2 diabetes and their providers working together to promote treatment adherence

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UNIVERSITY OF CALIFORNIA

Santa Barbara

# Trabajando Juntas: Mexican immigrants with type 2 diabetes and their providers working together to promote treatment adherence

A dissertation submitted in partial satisfaction
of the requirements for the degree

Doctor of Philosophy
in
Counseling, Clinical and School Psychology

by

Gina Vanegas

Committee in charge:
Professor Andrés J. Consoli, Chair
Professor Miya Barnett
Professor Steve Smith

September 2020

The dissertation of Gina Vanegas is approved.

Miya Barnett

Steve Smith

Andrés J. Consoli, Committee Chair

July 2020

# Trabajando Juntas: Mexican immigrants with type 2 diabetes and their providers working together to promote treatment adherence

# ACKNOWLEDGMENTS

This dissertation is the culmination of a long journey that was tedious, depressing at its worst and fulfilling at its best. Thankfully I complete this journey alongside my family, who has had my back in so many ways. My achievements are the results of the collective support of my mother, my father, my sister, and my husband. I'm grateful to my mother from whom I inherited the perseverance and strength I possess. I'm grateful to my father who always pushed me to be an independent thinker and leader. To my beautiful sister who answers all my calls and is always ready to give me words of wisdom despite her being the youngest of the two. To my wonderful husband who has been by my side along every step of this process and whose support has been critical to my growth as an individual and professional.

I dedicate this dissertation to them, but especially to my mother, Rosa Martínez and my father Nestor Vanegas. They both sacrificed their educational pursuits to provide for me and my sister. My father's dream was to become a doctor and my mother's dream was to complete her bachelor's degree, but due to income limitations these dreams were put on pause until now. This dissertation and degree are the representation of their dreams and mine.

I would be remiss if I did not thank those in the CCSP department who are also responsible for my success in completing this dissertation. To my advisor Dr. Andrés Consoli, who has always inspired me to be an advocate for underserved communities through my research pursuits. To my mentor Dr. Steve Smith, who has always made space for me to express openly my fears and my hopes. To Dr. Miya Barnett, for her role as a committee member and supportive faculty.

Lastly, I want to express my gratitude to the dedicated team of administrators, staff, and especially the medical providers and their patients who allowed me to learn from their experiences. I appreciated their openness, welcoming attitude, and willingness to make time for me.

# VITAE OF GINA VANEGAS

July 2020

**Gina Vanegas, M.Ed.**
**Ph.D. Candidate**
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## EDUCATION

**Ph.D. – Counseling, Clinical, & School Psychology (APA – Accredited)** (September 2020)
Dissertation Title: Trabajando Juntas: Mexican immigrants with type 2 diabetes and their providers working together to promote treatment adherence.
University of California, Santa Barbara, CA

**M.Ed. – School Counseling** (May 2012)
Georgia State University, Atlanta, GA

**B.A. – Psychology** (December 2008)
Honors Thesis Title: The effects of gender, ethnicity and grade on bystanders' behavior
Georgia State University, Atlanta, GA

## LANGUAGE SKILLS

- Spanish: native language

## CLINICAL EXPERIENCE

08/2019 – 08/2020 Doctoral Intern
Miami-Dade County
Community Action & Human Services Department
Psychological Services
*Under the supervision of Dr. Tiffany Amrich*

- Identify staff training needs through the collaboration and consultation of program managers and administrators overseeing various social services in the county including the Head-Start program
- Design and remotely implement evidence-based trainings to meet the training needs of a diverse group of stakeholders including program administrators, clinicians, and community members on a variety of topics (e.g., service engagement, depression, domestic violence, etc.)
- Design and implement a data-driven evaluation of two programs within the social services department to improve their effectiveness and the consumers' experience
- Provide feasible recommendations based on a data-driven evaluation for program administrators to improve treatment effectiveness and facilitate resource allocation
- Provide individual psychotherapy for survivors of domestic violence utilizing evidence-based practices such as TF-CBT, MI, and Narrative Therapy

- Provide clinical supervision and training to a doctoral practicum student providing mental health services for the Head Start programs
- Conduct psychoeducational assessments for students identified by staff and parents in the Federal Head Start Program who may qualify for special education services
- Administer, score, and interpret psychological assessments including the Wechsler Preschool & Primary Scale of Intelligence (WPPSI-IV), Leiter International Performance Scale (Leiter-3), Battelle Developmental Inventory (BDI-2), Vineland Adaptive Behavior Scales (Vineland-3), Childhood Autism Rating Scale (CARS-2), among others
- Synthesize and communicate assessment results through a written integrative psychological report and through a feedback session
- Provide individual psychotherapy utilizing developmentally appropriate approaches (e.g. play therapy, parent education, teacher consultation) to children ages three to five and the adults that care for them
- Participate in weekly group and individual supervision

06/2018 – 05/2019 Clinic Coordinator & Supervisor
Hosford Counseling and Psychological Services Clinic
*Under the supervision of Dr. Heidi Zetzer*

- Managed the training, research, and psychological service activities of the clinic
- Provided clinical supervision and training to a team of 10 first time clinicians providing mental health services for a diverse group of individuals
- Created, documented, and enforced procedures related to teaching psychological assessment and psychotherapy competencies
- Conducted outcome monitoring of services provided in the clinic
- Revised clinic policies and procedures to ensure effective and efficient work-flow and training of clinicians
- Facilitated meetings related to the administrative operations and clinical activities of the clinic

10/2018 – 5/2019 Assessment Clinician
Koegel Autism Center
*Under the supervision of Dr. Ty Vernon*

- Collaborated as part of an assessment team to conduct psychological evaluations for individuals of all ages seeking diagnostic clarification.
- Conducted clinical interviews to learn background information and assess symptomatology using the DSM-5.
- Administered, scored, and interpreted psychological assessments including cognitive-testing, autism-specific testing, behavioral screening, and personality testing
- Synthesized and communicate assessment results through a written integrative psychological report and through a client feedback session
- Conducted psychotherapy with adults diagnosed with an autism spectrum disorder

06/2017 – 06/2018 Assessment Clinician
Hosford Counseling and Psychological Services Clinic (PAC)
*Under the supervision of Dr. Ron Brooks*

- Conducted clinical interviews to learn background information, assess symptomatology using the DSM-5, and select appropriate psychological assessments
- Administered, scored, and interpreted psychological assessments including the Wechsler Adult Intelligence Scale IV edition (WAIS-IV), Woodcock Johnson IV edition (WJ-IV), Personality Assessment Inventory (PAI), Thematic Appreciation Test (TAT), Rey Osterreith Complex Figure Test (RCFT), Comprehensive Trail-Making Test (CTMT), and Wechsler Memory Scale-Fourth edition (WMS-IV), among others.
- Synthesized and communicated assessment results through a written integrative psychological report and through a client feedback session
- Participated in weekly group supervision

07/2017 – 10/2018 Clinician
Family Service Agency
*Under the supervision of Nancy Ranck, LMFT*

- Provided individual, family, and couple psychotherapy in English and Spanish to adults living with depression, anxiety, and/or complex trauma
- Participated in weekly individual supervision
- Administered, scored, and interpreted brief outcome measures such as the Outcome Rating Scale (ORS), and the Session Rating Scale (SRS) to evaluate therapeutic progress

06/2016 – 06/2017 Clinician
Sanctuary Centers of Santa Barbara
*Under the supervision of Dr. Denise Mock*

- Provided group psychotherapy to individuals diagnosed with severe mental illness (e.g. Schizophrenia, Traumatic Brain Injury, Personality disorders) and/or substance use disorders
- Provided individual psychotherapy to individuals diagnosed with severe mental illness
- Participated in weekly individual and group supervision
- Administered, scored, and interpreted psychological assessments
- Analyzed and reported assessment results in the form of an integrated report
- Conducted a research study on the facilitative factors to the treatment engagement of individuals in the Co-Occurring Integrated Treatment Program

09/2015 – 05/2016 Clinician
Hosford Counseling and Psychological Services Clinic
*Under the supervision of Dr. Collie Conoley*

- Provided culturally relevant psychotherapy to individuals with various diagnoses and their families in Spanish and English at a community mental health center
- Conducted individual, couples and family psychotherapy sessions in English and Spanish
- Conducted intake interviews and assessments for potential clients
- Participated in weekly supervision sessions

08/2012 – 05/2015 School Counselor, Dacula Middle School
*Gwinnett County Public Schools*

- Planned, coordinated, and facilitated small group counseling sessions for students on a variety of topics (i.e. resilience, motivation, interpersonal skills)

- Conducted individual counseling sessions that use dynamic approaches to counseling and are developmentally appropriate (e.g. Play Therapy, Adventure Therapy based activities)
- Collaborate with teachers/parents to improve student achievement by facilitating consultations and workshops with teachers/parents as well as facilitating Student Support Team (SST) meetings, parent conferences and community workshops
- Implemented a comprehensive school counseling program using evidence-based interventions and data to guide the program's focus
- Created and implemented an intervention program for students with specific academic & socio-emotional needs based on achievement data
- Planned, coordinated, and conducted prevention-focused classroom guidance lessons for 6th grade students as part of their quarterly guidance instruction

06/2012 – 01/2013 Counselor, Behavioral Health Services
*CETPA: Mental Health & Abuse Services*

- Provided psychotherapy to individuals and their families in Spanish at a community mental health center for individuals diagnosed with depression, anxiety, eating disorders, among others.
- Performed intake assessments and prepared treatment plans for clients
- Collaborated with parents, teachers, parole officers to improve treatment outcome by conducting family sessions and facilitating consultations
- Participated in weekly individual supervision sessions in Spanish

08/2011 – 08/2012 Practicum/Intern Student, White Oak Elementary School
*Gwinnett County Public Schools*

- Planned, coordinated, and conducted classroom guidance lessons, small group counseling and individual counseling for K-5th grade students on a variety of topics
- Collaborated with teachers/parents to improve student achievement by facilitating consultations and workshops with teachers/parents
- Contributed to the implementation of a comprehensive school counseling program (ASCA Ramp Site)
- 850 onsite hours completed of which 280 were spent on direct services to students

## RESEARCH EXPERIENCE

06/2018 – 10/2019 Dissertation: Trabajando Juntas: Mexican immigrants with type 2 diabetes and their providers working together to promote treatment adherence
Department of Counseling, Clinical & School Psychology
*University of California, Santa Barbara*
*Under the supervision of Dr. Andrés Consoli*

- The study aimed to explore the phenomenology of treatment adherence within the context of the patient-provider relationship among Mexican and Mexican-American individuals with type 2 diabetes. Using a qualitative methodology, eight patients were interviewed about their experiences developing collaborative relationships with their providers and adhering to their treatment recommendations. Five bilingual providers (e.g. physicians and nurse practitioners) were interviewed regarding their experiences serving this population as it relates to developing collaborative relationships and promoting their patients' adherence. The researcher also evaluated the role of culture on the development of these relationships and treatment adherence.

06/2017 – 06/2018 Pre-dissertation project: Personal stories of treatment engagement: Building a sanctuary from addiction.
Department of Counseling, Clinical & School Psychology
*University of California, Santa Barbara*
*Under the supervision of Dr. Andrés Consoli*

- This study was conducted in partnership with a local co-occurring outpatient integrated treatment program. The study sought to identify the factors that are conducive to treatment engagement with mental health services by individuals suffering from both mood and substance use disorders. Using a qualitative methodology, five individuals who received services for at least 90 days in the treatment program participated in the study. Semi-structured, individual interviews were conducted, transcribed, coded, and analyzed using thematic analysis. Results indicated that participants' understanding of the treatment process, experience of key therapeutic elements of treatment, access to supportive resources, and engagement in relapse prevention strategies outside of treatment worked conjunctively to provide participants with the necessary tools to remain in treatment over prolonged periods of time.

09/2015 – 06/2019 Graduate Research Assistant
Department of Counseling, Clinical & School Psychology
*University of California, Santa Barbara*
*Under the supervision of Dr. Andrés Consoli*

- Contributed to research team studying transnational collaborations, program evaluations, multicultural supervision, psychotherapy integration and training, systematic treatment selection, psychotherapy in Latin America, ethics and values in psychotherapy, Latinx values, access and utilization of mental health services by Latinxs within a social justice framework, and the development of a bilingual (English/Spanish) academic and mental health workforce
- Tasks engaged in included the design and writing of grant proposals, ascertaining funding sources, conducting literature searches, transcribing qualitative interviews, analyzing data, writing manuscripts, and establishing and sustaining working relationships with the mental health community.

08/2011 – 12/2012 Graduate Research Assistant
Center for Research on School Safety, School Climate, and Classroom Management – Mexico Mental Health Project
*Georgia State University and University of Veracruz in Xalapa, Mexico*
*Under the supervision of Dr. Kristen Varjas*

- Coded and analyzed quantitative and qualitative data from interviews with educators and other service providers collected at a school in Xalapa, Mexico
- Collaborated in the writing process of an upcoming book chapter on the mental health of children in Mexico

- Collaborated with a research team at the Tulane University under the supervision of Dr. Nastasi to create a comprehensive and reliable coding system for the qualitative data

06/2010 – 06/2011 Intervention Coordinator
Center for Research on School Safety, School Climate, and Classroom Management - Bullying Prevention Project
*Georgia State University and City Schools of Decatur, Atlanta, GA*
*Under the supervision of Dr. Kristen Varjas*

- Served as the Intervention Coordinator for a large Injury Control Research Center grant funded by the Centers for Disease Control
- Collaborated with the project coordinator in supervising 12 graduate assistants involved in research activities
- Collaborated in several writing projects that included book chapters, doctoral dissertations, grant proposals and Journal articles
- Coordinated and supervised facilitation of six psycho-educational counseling groups at an elementary school
- Served as a liaison between School Administrators and Principal Investigators
- Analyzed data collected during the 2010-2011 year on the treatment integrity and acceptability of eight psycho-educational groups at two schools
- Coordinated GRA training, managed administrative duties related to research protocols (e.g., IRB, consent distribution)

06/2009 – 06/2010 Graduate Research Assistant
Center for Research on School Safety, School Climate, and Classroom Management - Bullying Prevention Project
*Georgia State University and City Schools of Decatur, Atlanta, GA*
*Under the supervision of Dr. Kristen Varjas*

- Facilitated three anti-bullying psycho-educational groups at two schools in Georgia
- Participated in the development and implementation of a culture-specific, psycho-educational curriculum for victimized students
- Collaborated in the research, design, and implementation of a parent component to the intervention for a grant application
- Collaborated in developing presentations and program dissemination materials for the Center for Injury Control as well as school PTA meetings
- Collaborated in the writing of a book chapter on bullying
- Collaborated with doctoral students in their research projects/dissertations by transcribing and coding interviews with LGBTQ youth and educators among others.

06/2008 – 12/2008 Research Assistant/Honors Thesis Student
*Honors Program, Georgia State University*
*Under the supervision of Dr. Christopher Henrich*

- Conducted an undergraduate honors thesis under the supervision of Dr. Christopher Henrich on the role bystanders play in bullying behavior
- Conducted advanced statistical analysis of data such as factor analysis of a survey aimed to assess bullying behaviors

- Presented Research Results at the Honors Research Conference, Summer McNair Research Conference and the Annual Biomedical Research Conference

11/2007 – 12/2008 Research Assistant/Ronald McNair Scholar
*Ronald McNair Research Program*
*Under the supervision of Dr. Christopher Henrich*

- Conducted a summer research project on bullying behavior
- Presented research at professional conferences such as the Summer McNair Research Conference and the Annual Biomedical Research Conference
- Provided a written summary of research results in APA style
- Attended monthly workshop on research training and relevant topics

## PUBLICATIONS

**Vanegas, G.**, & Consoli, A. J., Mendoza, N., & Castro, B., (in preparation). Trabajando Juntas: Mexican immigrants with type 2 diabetes and their providers working together to promote treatment adherence.

**Vanegas, G.,** & Consoli, A. J. (in preparation). Personal stories of treatment engagement: Building a sanctuary from addiction.

Consoli, A. J., Sheltzer, J. M., Romero Morales, A., Hidalgo, S., Nielsen, G., **Vanegas, G**., & Whaling, K. (in preparation). Access and utilization of mental health services by Mexicans/Mexican Americans seeking help in the public, specialty sector due to depression: Facilitative and impeding factors.

Consoli, A. J., Perez, Acosta, A. Morgan Consoli, M. L., Romero Morales, A., & **Vanegas, G**., (2017). Heritage mentoring project: Rubén Ardila – Colombia. *International Psychology Bulletin,* 66-72.

Sánchez, A., Hufana, A., Vázquez, M. D., Morgan Consoli, M. M., Consoli, A. J., Casas, J. M., **Vanegas, G.,** Sheltzer, J., Meza, D., & Unzueta, E. (2017, Spring). Post-Election reactions of Latinx community members in Santa Barbara. *UCSB Diversity Forum*, *11*(2), 22.

Consoli, A. J., Whaling, K. & **Vanegas, G**. (2017). Professional organizations. In A. E. Wenzel (Ed.), *Encyclopedia of Abnormal and Clinical Psychology* (pp. 2671-2672). Thousand Oaks, CA: Sage.

Consoli, A. J., Romero Morales, A., & **Vanegas, G.** (2017). *Machismo.* In K. Nadal (Ed.), The SAGE encyclopedia of psychology and gender. Thousand Oaks, CA: Sage Publications.

Perkins, C., Wood, L., Varjas, K. and **Vanegas, G.** (2016). Psychological well-being of children and youth in Mexico. In B. K. Nastasi & A. P. Borja (Eds), International handbook of psychological well-being in children and adolescents: Bridging the gaps between theory, research, and practice (pp. 115-136). New York: Springer.

Thornberg, R., Tenenbaum, L., Varjas, K., Meyers, J., Jungert, T., & **Vanegas, G.** (2012). Bystander motivation in bullying incidents: To intervene or not to intervene? *Western Journal of Emergency Medicine, XIII(3),* 247-252.

## NATIONAL & INTERNATIONAL CONFERENCE PRESENTATIONS

**Vanegas, G.**, Consoli, A. J., Castro, B., & Mendoza, N. (2019, October). *Lo importante es la actitud: Experiences of Mexican patients receiving treatment for type 2 diabetes*. Poster presentation at the annual convention of the National Latinx Psychological Association, Miami, Florida.

Consoli, A. J., Sharma, H. , & **Vanegas, G**. (co-chairs) (2018, August). *Advancing social justice internationally: Psychology contributions*. Symposium presented at the annual convention of the American Psychological Association, San Francisco, California.

**Vanegas**, G., & Consoli A. J (2018, August) *Treatment Engagement Among Individuals Living with Co-Occurring Mood and Substance Use Disorders.* Poster session to be presented at the 126th Annual American Psychological Association Conference, San Francisco, CA.

**Vanegas**, G., Consoli A. J., Whaling, K., Ballou, S. (2017, July) *Facilitative Factors to The Treatment Engagement of Individuals in a Co-Occurring Outpatient Integrated Treatment Program.* Paper session to be presented at the XXXVI Interamerican Congress of Psychology, Merida, Mexico.

Whaling, K., Consoli, A.J., & **Vanegas, G.** (2017, July). *Perspectives on mental health services: Mexicans and Mexican-Americans receiving treatment for depression in the U.S.* Paper session presented at the 36th Interamerican Congress of Psychology, Mérida, MX – YU.

Vázquez, M., Whaling, K., **Vanegas, G**., & Plunkett, S.W. (2017, April). *Familial risk and protective factors on depression in Latina/o emerging adults.* Poster session presented at the biennial meeting of the Society for Research on Child Development, Austin, TX.

Consoli, A. J., Whaling, K., **Vanegas, G**., Romero Morales, A., & Sheltzer, J. (2016, August). Alternative cultural paradigms in Latina/o psychology: What we know and what we need to know. Paper presented at the annual meeting of the American Psychological Association, Denver, CO.

Sheltzer, J., Consoli, A. J., Romero Morales, A., Whaling, K., & **Vanegas, G.** (2016, August). *Consumers' voices: Mexican-Americans accessing mental health services for depression.* Poster presented at the annual meeting of the American Psychological Association, Denver, CO.

Romero Morales, A., Consoli, A. J., & **Vanegas, G**. (2016, September). *Machismo revisited: A critical perspective and recommendations for practitioners*. Paper presented at the National Latina/o Psychological Association 2016 biennial conference, Orlando, Florida.

Consoli, A. J., Whaling, K., **Vanegas, G**., Romero Morales, A., & Sheltzer, J. (2016, August). Alternative cultural paradigms in Latina/o psychology: What we know and what we need to know. In A. J. Consoli, & L. J. Myers, Ethnic Psychological Associations expand psychological knowledge: Alternative cultural paradigms. Paper presented at the annual meeting of the American Psychological Association, Denver, Colorado.

Sheltzer, J., Consoli, A. J., Romero Morales, A., Whaling, K., & **Vanegas, G**. (2016, August). Consumers' voices: Mexican-Americans accessing mental health services for depression. Poster presented at the annual meeting of the American Psychological Association, Denver, Colorado.

Cadenhead, C., Varjas, K., **Vanegas, G.**, Rosenbaum, L., & Marendt*,* A. (2012, July). *Youth in Xalapa, Mexico* in the symposium entitled "Promoting Psychological Well-being Globally project: Reports from American partners" at the International School Psychology Association 34th Annual Conference, Montreal, Canada.

**Vanegas, G.**, Henrich, C., (2008, November). *The Bystander's Role in Bullying Behavior.* Poster Presented at the Annual Biomedical Research Conference for Minority Students, Orlando, Florida.

**Vanegas, G.**, Henrich., C., (2008, September). *The Bystander's Role in Bullying Behavior.* Poster presented at the Ronald E. McNair Post-Baccalaureate Achievement Program Fall Research Symposium, Georgia State University, Atlanta, GA.

## TEACHING EXPERIENCE

06/2017 – 08/2017 Graduate Teaching Associate
University of California at Santa Barbara

- CNCSP 110: Educational & Vocational Guidance, 2 sections

01/2016 – 06/2017 Graduate Teaching Assistant
University of California at Santa Barbara

- CNCSP 110: Educational & Vocational Guidance, 2 sections
- CHST 1C: Introduction to Chicana/o Studies, 2 sections
- CHST 167: Chicana Feminisms, 2 sections

## AWARDS & HONORS

| | |
|---|---|
| August 2019 | Neufeldt Award for Excellence in Clinical Supervision |
| January 2017 | 2016 - 2017 CCSP Travel Award |
| April 2016 | Hosford Hero Award, Hosford Counseling and Psychological Services Clinic |
| December 2008 | Graduated Cum Laude with Honors from Georgia State University |
| November 2008 | Inducted into the University of Georgia Graduate School 8th Annual Future Scholars Visitation Program. |

| | |
|---|---|
| September 2008 | Inducted into Psi Chi National Honors Society |
| August 2008 | Third Place at Georgia State University’s Annual Presentation McNair Poster Presentation |
| January 2008 | Accepted into the Honors Program at Georgia State University |
| November 2007 | Accepted into the Ronald E McNair Post Baccalaureate Program |

# ABSTRACT

## Trabajando Juntas: Mexican immigrants with type 2 diabetes and their providers working together to promote treatment adherence

by

Gina Vanegas

This study aimed to understand the experience of Mexican immigrant patients living in the U.S. and their health providers as they worked together in the treatment of type 2 diabetes at community health clinic. This study was conducted in partnership with a non-profit community health clinic that serves individuals living in poverty who may be uninsured. Utilizing a qualitative phenomenological approach five bilingual health providers and seven Mexican female cisgender immigrant patients with type 2 diabetes were interviewed regarding their experiences in working together to promote treatment adherence. Findings were evaluated utilizing a strength-based and social justice framework to understand the role that culture played in the development of the patient-provider relationship as it related to adherence. This study highlights effective strategies that are facilitative in building collaborative relationships that can be used to promote treatment adherence over time. This study has the potential to inform future intervention efforts that are informed in patients' and providers' perspectives, are culturally congruent, and may require minimal resources.

# Table of Contents

## Positionality Statement

As a cisgender Latina immigrant, I have had first-hand experience in utilizing an unfamiliar medical system where the vast majority of medical providers do not share the same language and/or cultural background as me. As a patient I believe these cultural differences impact the patient-provider relationship and treatment experience. I am also aware that my upbringing and family health practices have impacted my treatment adherence to certain recommendations when receiving medical care. In 2018, my mother was diagnosed with pre-diabetes, a precursor to type 2 diabetes. Through her experience, I witnessed the difficulties she faced in managing her diagnosis and even more so in working with her providers to lower her blood sugar levels. Upon my mother's diagnosis I became interested in the treatment adherence process of individuals who like my mother were recommended to change long standing habits that were culturally bound in order to improve the course of their disease.

Despite my familiarity with the pre-diabetes diagnosis, I lack an understanding of what it is like to be the person carrying the burden of the disease. As an immigrant from Colombia, I'm knowledgeable of my country's practices and beliefs regarding health, but less familiar with how these vary for Mexican immigrants who as a group make up a large portion of those diagnosed with type 2 diabetes. Through this study I aimed to better understand the treatment experiences of Mexican immigrants in working with their providers and promote their adherence to treatment recommendations for type 2 diabetes.

In addition to the similarities I share with the patients I interviewed in this study; I also relate to the experiences of health providers from a mental health perspective. As a metal health provider for the past eight years I have specialized in providing care to Latinx immigrants living in poverty. My experiences as a service provider have largely influenced my interests in the treatment adherence process. As a provider, I realize the challenge that health providers face in engaging clients in the treatment process. As a result of my experiences as both patient and provider, I wanted to understand the treatment adherence process from the perspective of both the patients who carry the burden of the type 2 diabetes diagnosis and the health providers who helps care for them.

## Chapter One: Study Justification and Synopsis

According to the American Diabetes Association, diabetes mellitus is a chronic, lifelong condition in which the body's ability to produce or respond to insulin, a hormone in the bloodstream, is impaired. Type 2 diabetes, is one type of diabetes in which a once healthy pancreas is only capable of producing a limited amount of insulin that is insufficient to meet the body's demands. While many factors influence the development of type 2 diabetes, obesity is an influential factor given its high comorbidity with the disease; those whose body mass index (BMI) is 30 or above may be considered obese and therefore likely to be at a higher risk for developing type 2 diabetes.

Type 2 diabetes is an insidious disease which negatively impacts the body's functioning overtime in a way that may not be apparent to the individual until much later in the course of the disease. Some of the negative consequences of type 2 diabetes can include damage to the eyes, nerves, and kidneys. This disease also increases the risk for other serious conditions such as heart disease and stroke, which may ultimately lead to death. Although there is no cure for diabetes, treatment can improve life expectancy and overall quality of life (Centers for Disease Control and Prevention, 2017).

Treatment for type 2 diabetes varies but typically requires the individual to maintain a healthy lifestyle. Although in some cases type 2 diabetes can be managed solely through a healthy lifestyle, medication and/or insulin may be at times necessary to help regulate insulin production. To maintain a healthy lifestyle, individuals must engage in multiple behaviors in a consistent manner, these include: 1) maintaining what is currently considered a healthy weight; 2) sustaining a healthy diet; and 3) keeping a regular exercise routine.

Regarding a healthy weight, an adult's BMI is often used to estimate healthy weight ranges and although this measure may be inaccurate for athletes and others, in the general public a healthy BMI is considered to be between 18.5 and 24.9, a BMI between 25.0 and 29.9 is considered overweight, and a BMI above 30 is considered obese.

In terms of sustaining a healthy diet, those with type 2 diabetes must understand how sugar and carbohydrates impact one's insulin level. According to The American Diabetes Association those diagnosed with type 2 diabetes should consume foods that help maintain a stable level of glucose in the blood. To assess which foods can facilitate this, The Glycemic Index (GI) is used. This index assesses the degree to which a carbohydrate-containing food increases glucose in the blood. Foods low in GI include dried beans and legumes, non-starchy vegetables, some fruit, and whole grains. Other foods that are helpful to those with type 2 diabetes are those high in fat and fiber given their ability to slow down the impact of glucose in the blood.

In regards to exercise, it is recommended to maintain a regular exercise routine, given that physical activity helps increase insulin sensitivity in cells and aids in removing glucose from the blood. The U.S. Department of Health and Human Services (2018) recommends a minimum of 150 minutes of moderate, weekly activity that includes strength training of all major muscles twice weekly for those with type 2 diabetes. A goal of 30 minutes of daily exercise is recommended to maintain current weight, but in individuals needing to lose weight additional time may be needed.

The three components, maintaining a healthy weight, diet and exercise routine, must all be integrated simultaneously given that an individual's BMI is determined by one's food intake and exercise level. As a result, lifestyle changes are necessary for those with type 2 diabetes and require not only the individual's awareness of how these three components impact their blood sugar levels, but also demand the individual's commitment in enacting and sustaining these changes overtime. Given the significant level of resources (e.g.,, time, energy, knowledge, financial) that these changes demand from an individual, it is understandable that communities that lack such resources (e.g.,, racial/ethnic minority communities, those living in poverty), are increasingly susceptible to developing type 2 diabetes and tend to have lower levels of treatment adherence which result in poorer treatment outcomes.

Type 2 diabetes negatively impacts the individual, but the ramifications are not limited to the individual-level. While diabetes can substantially impact an individual's lifestyle it may also affect negatively members of a family, a community, and even the U.S economy. The economic effect on the healthcare system to care of people living with chronic diseases is significant. The annual health care expenditure of the U.S. reached $3.3 trillion dollars in 2016 (Centers for Medicare & Medicaid Services, 2018). Approximately 86 percent of the healthcare expenditure is used for the care of chronic health conditions (Gerteis et al., 2014). Chronic conditions such as cardiovascular disease costed $316 billion in 2012, diabetes costs in 2012 accounted for a total of $245 billion, and cancer care costs in

2010 added up to $157 billion (American Diabetes Association, 2013; Benjamin et al., 2017; National Cancer Institute, 2013). For diabetes, this expenditure increased dramatically from 2012 to 2017 and accounted for $327 billion in 2017. Although exact costs for type 2 diabetes are unknown at this time, of those diagnosed with diabetes, approximately 95 percent have type 2 (Center for Disease Control and Prevention, 2018). This means that the majority of the health expenditure for diabetes is directed towards type 2 diabetes.

Diabetes is indeed a costly disease to treat: of the total $327 billion spent on treating this disease in 2017, $237 billion was spent in direct medical costs. These include hospital inpatient care ($69.7 billion), prescription medications ($71.2 billion), antidiabetic agents and diabetes supplies ($34.6 billion), physician office visits ($30 billion), and nursing/residential facility stays ($6.4 billion). However, diabetes has also indirect costs such as those associated with individuals' decreased productivity as a result of the illness; such costs are estimated at $90 billion. These costs are projected to double by 2034 (American Diabetes Association, 2013; Center for Disease Control and Prevention, 2018). Costs to the individual are considerable with lifetime direct medical costs for treating type 2 diabetes and its complications for those aged between 25 and 64 up to $124,700. Individuals with diabetes may spend up to $16,750 per year on medical expenses alone. This number varies based on the individual's demographic background. In 2017, non-Hispanic African-Americans spent up to $10,473, non-Hispanic Whites spent up to $9,960, and Hispanics spent up to $8,051 in healthcare costs related to diabetes (American Diabetes Association, 2018). Approximately 67 percent of the costs are paid by government insurance, such as Medicare, Medicaid, and the military. Thirty percent is paid by private insurance and two percent by the uninsured. While the uninsured represent a small portion of those paying for diabetes care, this could be attributed to the fact that they have 60 percent fewer physician office visits and are prescribed 52 percent less medications than those with medical insurance. This means that diabetes is often left untreated which leads to higher usage of emergency department services with 168 percent more visits than those with insurance (American Diabetes Association, 2018). These numbers simply account for the financial burden individuals living with type 2 diabetes carry but do not account for the emotional burden individuals and their families endure as a result of this disease.

## Rationale for the study

Among the many communities impacted by Type 2 Diabetes, American Indians have the first highest prevalence (15%), non-Hispanic Blacks the second highest (13%), and the Latinx individuals have the third highest prevalence (12%), with individuals of Mexican origin carrying the highest prevalence (14%) compared to other Latinx groups (National Center for Chronic Disease Prevention and Health Promotion, 2014). Various studies have been conducted to address the high prevalence of type 2 diabetes among Mexican and Mexican-American individuals living in the U.S. These studies have varied in their intervention approaches, methodologies, involvement of stakeholders, and treatment settings. These intervention efforts have led to advances in the understanding of treatment adherence amongst patients with type 2 as it pertains to the development of culturally relevant interventions.

In the past 20 years more studies have documented research efforts to implement culturally relevant interventions (e.g.,, including family members, providing intervention in Spanish, integrating traditional foods in nutrition guidelines) that promote treatment adherence among Mexican and Mexican-Americans (Lorig, Ritter, Villa, & Piette, 2008;

Lujan, Ostwald, & Ortiz, 2007; Philis-Tsimikas et al., 2011; Rosal et al., 2011; Vincent, Pasvogel, & Barrera 2007). While these interventions have been successful in increasing treatment adherence in the short-term, the sustainability of these behavior changes remains unclear (Attridge, 2014). Within these intervention programs, attendance and attrition rates are still a concern given that in some cases even when the intervention is culturally congruent and available, some individuals attend only a fraction of the sessions provided and others drop out of the intervention prematurely (Brown & Hanis, 2014). Additionally, given the lack of inclusion of consumers' perspectives who participate in these interventions, it is difficult to know which aspects of the interventions they find helpful. This has limited our understanding of the mechanisms through which short-term treatment adherence is possible.

Given that that existing culturally relevant intervention efforts have been successful in producing short-term treatment adherence, but that interventions effects are not sustained once the intervention ends, it is important to evaluate potential points of interventions that can be sustained over longer periods of time. As such, the patient-provider relationship represents a potential point of intervention in that these relationships may be sustainable over long periods of time and the health provider has direct contact with the individual in any health setting. Moreover, given the direct contact the health provider has with the patient and the fact that it is the provider who shares the treatment recommendations to which the patient must adhere to, it makes sense to explore how this relationship promotes long-term adherence. Thus, it is imperative to explore ways in which a positive patient-provider relationship can be developed during regular doctor visits and ways in which such relationship can be harnessed to promote treatment adherence. Moreover, understanding ways in which patients and providers engage with one another and navigate cross-cultural differences may lead to identifying helpful strategies that could be sustained through the provider over long periods of time. Therefore, studies that evaluate the treatment adherence process among this population in an in-depth manner highlighting the perspectives of those providing and receiving care for type 2 diabetes can be beneficial.

Few qualitative studies have included the perspectives of multiple stakeholders (e.g.,, providers, patients) and even fewer have included the perspectives of Mexican and Mexican-American patients. A meta-analysis of 86 qualitative studies conducted between 2002-2013 focused on the differing perspectives between patient and provider on medication nonadherence. Of these studies, two focused on the perspective of Mexican and/or Mexican-American individuals (Brundisini et al., 2015). This meta-analysis concluded that few studies have included the perspectives of both the patient and provider and that this is an important gap that needs to be addressed as it may help identify where incongruences in the patient-provider relationship and treatment exist and what the sources of these incongruences might be (Brundisini et al., 2015). Their perspectives regarding the patient-provider relationship can shed light on ways such relationship can serve as a point of intervention in promoting treatment adherence for type 2 diabetes among Mexican and Mexican-American patients. Moreover, to understand the treatment adherence process in an in-depth manner more qualitative studies that that elicit the patient's and provider's perspectives regarding psychosocial factors (e.g.,, patient's relationships with those around them), emotional impact (i.e., patient's feelings related to their treatment, and ability to achieve glycemic control), and socio-cultural understanding to the disease and treatment (i.e., the role patients' culture and values play in their health behaviors) are necessary (Funnell, Tang & Anderson, 2007; Nagelkerk, Reick, & Meengs, 2006). Therefore, this study seeks to explore the perspectives of Mexican patients living with type 2 diabetes and their providers as it relates to the above mentioned dimensions in order to deepen our understanding of the treatment adherence process.

It is also important to understand the socioeconomic context and setting in which patients and providers relate to one another as this may provide insight into challenges and resources that are unique to the treatment process in this context. However, little is known about the treatment experiences of individuals receiving services in community health centers dedicated to serving low-income populations that often lack the necessary resources to implement intensive interventions (Bowser et al., 2010). In regards to the socioeconomic context of Mexican patients, poverty is overrepresented among the Latinx community, with approximately 18 percent of individuals living in poverty, the highest rate in the U.S. (U.S. Census, 2017). In comparison to other Latinx groups, individuals of Mexican origin experience the third highest poverty rate with 25 percent of them living in poverty (Macartney & Bishaw, 2013). This is important to note given that living in poverty limits access to quality treatment for health conditions and impacts one's ability to care for chronic diseases such as diabetes (Hashim, Franks, & Fiscella, 2001; Longest, 2006). Thus, it is imperative to learn how Mexican and Mexican-Americans who obtain care for diabetes in community health settings experience their treatment, and how this relates to their engagement with treatment. By identifying ways in which patients of Mexican origin who receive care in such settings and their providers experience treatment, researchers may learn how they successfully navigate barriers to treatment adherence in order to properly care for type 2 diabetes.

To address these gaps in the literature, this study aimed to understand the experience of Mexican and Mexican-American patients and their providers working together in the treatment of type 2 diabetes at a community health clinic.

## The Study

The study was conducted in partnership with the Santa Barbara Neighborhood Clinic (SBNC), a non-profit community health clinic and organization. SBNC serves individuals living in or near poverty and who also may be uninsured. Most patients at SBNC are Latinx individuals whom a vast majority are of Mexican origin.

The study utilized a qualitative phenomenological approach to understand treatment adherence among Mexican and Mexican-Americans with type 2 diabetes. It elicited the patient and provider's perspectives and examined the role that the patient-provider relationship plays in patients' adherence to treatment of type 2 diabetes. Five bilingual health providers and seven patients were interviewed regarding their experiences in working together to promote treatment adherence. Given that culture is likely to impact the way in which individuals conceptualize their disease, treatment recommendations, and the approach individuals take to working with providers findings were evaluated through a multicultural lens to better understand the role that culture played in the development of the patient-provider relationship as it related to adherence (Kleinman, 1980).

## Purpose of the study

The study contributes to the literature on the treatment adherence of patients living with type 2 diabetes and their providers in various ways. First, this study aimed to address the gap in the literature regarding treatment adherence among Mexican/Mexican-American patients which has been documented in a limited manner. Second, it complements current literature regarding culturally-appropriate interventions by exploring the mechanisms through which treatment adherence is facilitated through the patient-provider relationship. Third, this study contributes to current qualitative studies by featuring multiple perspectives that are not typically reflected in the research literature, the patient and provider's perspectives. Fourth, the current study utilizes a strengths-based approach by exploring ways in which patients and providers work together to promote treatment adherence from the perspectives of those who have developed a positive patient-provider relationship and who adhere to treatment recommendations. This is an important contribution to the literature on treatment adherence among Mexican/Mexican-American individuals living with type 2 diabetes given it may not only identify helpful strategies used, but it may also provide further insight into the role that culture plays into the treatment adherence process. This in turn may identify points of intervention that could promote treatment adherence long-term.

## Construct Definition of Treatment Adherence

Treatment adherence has been defined in the healthcare literature as the congruence between the patient's behaviors and the healthcare providers' recommendations for health (Sackett & Haynes, 1976). It may express the patient's ability and willingness to follow recommendations related to taking prescribed medications with fidelity, following dietary specifications, and/or executing lifestyle changes that aid the individual in preventing or managing an illness (Jin, Sklar, Oh, & Li, 2008).

The term treatment adherence may vary across fields of study. For example, in the healthcare field, treatment compliance may be most often used. In comparison, in the field of mental health, treatment engagement may also be utilized. Although slight differences exist between these terms, they are often used interchangeably in the literature and mean similar things.

With respect to evaluating treatment adherence, traditional models have conceptualized nonadherence as patients' failure or refusal to comply with treatment recommendations due to lack of knowledge or motivation (Van Dulmen et al., 2007; Vrijens, et al., 2012). However, more recent perspectives have acknowledged the important role that collaborative relationships between patients and their providers have in facilitating concordance rather than mere compliance. This represents a shift towards a patient-centered model of care that highlights the importance of the patients' autonomy and recognizes them as equal partners in treatment adherence by contributing experiential knowledge (Mead, & Bower, 2000; Vermeire, Hearnshaw, Van Royen, & Denekens, 2001). This shift in perspective has been documented through the development of collaborative models of care for ethnic minorities diagnosed with type 2 diabetes which is presented in later sections.

## Research Questions

This study explores the phenomenology of treatment adherence within the context of the patient-provider relationship as it relates to Mexican and Mexican-Americans patients living with type 2 diabetes. In order to do so, patients and providers were interviewed to gain insight into their experiences as it related to working with providers or patients to promote treatment adherence. The study sought to respond to the following research questions:

**Question 1.** How do diabetic patients and providers experience the treatment relationship?

**Question 2.** How do diabetic patients and providers experience working together to promote treatment adherence?

**Question 3**. How does the treatment setting, diabetes diagnosis, patients' culture and socioeconomic status impact the treatment experience?

## Chapter Two: Literature Review

The chapter presents a critical review of the relevant research literature to support the current study on type 2 diabetes among Mexican and Mexican-American individuals, their access and utilization of health care services for the disease, and the facilitation of treatment adherence. Although the majority of the literature available evaluates the prevalence of type 2 diabetes and treatment trends among Latinx individuals as an overarching group, this review focuses on information that is specific to the Mexican and Mexican-American population whenever possible. The chapter organizes relevant literature by first discussing the prevalence of type 2 diabetes in the U.S. and among the Mexican and Mexican-American population. Second, the literature pertinent to the treatment seeking attitudes, diabetes-related beliefs, treatment adherence patterns, and treatment experiences of Mexican individuals living with type 2 diabetes is presented. Third, the chapter will review relevant literature regarding culturally relevant interventions efforts to address the health needs of the Mexican and Mexican-American population. Last, the literature on the patient-provider relationship as it relates to trust and communication will be evaluated.

### Type 2 Diabetes in the U.S.

Type 2 diabetes is the most common form of diabetes with 1.4 million new cases diagnosed in the U.S. each year (CDC, 2016). Type 2 diabetes occurs when the body is not able to produce insulin properly; it is diagnosed through a glycated hemoglobin (A1C) test (American Diabetes Association, 2015). This test assesses an individual’s average sugar levels during a time period of two to three months. An A1C level between 5.7 and 6.4 percent is considered prediabetes, the precursor to a diabetes diagnosis. An A1C level of 6.5

percent or higher on two separate tests meets criteria for a Type 2 Diabetes diagnosis (World Health Organization, 1992).

Type 2 diabetes is a highly preventable disease even at the prediabetes stage, by following a healthy diet, increased physical activity, and modest weight loss (CDC, 2017). Treatment for type 2 diabetes includes maintaining a healthy diet, engaging in regular exercise, monitoring blood sugar levels, and, when necessary, receiving insulin therapy or diabetes medication (American Diabetes Association, 2018). Medications used for type 2 diabetes vary depending on an individual's blood sugar level and on the presence of other medical health conditions. The type of medication and dosage an individual's needs depends on a number of variables including the onset of the disease and the individual's ability to monitor and then manage glucose levels. Individuals may need to try more than one medication, a combination of medications, or medication and insulin. If left untreated, diabetes can have detrimental effects on an individual's health and lifestyle by causing loss of vision, kidney failure, non-healing ulcers that may lead to severe tissue or bone damage and may require amputation of limbs, stroke, heart disease and ultimately premature death (National Center for Chronic Disease Prevention and Health Promotion, 2014).

Proper treatment of diabetes can decrease the likelihood of developing the aforementioned complications in addition to decreasing the morbidity and mortality by 20 to 50 percent (CDC, 2017). Treatment for type 2 diabetes requires a great deal of adherence from the individual to engage in self-care behaviors such as taking medication, maintaining a healthy diet and proper weight, exercising, monitoring one's blood sugar, and engaging in regular check-ups (Bowser et al., 2010). Each of these self-care behaviors requires both time, motivation, skill, and disease-specific knowledge (Fernandez et al, 2011; McCloskey, Flenniken, 2010; Rodriguez, Chen, & Rodriguez, 2010).

The self-care behaviors previously mentioned are necessary for achieving positive treatment outcomes and preventing further diabetes related complications. For example, maintaining regular appointments with healthcare professionals is a form of self-care that is necessary for type 2 diabetes prevention and management, and has been related to positive treatment outcomes. In a study examining treatment adherence among 1,560 individuals with type 2 diabetes, Rhee et al. (2005) found that those who maintained at least seven scheduled appointments in the first year of diagnosis had lower A1C levels.

## Type 2 Diabetes Prevalence Among Mexican and Mexican-Americans

Latinxs are the largest and fastest growing ethnic group in the U.S. In 2016, Latinxs represented approximately 18 percent of the population with a total of 58 million Latinxs living in the U.S. (U.S. Census Bureau, 2016). Sixty-three percent of Latinxs in the U.S. are of Mexican origin and represent the largest subgroup of Latinxs living in the U.S (U.S. Census Bureau, 2015). Given the rising healthcare costs for chronic diseases it is imperative to evaluate how disease such as type 2 diabetes impact the largest and fastest growing ethnic group in the U.S. According to the CDC, approximately 50 percent of Latinx adults will develop type 2 diabetes over their lifetime. They are also 50 percent more likely to die from diabetes than white adults and develop diabetes at younger rates and with lower body mass indexes (BMI) (CDC, 2017). The age-adjusted prevalence of type 2 diabetes among Latinxs over 20 years old is 11.8 percent, with Latinx men diagnosed by physicians at higher rates (6.2%) than women (5.1%) (CDC, 2014). Specifically, among Mexican-American individuals, there is a high prevalence of obesity (approximately 50 percent) in comparison to non-Latinx whites (approximately 37 percent) across all age groups which increases the likelihood of developing type 2 diabetes CDC, 2016.

## Treatment Seeking Attitudes

Several studies have reported on the treatment seeking attitudes and behaviors among Latinxs. In general, Latinxs are less likely to seek care (Alegría, et al, 2008; Blanco et al., 2007; U.S. Department of Health and Human Services, 2001) possibly due to reasons related to socio-economic status, "self-reliant attitudes", and sociocultural context. In terms of socio-economic status, low income Latinx immigrants may delay seeking treatment due to lack of financial and medical resources until the symptoms of diabetes become acute and limit their functioning (Alegría et al., 2008; Cherrington, Ayala, Sleath, & Corbie-Smith, 2006). Cultural values and traditions can also impact Mexican and Mexican-Americans' willingness to seek and utilize services for diabetes and these cultural factors are important to take into account in order to increase treatment adherence among individuals of Mexican origin. Latinxs may delay seeking treatment because they may hold "self-reliant attitudes" and instead use prayer, isolation, avoidance, and denial prior to seeking help (Hansen & Cabassa, 2012; Ortega & Alegría, 2002). In a qualitative study examining the help-seeking attitudes of Latinxs with type 2 diabetes, researchers found that individuals recognized a need for formal care in relationship to the severity of the symptoms, the level of functional impairment, and the degree of support received from their social network (i.e., family, friends, doctors, priests) (Hansen & Cabassa, 2012). Those who sought formal care often experienced more severe symptoms which limited their day-to-day functioning and were likely to have some level of support from their social network. Furthermore, individuals reported initially focusing on the physical symptoms without fully understanding the complex relationship between somatic (e.g pain) and emotional symptoms (e.g., depressed mood) (Hansen & Cabassa, 2012). This limited understanding often delayed their decision to seek care and influenced how they conceptualized their symptoms.

Integrating treatment recommendations with one's cultural values, beliefs, traditions and customs is challenging and additional support in this process can be beneficial for Latinx individuals with diabetes. For example, in a study of treatment adherence among 34 Latinx men (Rustvel et al., 2009), participants were aware of the importance of taking their medication, maintaining a healthy diet, and engaging in physical activity in managing their diabetes. However, participants reported a lack of know-how and reluctance in applying nutritional guidelines into their daily routine particularly as it related to traditional foods (e.g., Pozole, Pan Dulce, Tortillas). Another challenging aspect of adhering to their treatment regimen included following dietary guidelines during social engagements such as time with family on the weekends, holidays, special occasions, and when traveling to their home country. Some participants found it particularly difficult to honor social norms during gatherings while at the same time adhering to the recommended nutritional guidelines; as a result many withdrew from social engagements to the point of isolation. Participants reported they viewed partaking in foods and drinks available when visiting with family as important to them and feared that refusing food from loved ones would be considered rude. The findings from this study highlight the importance for treatment programs to take into account cultural values and traditions in order to promote treatment adherence among individuals of Mexican origin with diabetes.

## Diabetes-Related Beliefs

Explanatory models of health and illness (Kleinman, Eisenberg, & Good, 1978) have proven useful in understanding how individuals experience a health matter and conceptualize their illness within the context of their culture (Kleinman, 1980). Individuals may conceptualize their illness by utilizing a biomedical framework that is guided by science and medicine, and/or utilizing a folk explanatory model in which the illness is seen through the lens of the individual's culture (Kleinman, 1980). These models posit that an individual's health behavior is guided by their beliefs about their disease and their values (Kleinman et al, 1978). As such, individuals must learn to conceptualize their disease and method of care by making sense of complementary and at times competing explanatory models of health in order to make decisions around self-care (Rodriguez, 2012).

**Beliefs about causes.** Previous studies have identified that Mexican and Mexican-Americans may attribute diabetes to explanations that may lie outside of the biomedical model (Mercado- Martínez & Ramos-Herrera, 2002; Weller et al., 1999). The experience of *susto* (fright) as an explanatory model of diabetes among individuals of Mexican origin has been long documented (Caban & Walker, 2006; Cabassa, Hansen, & Palinkas, 2008; Coronado, Thompson, Tejeda & Godina, 2004; Poss, & Jezewski, 2002). Other folk beliefs that individuals of Mexican origin may attribute as causes for diabetes related to the experiencing of strong emotions such as intense anger (*coraje*), or sadness and depression (*tristeza*) (Coronado et al., 2004).

Other studies have further explored the degree to which individuals of Mexican origin use biomedical and folk beliefs to conceptualize diabetes and how this may vary across different age cohorts. Palmquist, Wilkinson, Sandoval, and Koehly (2012) conducted a cross-sectional study of 497 adults of Mexican origin. Researchers found that across all age groups participants attributed biomedical risk-factors to the development of diabetes over folk-illness explanatory models. However, among adults 42 through 75 years old, diabetes was more often attributed to the experience of susto in comparison to other folk beliefs. These individuals tended to be born and educated in Mexico which may speak to differences in acculturation levels and country of origin. Participants across all age groups were less likely to cite the experience of *empacho* (stomach ailment), *embrujo* (curse), *mal de ojo* (evil eye) and fate as causes for diabetes. This is important to note given that the literature often presents cultural beliefs as homogenous across individuals of Mexican origin. As such, cultural health beliefs among Mexican and Mexican-Americans may vary based on the individual's experiences with diabetes, degree of acculturation, age, educational level, and country of origin.

**Beliefs about treatment.** An individual's conceptualization of the etiology of the disease may also influence the behaviors they engage in to care for the disease (Kleinman, 1980). First, individuals learn about the course of a disease and whether treatment will lead to the management of a disease or cure it altogether. A study conducted by Laboy (2015) utilizing a mixed-methods approach found that several participants in the study believed diabetes could be cured through pills and this depended on the person and circumstance. Some participants reported having heard of stories of people claiming to have cured their disease. This is an important first step for providers to clarify and qualify patient expectations about their engagement in self-care activities.

Similarly to the ways individuals of Mexican origin conceptualize the causes of diabetes, they may utilize both a biomedical and/or folk explanatory model to conceptualize appropriate treatment of diabetes. A qualitative study exploring the attitudes and beliefs of 42 Mexican-Americans found individuals utilized both a biomedical and folk belief system to understand the causes and treatment of diabetes (Coronado et al., 2004). Individuals integrated the two beliefs models to conceptualize the effective treatment for diabetes thus emphasizing the importance of following treatment recommendations provided by doctors, while also supplementing such these with natural treatment options (e.g.,, use of herbal teas, chaya, aloe, nopal). Additionally, individuals who utilize folk explanatory models of diabetes may engage self-care activities that are congruent with such beliefs. For example, a study found that those who attributed diabetes to the experience of susto, often used prayer and cleanses (*limpias*) as ways to manage their diabetes (Poss & Jezewski, 2002). Rustveld et al. (2009) found that individual's endorsement of *fatalismo* contributed to participant's decision to adhere to biomedical treatment regimens for diabetes. Fatalismo is based on the perception of a predetermined life path in which an individual has little control in its ability to change the course of an event or, in this case, the course of a disease (Barron et al., 2004). Participants reported generally perceiving their diabetes diagnosis in a "fatalistic" manner which contributed to their limited efforts in adhering to treatment recommendations.

## Treatment Adherence

As mentioned in the previous chapter, treatment adherence has been defined in the health literature as the congruence between the patient's behaviors and the healthcare provider's recommendations (Sackett & Haynes, 1976). However, this definition has been examined in more recent years within the context of collaborative relationships between patients and providers to represents a shift towards a patient-centered model and to recognize the patient as an equal partner in treatment adherence in order to promote concordance rather than compliance (Vermeire, Hearnshaw, Van Royen, & Denekens, 2001). Yet, many individuals with diabetes struggle to maintain the motivation necessary to engage in diabetes management on a regular basis (De Groot, Andersen, Freeland, Clouse, & Lustman, 2001). A systematic review of randomized controlled trials on the effectiveness of self-management training for type 2 diabetes found that collaborative interventions aimed at increasing an individual's knowledge of diabetes self-management strategies help improve self-reported dietary habits, increase self-monitoring of blood glucose, and aid in glycemic control. However, these gains were achieved only in the short term (less than 6 months). The study also concluded that although increased diabetes self-management training is helpful, changes in personal attitudes and increased motivation to perform such activities is necessary for long-term metabolic control (Norris, Engelgau, & Narayan, 2001). Additionally, previous studies have shown that increased self-efficacy in following dietary recommendations can predict increased self-reported treatment adherence. Equally important, when these self-care activities are meaningful to the individual, life satisfaction also increases (Senecal, Nouwen, & White, 2000; Sousa, Zauszniewski, Musil, Lea, & Davis, 2005). These results highlight that while knowledge of basic nutrition may help someone understand what foods they should eat, individuals are more likely to maintain a healthy diet long term if they feel confident in their ability to integrate healthy meals as part of their lifestyle and their attitudes and reasons for seeking such changes are personally meaningful.

Treatment adherence has also been studied in relationship to an individual's health literacy and physician trust among Latinxs. Although the nature of the relationship between these three constructs still needs to be explored further, a cross-sectional analysis of 140 adult Latinxs diagnosed with diabetes found that low levels of health literacy were linked to high levels of physician trust, and high self-reported levels of medication adherence, diet, and foot care (White, Osborn, Gebretsadik, Kripalani, & Rothman, 2013). It is important to note that health literacy levels in this study were not associated with acculturation or A1c levels and therefore the degree to which participants in the study had adapted to the American culture was not related to their health literacy or their average glucose level. These results indicate there is a relationship between the level of knowledge an individual has about their disease and how much they may rely on the physician to guide the treatment. However, it is unclear how these three constructs; patient's literacy, physician trust, and patient adherence, impact or relate to one another.

## Living in Poverty

Self-care behaviors required for the prevention and management of diabetes are particularly difficult for individuals who live in poverty and/or who do not have health insurance. These individuals often do not have the financial means or nutritional education needed to prevent and treat type 2 diabetes (Bowser et al., 2010). According to the U.S. census, over 40 million people live below the federal poverty line ($23,550 a year for a family of four and $19,530 for a family of three) (U.S. Census Bureau, 2016). According to experts these numbers underestimate the number of people living in poverty. According to the National Center for Children in Poverty [NCCP] (2018), the federal poverty line is based on methodology developed in the 1960s and thus it is outdated given it does not reflect the current income necessary for families to afford basic needs. It also does not reflect the variations in needed income based on location, for example, what it takes to maintain a family of four is likely to differ between a rural and an urban setting.

Although the Affordable Care Act (ACA) has decreased the rates of individuals without health insurance across race and ethnicity, Latinxs are still the most likely to lack health insurance in comparison to other ethnic and racial groups. This is partly due to the large number of Latinxs who lacked coverage prior to the implementation of the ACA and the number of Latinxs who are undocumented (Doty & Collins, 2017). Among Latinxs, 22 percent live in poverty and 22 percent lack health insurance. This percentage is slightly higher among Mexican nationals living in the U.S. and Mexican-Americans, of whom 25 percent lack health insurance (Flores, Lopez, & Radford, 2017; U.S. Department of Health and Human Services, 2015). Additionally, noncitizen adults and children lack health insurance at greater rates than U.S. born citizens. In fact, in comparison to U.S. born citizens, noncitizen adults are two and a half times more likely to lack health insurance, while noncitizen children are three times more likely to lack health insurance (Barnett & Vornovitsky, 2016). Individuals who do not have health insurance and who live in poverty often receive healthcare later in the course of a disease and in an inconsistent manner (Longest, 2006). This delay in care is detrimental to the management of diabetes, a disease that requires a great deal of monitoring and that is highly prevalent among this population (Cabassa et al., 2011). Latinx individuals living in poverty may require a greater level of support in the prevention and management of the disease. Thus, more studies evaluating both the needs of this population and ways to provide additional support in regard to treatment are necessary.

## Treatment Experiences

Treatment experiences of individuals with type 2 diabetes are largely influenced by their understanding of the disease and treatment proposed. More importantly, culture plays an important role in shaping this understanding, and both, people's ability as well as their willingness to adhere to treatment. It is important to first note that an individual's conceptualization of their symptoms influences their initial help-seeking behaviors (Kleinman, 1988). This conceptualization continues to influence their likelihood of utilizing services along the treatment process. In a study evaluating Latinx adults view of their type 2 diabetes, researchers reported that for some, a diagnosis of diabetes elicited strong emotional reactions such as anger and hopelessness. For others who had difficulty managing their blood sugar levels, feelings of anxiety and depression were common (Cherrington et al., 2006). Cabassa, Hansen, Palinkas, and Ell (2008) found that the experience of having limited every-day functioning as a result of diabetes can add to an individual's burden and lead to feelings of depression.

The findings from the studies discussed above highlight the importance of creating treatment programs that help Latinx individuals successfully integrate treatment standards with cultural values and traditions, and help the individual conceptualize the disease in a way that is facilitative of treatment adherence. Such integration can increase both the individual's understanding of the disease and their willingness and ability to adhere to a treatment regimen in the long term. Additionally, treatment adherence is a shared responsibility between the patient and the health professional. Thus, treatment recommendations and standards need to also be shaped and adapted in a way that support Latinx individuals' ability to adhere to a treatment.

## Culturally Relevant Interventions

In more recent years there has been increased efforts to create culturally congruent interventions for ethnic minorities living with type 2 diabetes (Attridge, Creamer, Ramsden, Cannings-John, & Hawthorne, 2014). These interventions have been adapted linguistically and socio-culturally, and they have been utilized by health workers who share a similar cultural background as the patient (Brown, Garcia, Kouzekanani, & Hanis, 2002; Philis-Tsimikas, Fortman, Lleva-Ocana, Walker, & Gallo, 2011; Tucker et al., 2014; Whittemore, 2007). Sociocultural adaptations have included the involvement of family members in the interventions, provided informal settings for socialization during health education activities, utilized peers for support, integrated dietary recommendations with traditional dishes, and assessed cultural beliefs regarding the causes and treatment of diabetes and health care traditions (e.g., the use of herbal remedies) (Brown et al., 2002; Haltiwanger & Brutus, 2012; McEwen & Murdaugh, 2014; Whittemore, 2007). The effectiveness of such interventions efforts has been evaluated based on health-related outcomes such as glucose levels, metabolic control, cholesterol levels, and health-related knowledge, among others. Randomized control trials have demonstrated varying degrees of effectiveness in such outcomes for individuals who receive culturally competent interventions in comparison to those who do not (Brown et al., 2002; Osborn et al., 2010). For example, interventions were successful in increasing glycemic control, self-efficacy, and health-related knowledge. Interventions were less successful in lowering cholesterol levels, BMI, and blood pressure and did not increase quality of life (Attridge et al., 2014). Despite the more recent increase in research studies implementation of culturally sensitive interventions, there is limited knowledge regarding the longevity of such effects and the experience of individuals receiving such interventions (Attridge et al., 2014). Additionally, less is known about the cost and resource effectiveness of such interventions and the feasibility of their implementation across multiple settings. Many of the interventions utilized in these studies were resource intensive (e.g., time, cost, human power).

An example of a labor-intensive intervention utilized can be found in a randomized controlled study conducted along the Texas-Mexico border. The study evaluated the effects of a culturally competent self-management education intervention as part of the county's health initiative. A total of 256 individuals diagnosed with type 2 diabetes between the ages of 35-70 participated in the study. Participants received a total of 52 contact hours over a year long period. These contact hours were comprised of weekly education sessions on nutrition, self-monitoring blood glucose levels, exercise, and other self-care topics. Participants also received bi-weekly support through group sessions aimed to promote behavior changes for a 6-month duration. Education and support were provided by bilingual Mexican-American nurses, dieticians and community workers. The intervention was provided in the participants' language of preference and the participants' family was involved in the intervention. Other aspects of the intervention that were culturally relevant related to the integration of nutritional recommendations with the participants dietary preferences, and adaptations of traditional dishes. An emphasis on utilization of interpersonal relationships was used to promote behavioral changes through meetings with health professionals, community workers and others struggling with similar challenges. Results of the intervention demonstrated that participants A1c levels decreased over a 12-month period, in particular for those with A1c levels above 10 percent (Brown et al., 2002). Other dimensions regarding the intervention's impact on patients' quality of life, BMI, or cholesterol levels were not reported.

The interventions utilized in this study are exemplary in that great efforts were made to provide care that was culturally and linguistically relevant. However, these required a great deal of face-to-face contact with providers, involved several health professionals to deliver the multiple aspects of the intervention, and, more importantly, it demanded a significant amount of time from the participant. Moreover, this level of care may be difficult to provide at community health centers who are typically underfunded and overwhelmed by the large number of patients they serve. Individuals living in poverty may experience this level of care as time intensive and burdensome. Individuals who are already burdened with meeting multiple demands in caring for their families and providing financial stability may find attending to their health to this degree as not feasible.

The long-term effects of such interventions are still uncertain given that the delivery of the interventions offered in these studies ranged between six weeks and a year-long period without evaluating the sustainability of their effects over prolonged periods of time (Lorig, Ritter, Villa, & Piette, 2008; Lujan, Ostwald, & Ortiz, 2007; Philis-Tsimikas et al., 2011; Rosal et al., 2011; Vincent, Pasvogel, & Barrera 2007). Some of these studies although initially effective in increasing treatment adherence and lowering A1c levels, did not yield long-term change (Attridge, et al., 2014; Whittmore, 2007). In these studies, authors explained that although the interventions increased treatment adherence behaviors, it was likely that changes in attitudes and beliefs are needed in order to sustain long-term effects. Other studies reported that although effective in lowering A1c levels, these remained high at the end of the 12-month intervention (Brown et al., 2002), thus, indicating a need for further interventions past the 12-month period. It is possible that individuals who are able to participate in this level of care continue to struggle in maintaining self-management strategies once the support from these interventions is terminated. As such, it is important to identify effective strategies that are cost-effective, sustainable, and can supplement or boost the effects of other culturally relevant intervention efforts in order to promote long term treatment adherence.

The above mentioned research efforts demonstrate that culturally relevant interventions can be effective in promoting treatment adherence and delivering positive treatments outcomes as it relates to lowering A1c levels while the intervention is implemented, but that these outcomes tapper off once the intervention is discontinued. Although progress has been made in the creation of culturally competent interventions more research is still needed to better understand what the treatment adherence experience is like for individuals living with the disease. Attridge et al. (2014), authors of a meta-analysis of 33 randomized trials evaluating the effects of health education interventions for Mexican and Mexican-American patients living with type 2 diabetes concluded that culturally appropriate interventions had been effective in the studies evaluated. Conversely, authors also noted that it was difficult to determine which aspects of the interventions were most effective given that the perspectives of those receiving the intervention were rarely included. Therefore, studies that can provide an in-depth understanding of what individuals consider most beneficial and how these interventions have contributed or not to their quality of life and sense of efficacy in managing their diabetes are imperative. As interventions continue to evolve it will be important to integrate the perspectives of the individuals living with the disease, particularly those receiving services at community health clinics that serve individuals living in poverty. Their perspectives may shed light on what the experience of treatment adherence is like and in turn may help identify alternative points of intervention that can be implemented in such settings.

## Patient-Provider Relationship

Various dimensions of the provider-patient relationship have been evaluated as they relate to treatment outcomes for various chronic diseases, including type 2 diabetes. Some of these dimensions involve physician trust, patient-provider communication, provider's cultural understanding of the patient's sociocultural context, and differences in the perception of treatment effectiveness. These dimensions have been studied within the context of Latinx individuals as an ethnic group with limited research evaluating within-group differences.

**Physician trust.** One aspect of the patient-provider relationship that has been studied among the Latinx population as a group is physician trust. Ample research has demonstrated that Latinxs have less trust towards medical providers and medical facilities than Whites (Armstrong et al., 2006; Beach, Boulware, Roter, & Cooper, 2003; Halbert, Armstrong, Gandy, & Shaker, 2006; Stepanikova et al., 2006). A study evaluating ethnoracial disparities in physician trust found that among those surveyed, Latinxs were 40 percent less likely than Whites to trust their medical providers. This distrust related to the physician's medical judgment, the physician's ability to prioritize their needs, and their ability to care for the patient as a person (Sewell, 2015). Physician distrust can negatively impact help-seeking behaviors and treatment adherence for patients (Whetten et al., 2006). In contrast when patients trust their physician this can improve their relationship and enhance the overall treatment experience. For example, Julliard et al. conducted a qualitative study exploring the perspectives of 28 Latinas about their communication of sensitive information with their physicians. The study found that trusting patient-provider relationships increased the likelihood that Latina patients would disclose sensitive information related to care. Authors highlighted that patients' ability to trust their physician was based on their perception of the existence of mutual respect, and physician's compassionate, caring and kind attitude towards them (2008). This distrust may also be compounded by other limitations such as language proficiency that challenge patients' and providers' ability to build trusting relationships with each other.

**Patient-provider communication.** Limited language proficiency in English and Spanish present challenges for effective patient-provider communication and overall treatment experience. A study of 306 Spanish-speaking patients found that these patients were twice more likely to receive advice on diet and exercise when served by a Spanish-speaking physician (Eamranond, Davis, Phillips, & Wee, 2009). Additionally, according to data from 1186 Latinxs participating in the National Health Interview Survey (NHIS) concluded that 50 percent fewer Latinxs with limited English proficiency received lifestyle recommendations from their physician in comparison to their English-proficient counterparts (Lopez-Quintero, Berry, & Neumark, 2010). Lifestyle changes are necessary for effective treatment of type 2 diabetes; lack of communication regarding such a crucial aspect of treatment is detrimental for patients as it makes it harder to attain positive treatment outcomes while contributing to health disparities.

Another obstacle to accessing relevant health treatment for Latinx immigrants can be limited English proficiency (LEP) considering the scant number of Spanish-speaking professionals. LEP can get in the way of communicating one's needs to health professionals, understanding health related information, and navigating the healthcare system overall (Mulvany-Day, Alegría, & Scribney, 2007). An individual's ability to communicate openly with health professionals regarding their symptoms and concerns about treatment is necessary to develop a collaborative relationship that can lead to treatment adherence and ultimately positive treatment outcomes. To overcome this language barrier, Spanish-speaking Latinxs can profit from receiving care from Spanish-speaking providers and/or from the use of professional interpreters who can facilitate pertinent communication between the individual and health professionals (Interian, Ang, Gara, Rodriguez, & Vega, 2011). However, it is important to use certified translators who are familiar with medical terminology and who are trained to avoid reinterpretation of meanings when translating (Herndon & Joyce, 2004). Moreover, attempts to communicate non-verbally may be fruitful when using pictures and simple nonclinical language to facilitate understanding of provider treatment recommendations (Gonzalez, Salas, & Umpierrez, 2011). Even more important is for providers to demonstrate patience towards patients' attempts to communicate with limited English proficiency in order to promote patient communication.

Additional factors impact the patient-healthcare professional communication including the individual's beliefs about their symptoms, past experiences with health professionals, and expectations about the treatment they seek. This communication is also bound to the limitations of the setting in which they seek services such as appointment availability and time allotted for patient-health professional face-to-face encounter (Carmona, 2007; Hansen & Cabassa, 2012). These limitations may be more salient to individuals seeking care in low-income clinics in which appointment availability and patient-health professional face-time is more likely to be limited. These contextual limitations may in some cases present a barrier to developing trusting relationships between patient and healthcare provider and should be taken into account when providing interventions for Latinxs seeking care in clinics where the primary population being served is low-income.

**Sociocultural context.** While language fluency is important for both the patient and the provider to communicate with each other effectively and thus increasing the likelihood of developing a positive bond and ultimately positive treatment outcomes, cultural understanding is equally important. In a study where Spanish language and cultural training was offered to health providers delivering type 2 diabetes treatment, authors concluded that this was an effective treatment intervention that resulted in significant improvements in patients' HbA1c levels (McElmurry, et al, 2009). This highlights the importance for providers to understand the cultural context of their patients in order to develop positive relationships. Campos presents culturally-relevant aspects that health providers should keep in mind when interacting with Latinx patients. These aspects reflect the patients' desire for a warm, affectionate, friendly demeanor that can convey compassion verbally and/or non-verbally (2007). Similarly, other studies have identified cultural aspects that were relevant to Latinx patients' treatment engagement. The cultural values of *respeto* (respect), *simpatía* (empathy*)*, and *confianza* (trust*)* were found to be important factors in Latinxs' ability to form collaborative relationships with providers and could be utilized to improve treatment outcomes (Cabassa, Hansen, Palinkas, & Ell, 2008; Hansen & Cabassa, 2012).

**Treatment effectiveness perception incongruences.** Perception discrepancies of treatment effectiveness between the patient and provider have been found to influence the patients' willingness to follow providers' recommendations (Hansen & Cabassa, 2012). As a result, it is important for health professionals to attend to patients' appraisal of treatment effectiveness throughout the treatment process. Doing so may help the provider prevent nonadherence and modify treatment as necessary (De Groot et al., 2001; Hansen & Cabassa, 2012). For example, patients' perceived treatment effectiveness may differ from actual health related measures indicating progress. A patient may not perceive a sense of progress when taking a medication and as a result decide to stop following the provider's recommendation to take such medication. While the medication may be helping manage the patient's diabetes, this may not be apparent to the patient which can ultimately result in non-adherence. Thus, it would be important for practitioners to address discrepancies between perceived and actual progress given this is crucial to continued treatment adherence. In regard to medication recommendations for diabetes, health education regarding the side-effects, reasons for prescribing medication, and exploration of beliefs about taking medications can be helpful in facilitating adherence. Thus, developing collaborative relationships with Mexican and Mexican-American patients need to be prioritized particularly at the initial stages of treatment in order to increase treatment engagement and prevent early treatment drop-outs.

### Suggested future directions found in the literature

Although studies have examined the role that culture plays on the patient-provider relationship for Latinx patients as a group, the large heterogeneity that exists within this group is not reflected in the research. While this literature highlights the importance of the patient-provider relationship on treatment outcomes, this relationship has not been examined within the context of Mexican and Mexican-American adults living with type 2 diabetes in the U.S. and the providers who serve this population. Thus, given the high prevalence of type 2 diabetes among Mexican and Mexican-Americans it is important to explore how this group experiences their relationship with health providers. Furthermore, the perspectives of the providers in relating to their patients can provide invaluable information regarding helpful strategies that promote collaborative relationships with Mexican and Mexican-American patients. Gonzalez, Salas, and Umpierrez (2011) highlight the need of research dedicated to evaluating ways in which culturally competent strategies can be delivered through daily practice by health care providers with Latinx patients. Therefore, more research is needed to determine to what extent current reported trends for Latinx patients as a group are representative for individuals of Mexican-origin living with type 2 diabetes and what current effective strategies providers use in their daily practice with this population. Moreover, the limited literature evaluating treatment adherence among individuals of Mexican origin recommends that future studies focus on exploring the role that culture plays in the patient-provider communication, the way they relate to each other, and how this impacts treatment adherence. Lastly, it is suggested that future studies consider ways in which education, social class, ethnic and language differences influence beliefs about diabetes and patient-provider communication patterns (Weller et al., 2012).

In response to suggested future directions found in the research literature regarding the treatment adherence of Mexican patients with type 2 diabetes this study aimed to explore the following dimensions from the perspectives of these patients and their providers: 1) The patient-provider relationship; 2) The way in which culture plays a role in the treatment experiences of participants; 3) The impact of sociocultural differences (culture, education, class, and language) between patient and providers on their relationship, treatment experience, and adherence. The next chapter will provide insight into how this study sought to explore these dimensions in a systematic manner.

# Chapter Three: Methods

## Conceptual Framework

The research literature on the treatment of type 2 diabetes among Mexican and Mexican-American patients has identified a need to further explore what contributes to this population's medical treatment adherence particularly when receiving services at community health clinics that provide free or near-free services. This study aimed to elicit the perspectives of Mexican and Mexican-American patients receiving services at a local community health clinic and their medical providers as they worked together to achieve and sustain treatment adherence for type 2 diabetes. Figure 1 denotes the conceptual framework utilized in this study and is further explained in sections following.

This study utilized a strengths-based perspective that is congruent with the counseling psychology field. As a result, the study focused on learning from positive examples that demonstrated a collaborative relationship where the patient was adherent. Treatment adherence can be defined as the concordance between the patient and provider that exists regarding treatment recommendations and that is reflected in the patient's behavior. Adherence may be understood along a continuum in which varying degrees of concordance can exist. In the treatment of type 2 diabetes, adherence constitutes of a variety of behaviors that patients are to strive to engage in (e.g., blood sugar levels monitoring, physical activity, medication uptake). Given the number of recommendations and complexity involved in type 2 diabetes care, treatment adherence can be challenging. By learning from positive examples in which the patient and provider characterize their relationship as positive and in which the provider describes the patient as adherent, researchers may learn helpful strategies that patients and providers use to develop collaborative relationships that could lead to sustained treatment adherence.

Therefore, this study sought to shed light on the experiences of those who provide medical treatment for type 2 diabetes and share their recommendations (the providers), and those who live with the disease and collaborate with providers to follow treatment recommendations (the patients). Thus, a qualitative methodology is necessary for an in-depth exploration of the patients' and providers' experiences as it relates to promoting treatment adherence. This methodology allows the researcher to honor a level of complexity that may not be possible using quantitative methodologies by facilitating an in-depth exploration of a construct or experience and allows the researcher to understand the context in which the experience occurs (Creswell & Poth, 2018). This study aims to explore the patient-provider relationship within the context of individuals of Mexican origin living with type 2 diabetes receiving services at a community health clinic. As such, a qualitative methodology will aid in understanding the role that the patient-provider relationship plays in the treatment adherence of these individuals.

**The phenomenon.** This study utilizes a phenomenological approach to the study of treatment adherence. In this case, the phenomenon studied is that of the patient and provider working together to promote treatment adherence. Phenomenology assists the researcher to uncover, explore, describe, and analyze the phenomenon in an in-depth manner (Van Manen, 1997). This method best serves the intended purpose of this study by providing a tool for the researcher to understand the essence of what facilitates treatment adherence within the context of the patient-provider relationship as it relates to Mexican patients receiving health services at a community health clinic. Phenomenological research also aims to understand the phenomena from the perspectives of the individuals involved (Creswell & Poth, 2018). Therefore, it was important to evaluate the phenomenon from the perspectives of both the patients and their providers. Additionally, the nature of the patient-provider relationship was explored in order to understand how patients and providers develop a positive relationship and work together during medical visits to discuss and promote treatment adherence. The phenomenological approach also provides the researcher with a method to explore the commonalities of the experienced phenomenon that exist among participants in order to understand the essence of these experiences (Creswell & Poth., 2018). Therefore, data can be found within the perspectives of the patients and providers who have developed positive relationships within the context of treatment and for whom this has resulted in treatment adherence.

**The lifeworld.** There are various approaches within phenomenology, a reflective lifeworld phenomenology focuses on the intersubjective aspects of the world, how individuals relate to the world and each other. This phenomenological approach was chosen given that this study aimed to understand how patients and providers relate to one another. Compared to other phenomenological approaches, in reflective lifeworld research equal attention is given to the phenomena as it is to the context in which the phenomena presents itself. In this case, the lifeworld or context in which the phenomenon occurs was conceptualized as the impact that culture, setting, and socioeconomic class played on the patients and providers as they worked together to promote treatment adherence (see figure 1). This study aimed to hold the phenomenon and context as equals thus the phenomenon of working together to promote treatment adherence is explored and illuminated by the reflective lifeworld research approach, based on the phenomenological epistemology as described by Dahlberg, Dahlberg, and Nyström (2008).

The role culture plays in this meaning-making process is relevant to this study, particularly as it relates to the experience of the patients who share a culture that is not considered the dominant culture in the U.S. Culture may also impact the patient-provider relationship given that patients and providers often do not share the same cultural background. Thus, it was important to explore ways that patients and providers alike work with cross-cultural differences as they relate to cultural norms, beliefs, traditions, and language, among others in working together to promote adherence. In addition to the role of culture, the setting in which the patient-provider relationship develops also can play an important role that required further examination. In this study the setting was a health clinic that provides free or near free services and has multiple locations across different areas of the community. The study explored unique aspects of the treatment experience and how larger systemic issues such as the setting' strengths and limitations, and socioeconomic status influences the patient-provider relationship and the treatment adherence process.

## Research Setting Description

This study was conducted in partnership with a non-profit community health clinic and organization that aims to provide affordable, comprehensive, and quality care. The organization offers integrated health services in that it is made up of two dental clinics, four medical clinics, and offers behavioral health services on site. Within the services the health clinic offers, care management for chronic illness, such as diabetes is included along with preventive programs and education. These clinics are located in the north, east, and west side areas of a small town in California. Due to the clinics' geographical location within the city, individuals from various communities have access to care regardless of their transportation limitations. Moreover, the organization aims to provide quality care regardless of the individual's ability to pay thus largely serving individuals who likely live in poverty and/or are uninsured (Agency's website, 2018).

## Participants

The purpose of this study was to describe the phenomenon of the patient and provider working together to promote treatment adherence within the context of type 2 diabetes among individuals of Mexican origin receiving care at a community health clinic. The sample of participants was chosen based on literature suggesting the wide prevalence of type 2 diabetes among Mexican immigrants (National Center for Chronic Disease Prevention and Health Promotion, 2014), the challenges in maintaining long-term adherence to treatment (Attridge, et al., 2014; Whittmore, 2007), and the benefits of building collaborative relationships with health providers (Rathert, Wyrwich, Boren, 2013). This study recruited two groups of individuals identified as patients and providers from the community health clinic.

A homogenous sample is necessary in qualitative research in order to draw inferences about a phenomenon. For this reason, participants were chosen based on their experience with the phenomenon. In this case both the patients and providers had experience either engaging in treatment adherence or helping to facilitate treatment adherence in their patient population. By collecting data from two types of informants the researcher may describe richer accounts of the experience of the phenomenon and analyze the phenomenon from multiple perspectives. This can also serve as a form of triangulation of the data which is important to increase the trustworthiness of the themes that emerge (Arksey & Knight, 1999).

As mentioned before, this study utilizes a strengths-based approach to the study of treatment adherence which is consistent with Counseling Psychology as a field. In this manner, recruitment criteria was designed to elicit the perspectives of individuals who were able to adhere to treatment recommendations despite the many barriers that exist. These examples may provide insight into how others may also be able to surpass barriers. Their insights may shed light on potential points of intervention and practices that health providers and health clinics may be able to utilize to promote treatment adherence among Mexican immigrants with type 2 diabetes.

The number of participants included in this study is based on recommendations of the use of three to sixteen individuals for phenomenological studies (Smith, Flowers & Larkin, 2009). Dahlberg, Dahlberg, & Nystrom (2008) recommend a minimum sample size of about five participants but that this can vary depending on the level of experience of the interviewee. While some interviews may have more experience formulating reflecting on their experiences, others may not. In this study, providers appeared more accustomed to reflecting upon their treatment experiences, in comparison to the patients interviewed. Dahlberg, Dahlberg, & Nystrom (2008) also pose that in lifeworld research “there is no talk about saturation” (p. 176) given its ontological and epistemological stance that the meaning of a phenomenon is infinite and ever-evolving, therefore saturation is not possible. As such five providers and seven patients were recruited to participate in this study. See table 1 and table 2 for participant demographic information.

The first group of participants consisted of five health providers who delivered medical care for Mexican immigrant patients with type 2 diabetes at the community health clinic. All providers who participated in the study self-identified as cisgender women. Four out of five were born in the U.S. and one was born in Spain and had lived in the U.S. for the past 15 years. All providers identified their race as White. In terms of their ethnicity, two providers identified as not Hispanic, and three providers reported their ethnicity as Hispanic of different descents (See table 1 for details). All five providers reported they had completed graduate or professional studies, specialized in family medicine, and served individuals of all ages at the community health clinic. Their years of experience serving patients diagnosed with type 2 diabetes ranged from 4 to 16 years. Three out of five participants served as primary care physicians and two participants served as nurse practitioners at the clinic. All participants were bilingual in English and Spanish with varying levels of fluency. All participants received a research incentive of $25 in the form of a gift card to a local supermarket.

The second group of participants consisted of seven patients that received care from the providers who participated in the study who attended treatment at the clinic for their type 2 diabetes diagnosis and who identified as Mexican immigrant women. These patients were referred by their providers based on the positive nature of their relationships and the provider's evaluation of their positive adherence to treatment. All patients who participated in the study self-identified as cisgender women, were born in Mexico, and were monolingual Spanish-speakers. Three individuals were from Guerrero, one from Michoacán, one from Guadalajara, and two left the question unanswered. All had lived in the U.S. for at least 10 years. In terms of race and ethnicity, all patients self-identified as Hispanic with six identifying their race as other and one as other and White. The highest level of education completed among the patient participants was high school with one reporting not having ever received formal education. All participants reported a gross family income below $35,000 a year with the number of dependents ranging from one to three. The number of years living with type 2 diagnosis ranged from as little as two years to 18 years. All participants were on medication for type 2 diabetes, three had received diabetes related health education, two had seen a nutritionist to help manage their diabetes, and one was using insulin to treat her diabetes. All participants received a research incentive of $25 for their participation in the form of a gift card to a local supermarket.

## Materials

The study utilized two measures: A demographic questionnaire and a semi-structured interview.

**Demographic questionnaire.** This questionnaire collected the following information from the participants: age, gender, ethnicity, language preference, country of origin, number of years living in the U.S., education level, household income, estimated date of diagnosis, and type of resources accessed through the community health clinic (e.g.,, dietician, diabetes education, medication).

**Semi-structured interview.** Two interview protocols were utilized, one protocol was designed for individuals who experience the diagnosis and treatment, and another for the providers who serve this population. Interview protocols utilized semi-structured, open-ended questions exploring various domains related to the patient-provider relationship, treatment of type 2 diabetes, and treatment adherence.

The interview protocols were designed to explore the participants' lifeworld in order to understand the phenomena of common interest (Gadamer, 1995). The interview protocols for both groups of participants, had similarities in the topics explored, but differences that accounted for the unique manner in which they related to the phenomenon. As such, both protocols explored the relationship between the patient and provider, the goals and tasks the patient and provider engaged in during their encounters, and adherence to treatment recommendations for type 2 diabetes. Throughout both protocols, culture was at the forefront of the line of questioning inquiring about the role that values, beliefs, traditions, similarities and differences in cultural background between the patient and provider played in their relationship, approach to working together, and attempt to promote treatment adherence.

The differences between the patient and provider protocol were reflected in how the patient and provider approached their work together during their encounters. Questions in the provider protocol honored their experience and educational background in formulating treatment goals and elicited their perspective about how to do this with Mexican and Mexican-American patients diagnosed with type 2 diabetes. In the patient protocol, these set of questions related to their expertise as “the patient” who is in the receiving end of treatment (see appendix).

## Procedure

Upon approval of the host university’s Institutional Review Board committee, the recruitment process utilized purposive sampling which relies on expert knowledge of the population to select participants in a nonrandom manner (Lavrakas, 2008). Purposive sampling is the most widely used and important kind of non-probability method to recruit participants into a research study (Welman & Kruger, 1999). Participants were recruited from a community health clinic that primarily serves the population of interest. Through its four locations, the community health clinic serves primarily a low-income, Latinx population, that is mostly Mexican/Mexican-American. This study relied on referrals from health providers at the clinic. These referrals were based on the criteria set forth by the researcher to participate in this study. The recruitment criteria focused on self-identified Mexican or Mexican-American individuals diagnosed with type 2 diabetes receiving services at the community health clinic. Participants identified by the providers were contacted via phone by administrative staff, at which point, they were provided with brief information regarding the study and asked whether they granted permission to be contacted by the researcher or wished to contact the researcher directly. All potential participants went through an initial phone screening process to ensure that they met the inclusion criteria set forth. Additional background information was collected and included the participants' age, sex, gender, ethnicity, socioeconomic status, and educational background among others. The researcher and potential participant engaged in informed consent prior to conducting an individual interview. Participants learned about the risks and benefits of participating in the study, the voluntary nature of their participation, purpose and procedures of the research study, and the procedures used to protect confidentiality. Participants engaged in a face-to-face, in-depth semi-structured interview with the researcher that lasted between 60-90 minutes and took place in a private room at the agency's facilities. Interviews were conducted at the location that the provider or patient indicated as their primary location. These were carried at times in exam rooms, staff offices, conference rooms, and staff break rooms, but all took place in a private manner. The availability of these spaces varied depending on the clinic's location.

## Data Analysis

In Lifeworld phenomenology, the researcher aims to better understand a complex and intersubjective experience, in this case the experiences of patients and providers working together. Therefore, to better understand such phenomena, the researcher must break the data apart, organize, simplify and clarify what that experience is like for the individuals involved

(Dahlberg, Dahlberg, & Nystrom, 2008). As a result, the data was divided into two groups initially, the patient interviews and the provider interviews so as to organize and understand the nuances of each group's perspective. Within each group, each interview was carefully analyzed to identify both the commonalities and differences that existed between participants in that group. When breaking the data apart, the researcher keeps in mind in the background how each subset of data relates to whole therefore contributing to a whole-part-whole thematic analysis (Vagle, 2018). In this study, the whole represents the phenomenon of what it is like for patients and providers to work together to promote adherence and each group's perspective represents parts of this whole. Hence, the researcher examined each group's perspective separately while keeping in mind how each perspective related to the whole. Furthermore, these two major pieces of data were subsequently broken down into various smaller pieces or clusters of themes that added to the understanding of the phenomenon. To do so, the researcher engaged in reflection about the relationships that emerged between subsets of data and to the whole. Such reflection took place individually and with other members of the research team. These reflections were kept in the researcher's notes and allowed the researcher to move from a general understanding of the data and into an analysis of the meaning of the whole. This process followed a "spiral" type of analysis in which both beginning and end of analysis were characterized by an openness which allowed the phenomenon to be understood in new ways and within a new context (Radnitzky, 1970; Vagle, 2018). That is, the meaning of what it is like for patients and providers to work together to promote adherence evolved over time through the analysis process. Thus, allowing for a new meaning to emerge and the phenomenon to be better understood within the context of participants cultural background and the health setting in which the research took place.

The process of breaking the research data was done methodically in order to help the researcher understand the value of each part and how this related to the whole (Giorgi, 1997; Vagle, 2018). To do this, data was broken down into themes that allowed the researcher to identify meaningful patterns that described and explained the phenomenon. These themes or patterns later evolved as the researcher found new meaningful ways of understanding the phenomenon. The main goal in this stage was to maintain an open mind and to be sensitive to the way in which the meaning of the phenomenon evolved (Dahlberg Dahlberg, & Nystrom, 2008). Once the data was broken down and clustered into themes, data was treated again as a whole. The relationship between the various themes was then examined and a pattern that elucidated the phenomenon in a new and meaningful way was identified. Phenomenological research aims to describe the phenomenon's essence and it's essential meaning. In line with Husserlian phenomenology, the researcher must interpret these essences and not merely describe these as this is what makes the process of analysis empirical in itself (Husserl, 1998; Husserl, 2001). Therefore, the meaning of the phenomena does not belong to the phenomena or the researcher, but rather it is construed in the dialogue between the phenomena and the researcher (Merleau-Ponty, 1968). Following Merleau-Ponty's philosophical stance, in order to best understand the experience of patients and providers working together to promote adherence this experience has to be contextualized. In other words, the analysis of the phenomena needs to reflect the impact that the setting in which the experience takes place and the influence of sociocultural variables (e.g., education, class, culture,) has on the phenomenon.

Reflective lifeworld research draws from both phenomenology and hermeneutics in that the former, phenomenology, aims to interpret the phenomenon while the second, hermeneutics, seeks to capture rich descriptions of the phenomena and the context around it without interpretation or constructions of it (Dahlberg Dahlberg, & Nystrom, 2008). Therefore, lifeworld research also works outside of the descriptive vs. interpretative dualism by drawing from both approaches while reflecting the openness and responsiveness attitude to the phenomenon that is characteristic of the phenomenological tradition (Vagle, 2018). To this end the researcher "bridles" her assumptions by discussing personal experiences with the phenomenon so as to not influence her view of the descriptions that participants provided (Dahlberg, Dahlberg, and Nystrom, 2008). Given the experiences of the principal researcher with the phenomenon of treatment adherence, an attempt was made to "bridle" her presuppositions and to approach the phenomenon with a fresh new perspective.

Descriptions and analysis of the phenomena are important in order to provide the results of a study that is as close to the data as possible. However, the researcher's opinion, familiarity with the phenomena, and lens are 'bridled' in lifeworld reflective research. The bridled attitude is characteristic of the lifeworld research and describes the process of understanding phenomena and its meaning as reflective and open (Dahlberg, Dahlberg, & Nystrom, 2008). Unlike other phenomenological approaches which use "bracketing" which refers to the researcher's restrain in keeping their beliefs, theories, and experiences with the phenomena out of the process of understanding the phenomena, in the "bridled" attitude the researcher aims to engage in continuous dialogue with the phenomena. As such, it is important to not make "the indefinite definite" by quickly assuming an understanding of the meaning of the phenomena. Instead, Dahlberg Dahlberg, & Nystrom (2008) pose that the researcher must approach the understanding of the phenomena as a slow evolving process that requires an open and reflective attitude. That is, everyday experiences that have become tacit overtime must be questioned, reflected upon, and dwelled with in order to better understand their meaning. This process takes time and requires an active dialogue between the phenomena (data collected) and the researcher.

### Trustworthiness

In line with “the bridled attitude” that is characteristic of the reflective lifeworld approach the researcher engaged in reflection with a team made of two undergraduate researchers and an expert researcher who posed questions that engaged the researcher in reflection of pre-understanding, attitudes, and biases that might influence the data analysis process. All members of the research team were bilingual in Spanish and English, with the principal researcher and expert researcher being proficient in utilizing Spanish at an academic level. Additionally, the researcher committed to the “bridled” attitude in the following ways: 1) The researcher engaged in reflection individually through the use of field notes in which initial impressions of the data were written upon completion of each interview; 2) Members of the research team engaged in reflection regarding their perspective of each interview upon the transcription of each interview in a written format; 3) Individual reflections were shared and discussed on a weekly basis as a team; 4) The researcher worked collaboratively with team members to develop the themes found in the data and to construct the meaning of the phenomenon. To do so, each member of the team developed tentative themes for the two groups of data. These were later discussed as a team in order to develop the final themes that represented the experience of the patient and of the provider. Also, each member of the team took time to develop a graphic that demonstrated the meaning of the phenomenon. The team discussed commonalities and differences between the three graphics to construct a graphic that depicted the final meaning of the phenomenon; 5) These findings were shared with the expert researcher who helped guide this study by providing feedback regarding the data analysis process and the findings of the study. Additionally, the researchers' reflections were documented in a written format in order to follow ways in which the meaning of the phenomena and structure evolved over time.

The team also provided input regarding the accuracy of the structures and essences identified by the researcher and the extent to which these reflected or not the original data. This process of joint reflection, open dialogue, and active "dwelling" with the phenomena contributed to the triangulation of the data which Creswell describes as necessary to the assessment of the accuracy of the findings (Creswell & Poth, 2018).

Throughout the research process the researcher drafted self-reflective memos that raised my awareness of the biases, prejudices, past experiences and how these have shaped my interpretation of the phenomena (Creswell & Poth, 2018). For example, the researcher had prior experience conducting a study that evaluated treatment adherence among individuals with co-occurring severe mental illness and substance use. This experience inevitably influenced the researcher's pre-understanding of the phenomenon. As such, the researcher engaged with this pre-understanding by identifying ways that the context in which the phenomenon of treatment adherence occurred influenced its meaning. In the beginning these preconceptions of the phenomenon were used during the initial phase of interpreting the data. For instance, in the prior study conducted the researcher learned about the importance of including the perspectives of both the individuals with the disease (the patient) and the providers in order to understand the phenomenon of treatment adherence. As a result, the perspectives of both patients and providers were included in this study which allowed the researcher to place greater focus on the interpersonal process that takes place when patients and providers work together to promote adherence. According to Gadamer, all understanding is influenced by earlier experiences (Gadamer, 1995). Thus, it is impossible to completely set this aside during our analysis of the data. He suggests instead that this pre-understanding is used during the initial stages of the analysis process so as to harness it in productive ways (Gadamer, 1995). By actively engaging in dialogue and memoing self-reflections of the researcher's pre-understanding, the researcher approached the process of bridling in a disciplined and methodical manner so as to remain open to the meaning participants expressed during the interviews and thus attempting to present the findings in ways that honored their contributions.

## Human Participants and Ethical Considerations

A proposal of this research study was evaluated by the Institutional Review Board of the researcher's university. No Institutional Review board was established at the partnering community clinic to evaluate the proposed study. However, several meetings were held with the Chief Medical Officer of the institution to evaluate the feasibility and ethical standards of the research study. Throughout the recruitment stage of the research process researchers and the partnering community clinic were mindful not to impose undue influence on potential participants to volunteer for the study. As such, all participants were contacted by administrative staff rather than the Chief Medical Officer or the individual's provider in an attempt to avoid influencing participants given the different power dynamics within the organization. Informed consent was obtained from all participants. All electronic data was kept in password protected files in an encrypted computer. Paper copies related to the study were kept in locked files in a locked room of the university. A conscious effort was made to facilitate participation in the study by conducting interviews at the clinic site chosen by the individuals, this helped account for difficulties related to transportation given that most chose to conduct interviews at sites located within walking distance of their home. Additionally, participants were fairly compensated of their time by receiving a $25 gift card that could account for work hours missed in order to participate in the study.

# Chapter Four: Results

The results are organized into two groups: the patient group and the provider group. For each group the following invariant constituents are presented: relationship building, adherence building, and contextual factors that impact treatment. Furthermore, each of these constituents include themes and are reflected in Tables 3 and 4 as well as in Figures 2-4 (see Appendices). At the end of this chapter, the essence of the phenomenon is presented in order to synthesize the relationship between the themes that emerged from the data and the phenomenon.

## The patients

From the patients' perspectives and with respect to relationship building, the experiences that led to relationship building with their providers included: the development of a personal bond, having a common language, and the provider's level of professionalism. Factors that promoted patients' adherence to treatment recommendations included: patients' motivations to change, their experiences implementing lifestyle changes, their provider's encouragement, and the expectations they have for themselves as patients and of their providers. Additionally, patients identified the following contextual factors that impact their treatment experience: the role of culture in treatment, their understanding of type 2 diabetes, and systemic challenges they encounter. Table 3 presents the invariant constituents and themes derived from the analysis of patient responses.

**Relationship building.** The following represents themes that emerged in the analysis of patient interviews regarding what helped them relate to their provider, develop trust, and build a relationship overtime. From the patients' perspective, the provider's ability to communicate with them in Spanish, to convey empathy, and to maintain a professional attitude during their visits helped them develop a trusting relationship with their provider.

***Personal bond***. According to patients what promoted the development of a personal bond is the provider's ability to convey their *humanidad* (literally, their humanity, similar to human presence and empathy), personal interest in the patient, and inspire *confianza* (trust).

Patient's perception of the provider's *humanidad* (empathy) was conveyed by their ability to understand the patient's circumstances, take their health concerns seriously, provide health information, listen to the patient, as well as their ability to demonstrate patience. Patients emphasized the importance of feeling heard and approached with genuine care. One patient shared what actions the provider took that helped her feel heard and respected.

> I know my body, I know when I am in pain or feeling something that is not normal, so I come and explain it to them. But there have been times when they don't take what I say seriously… but this other doctor I saw, she did give it a bit more importance and referred me to get more specialized exams.

According to patients, providers also demonstrated their personal interest in the patient and inspired *Confianza* (trust) when they engaged patients in small talk. This helped put the patient at ease and created a sense of intimacy or trust that promoted the development of a personal bond. One patient explained that the difference between their perception of the provider as someone trustworthy or untrustworthy was their demeanor towards the patient. She shared an experience in which her provider conveyed trust: "She was my same age. She told me, 'I'm also your same age. Look, we don't look that old'. I told her, 'yeah, you are right [laughs].' I trusted her."

***Language.*** The analysis of the patients' narratives identified the provider's level of fluency in the Spanish language as significant in the treatment experience. The providers level of fluency that patients encountered varied from limited to full proficiency. Patients reported feeling most comfortable communicating their needs and asking questions when the provider was fully proficient. One patient noted, "You feel safe and comfortable in sharing what may be wrong… It gives me comfort and trust knowing that she speaks Spanish."

When providers' language fluency was limited, patients looked to the demeanor of the provider in caring for them. This demeanor communicated warmth or judgement from the perspective of the patient. Even when patients preferred proficiency in language, they also recounted positive experiences working with some providers with limited language proficiency.

> I saw her from the beginning in the way she treated patients. Although she would never say anything because she didn't speak even a bit of Spanish, you would have to not have any smarts to not understand what she was trying to say. She would make herself be understood by others… and it looked like she understood me well, I thought, I would see her and feel like she was treating me well.

In contrast, one patient provides an example in which language posed a barrier, but it was the perceived demeanor of the provider that inspired distrust.

> You see when a person likes you and when they don't... when I came next time I told them 'I don't want to see that doctor'. Because I saw that the doctor brought someone in to translate for her, because she didn't speak Spanish, but it looked like she wasn't too pleased having someone translating for me. It was as if she was saying 'why does she not speak English?'

These two distinct examples point ways in which patients believe a language barrier can thwart the relationship building process or can be overcome through the providers' effort in communicating non-verbally with the patient.

***Professionalism.*** The perceived level of provider's professionalism by patients was another constituent identified in the analysis of their narratives. More specifically, the perceived level of respect they were given and the attitude providers had towards fulfilling their duties as health providers stood out. One patient explains professionalism in the following manner, "The treatment and attention she gives me to answer my questions, and the interest I see she has in explaining things to me, and her patience towards me when I'm feeling bad."

For patients, the provider's professional attitude came through as early as the beginning of the health visit. Patients noted "la actitud de recibirme" (the attitude in welcoming me) was important to them and was the first way in which they assessed the provider's level of professionalism. In their eyes this conveyed not only a sense of professionalism in having a positive attitude towards their job, but also a caring attitude towards the patient. One patient shared the following example.

> I have had to see doctors that many times look like they're upset for having to see me. I can understand they may be tired but many times their attitude is disconcerting. Every time I see her [current provider], she's always willing to see me, and if she's tired, she still gives me her best to give me reassurance…she has a good attitude.

Similarly, respect was also an important aspect of the manner in which patients assessed the provider's level of professionalism.

**Treatment adherence building.** The following represents themes that emerged in the patients' interviews regarding what motivated them to adhere to treatment recommendations, how they went about implementing lifestyle changes, how this process was facilitated through the patient-provider relationship, and what their expectations were of themselves and their providers.

***Motivation to change.*** For patients a desire to be present for their families, to live and/or to care for themselves, and the progress they make, motivated them to adhere to treatment recommendations. One patient provided the following about her motivation to change: "For my health and for my family, and for everyone. As they say ¡Uno, dos, tres, por ti!¡Uno, dos tres, por mí! (One, two three for you! One, two three for me!)."

From the patients' perspectives progress was observable through their increased mobility, positive mood, and/or decreases in A1C levels. For some patients, progress came after making dietary changes and was perceived by the patient in their sense of well-being. One patient shared her perspective about the relationship between her diet, blood sugar levels, and her well-being.

> What happens is that when you eat healthy you feel good. Your mood. When you have high blood sugar, I feel tired. I feel down, irritable, angry! Then when all [her blood sugar] is good, you're happy, calm, relaxed, nothing matters! You want to live in the moment, you enjoy. 'how beautiful life is, oh this is beautiful, that is so beautiful'. When your blood sugar is high, like what happens to me when I eat things that I shouldn't, you notice. You feel tired! When your diabetes is high, you feel tired! All you want to do is close your eyes.

Patients observed progress improved not only their quality of life, but also their sense of self-efficacy in managing the disease. One patient shares, "It's important for me because I have had my A1C above 11… now, no more. Five, six and I feel wonderful. Very proud of myself!… you can do what you set out to do!"

***Implementing lifestyle changes.*** Patients shared their experiences implementing lifestyle changes recommended by their providers as well as barriers they faced in implementing such changes**.** In general, patients expressed wanting to adhere to treatment recommendations yet modifying such recommendations to better fit their lifestyle. In doing so, they attempted different approaches until they found a viable alternative that fit their lifestyle. From the patient's perspective, this alternative was often communicated with the provider who then evaluated it and shared their input. One patient shared her journey in implementing and keeping an exercise routine based on the provider's recommendations:

> Participant (P): This one time they sent me to yoga… I went. But I used to have bad allergies before. I would try to go to yoga but I didn't like it… I would blow my nose and I would say 'okay I will take some tissues or a towel' because of the allergies my nose would constantly run. I would do a little bit of the exercises but then my allergies would flare up, I would get teary-eyed and would have the urge to go to the bathroom. I tried Zumba too, went to one class, didn't like it. She [the provider] helped me to go to yoga. The first few days I liked it but then I asked myself 'what am I doing going over there? when I can go walk on my own with my water bottle. I already know where to go for a walk, where there are bathroom, where there is this and there's that'.
>
> Researcher (R): Does your doctor and nurses know that you decided to not continue with yoga and just go for walks?

> P: She told me to continue walking. She said 'go in the morning, go in the afternoon, any time you have available'. I tell her that's what helping me drop weight and I like to walk.

From the patients' perspective, a barrier to implementing lifestyle changes was their perceived progress or lack thereof. When patients sensed they made progress based on changes they implemented this motivated the patient to adopt such changes as habits. Yet, when no progress was perceived by the patient, they became frustrated and this, in turn, became a barrier to adherence. One patient explained how her emotional well-being was impacted when her efforts in making dietary changes did not show positive results on her A1C results:

> There are times that I start getting desperate. I get stressed out because there are times that I eat things that I know are not going to be damaging but then my blood sugar goes up. If I get hungry at night, I say 'No, I can't eat, my blood sugar is going to go up!'. So that causes me stress. I get desperate because I'm hungry but at the same time I don't want my blood sugar level to get too high.

Limitations regarding patients' physical functioning made it difficult and at times even painful to engage in physical activity. When patients were able to engage in physical activity, they often utilized walking, whether it was used as their primary form of exercise and/or form of transportation. However, changes in weather (e.g., the onset of winter, rain) made it challenging to engage in their typical health routine.

***Encouragement.*** According to patients, the provider's encouragement helped promote their adherence by helping them recognize their own achievements. When providers shared good news about the patient's progress in relationship to their A1C measurement, this was encouraging to patients. From the patients' perspectives, providers' recommendations were coupled with encouragement for implementing lifestyle changes. Sometimes encouragement was provided even when the results were not what was expected from either the provider or the patient. One patient shared,

> Well, you feel sad. She asks what I will do [differently]? I respond that I will not eat this or that, that I will go walk more, or do this other thing. She says, 'you will be okay, you will be okay.'

Patients also expressed that their providers' ability to encourage them in their accomplishments and lack of progress was important to them and motivated them to continue adhering to treatment recommendations.

***Role expectations.*** Patients shared what they believed was their responsibility and what they expected from providers. From their perspective, patients are responsible to look after themselves and to follow the providers' recommendations. One patient shared "no one is going to ever have more responsibility over your life than you." As for the role of the provider, patients viewed them as someone who recommends "lo que es mejor para uno." (what's best for me). Patients recognized the provider as someone with more knowledge about how to treat type 2 diabetes, whose role was to share such education with them and to make health decisions based on what is best for the patient. One patient expressed providers' responsibility as such, "To be conscious that diabetes is a silent disease. To be conscious about why she does the vision exams, the liver exams."

**Contextual factors.** The following represents themes that emerged in the patients' interviews about the impact that culture, diabetes understanding, and systemic challenges had on their treatment experience. Patients' identified ways in which their cultural background influenced their understanding of the type 2 diabetes diagnosis. According to patients their understanding of their diagnosis was also influenced by different sources of information (e.g., formal classes, family history, personal experiences, and the media). Additionally, patients as a group identified systemic challenges such as discrimination, poverty, and time as limitations that they managed by utilizing various forms of resources available to them and with the help of their providers.

***Culture***. The analysis of patients' narratives identified cultural congruent strategies including the integration of natural remedies with treatment recommendations made by their providers. Although patients reported taking a variety of natural remedies for multiple health purposes, the following natural remedies were taken specifically to care their type 2 diabetes: nopal, cinnamon tea, laurel, moringa, and green tea. One patient shared: "In my childhood over there [Mexico], there were no doctors, there was nothing. If we had a fever my mom would give us *epazote tea* (herbal tea), tea of any kind of herb you could find in the countryside." Although some health behaviors were learned with the intention of caring for an illness, sometimes these were practiced as a result of income limitations rather than out of a desire to care for their health,

> We were a lot of children, nine total, and we were poor. My father worked the fields, we would eat whatever was in season: ejotes, calabacitas, all of that from the land. If you said, 'my head hurts' the response would be 'have some tea' and that was more than enough.

Such behaviors were not limited to the use of natural remedies to care for an illness, but also extended to the patient's past dietary patterns while growing up in Mexico.

> I remember from a young age that my mom would try to always have vegetables. It wasn't easy due to our lack our resources. We would only have meat once a week, on Sundays. During the week it would be vegetables because they were more affordable but on Sundays it was tradition that we would have meat. Bread, not so much. Sundays were made to reward yourself, it was always bread and meat.

Given the limitations of poverty while growing up, activities typically associated with the consumption of food such as family gatherings had a special meaning. The focus of family gatherings was on "la convivencia" (building community), that is the experience of sharing time together as a family rather than solely on the food being consumed. The reward in such instances was spending time with family, "It is a tradition that you have to maintain it as if it was a party. [even] if the economic situation was difficult, it was a party that was the reward a way to build community during that party."

***Diabetes understanding.*** For patients, type 2 diabetes was a disease that was familiar given its large representation within the patient's social context. Many had family members living with the disease, some had loved ones who died from the disease, while only one patient was the first person in their family to receive the diagnosis. Patients' understanding of the disease was also impacted through the examples of others in their communities living with diabetes. For patients watching others within their social context in worst conditions as a result of the disease, served as a reminder about the consequences of diabetes if left untreated "I'm very scared. I have seen many cases that end up on dialysis, many other things that make me really scared."

Patients' understanding of the course of the disease, the etiology of the disease and appropriate treatment of type 2 diabetes was obtained from a combination of their family's history with the disease, their own experience living with diabetes, and for some, what they learned through diabetes education classes.

> I'm the first to try to take care of my diabetes. On my mother's side I would always hear that someone in her family would die from diabetes and in fact several of them had lost several extremities before they died. My mother died of diabetes and colon cancer, it was both things. When I was 15 they diagnosed her with diabetes, I never saw her make any changes to her eating habits. I would tell my mom 'the doctor said this' and she would respond 'de gordos y tragones tienen unos pantalones and I can't live without eating tortillas'… to me that was something unimportant, I didn't really understand the magnitude of the disease… what I have been hearing in my classes is that it has a much bigger effect, it impacts your mood and mental health.

Patients attributed their development of the disease to a variety of factors, for some it was stress, for others was an inevitable disease due to their family's health history, "I am diabetic by inheritance, my mother was diabetic. In Mexico a doctor once told us that we did not have a 50 percent chance of being diabetic, that we had a 99.9 percent chance of being diabetic." Out of seven patients interviewed only one reported being the first diagnosed with the disease in their family. For the only patient without a family history of type 2 diabetes she attributed the development of her diagnosis to the experience of "*susto*" (fright).

> I didn't get diabetes due to my low weight or lack of nutrition. I got diabetes because I experiences a *susto*… I had spoken to my sister the afternoon of February 13th because it was her birthday, someone called me at one in the morning on the 14th of February to tell me she had died… That's why I do not believe what they say about diabetes being hereditary. No one in my family was diabetic. The only diabetic is me.

As for the diabetes education classes, four out of seven patients had attended such classes. For those who had attended these classes they reported learning a variety of information related to nutrition, exercise, and the causes for type 2 diabetes, among others. From the patients' perspective, such information helped them better understand ways in which diabetes impacted their health, mood, energy levels, and overall impact of the disease.

***Systemic challenges.*** Patients identified challenges they had to overcome in seeking treatment services and in adhering to treatment recommendations. Such challenges were sometimes representative of larger systemic problems that exist in our society (e.g., discrimination, poverty, and time limitations). One patient described a negative experience she had when she was referred to a specialist at another clinic by her main provider.

> There really is a lot of discrimination. When I had the accident and the doctor sent me to [clinic's name] to get some exams done, the nurse got upset and asked me 'why are you here, what are you here for?'. It bothered me. I told him 'I'm here because they sent me. It is not because I want to be here, I would not come here on my own. Why this attitude?'

From the patient's perspective, such experiences were not representative of the positive experiences they have with their preferred provider. This is unsettling and unwarranted from the patients' point of view. Such negative interactions discouraged patients from seeking services outside of their home clinic or preferred provider. While discriminatory experiences typically occurred when patients did not share the same ethnic/racial identities with the provider, sometimes negative experiences were perpetrated by those who shared the patients' same or similar ethnic background.

> If there is a Mexican person working here, I am Mexican myself, many times you don't like the person or the person doesn't like you and they don't treat you well. Even though they are working here and we're both Mexicans. I believe that because we are both Mexicans we should love each other.

Systemic challenges such as poverty also impacted the patient's treatment experience by limiting their access to necessary medication, sometimes even when insurance provided by the government was available. This was distressing for patients and limited their ability to adhere.

> They told me that they were going to give me insulin, and insulin is so expensive… so I thought to myself 'now what?'. I kept thinking and thinking… I said, 'if I have to use this thing and I don't have money to buy this medicine, what am I going to do?'… That's what people don't understand, that you're worried because you're trying to figure out how you can make it work. I asked my husband are we going to pay the cellphone bill, buy gas, or buy the medicine? He says 'no, your medicine comes first.' I paid for it something like two months but then I told him 'no'. You begin to deny yourself that you have a disease because there is no money to pay [for the medicine].

Sometimes the patients' socioeconomic status required them to engage in behaviors that were detrimental to their health despite their desire to adhere to health recommendations. Patients sometimes shared their inability to afford necessary medication or other basic needs with their providers and were able to recruit help from their providers to overcome such challenges. One patient shared "she [provider] says 'we have this medicine, it's helping a lot of people', I told her 'doctor, I do not have the money to buy this medicine' and she was the one who helped me to get Medi-Cal to pay it for me."

Other systemic issues that inevitably impacted patients' treatment experiences involved limitations set by the healthcare system in the U.S. That is, time limitations that determined the amount of attention a patient received in one single visit and the availability of appointments that could be readily made by patients. One patient shared her experience with this system of care.

> If I have a headache or got sick overnight and come tell her [the provider] 'you know what doctor, I'm also feeling this' [she says] 'you have to make another appointment because you came here just for this'. That's where I say, what's the difference? I asked about this and they told me it was more about time. That depending on what I had set my appointment for, that's what they would allot the time for.

Time limitations also extended to long wait times which were a source of frustration for some patients. While most patients expressed being understanding of the providers' time limitations, overall patients wished more time was allotted for health providers to listen to their concerns. One patient described medicine as "mechanic" and "direct" leaving little room for the patient and provider to speak, "What I understand is that there are so many people, so many of us that need care that there's no time to socialize or spend time with the patient. It's not that she [the provider] doesn't want to, it's that time is limited."

### The providers

The themes that emerged in the providers' interviews regarding their treatment of Mexican patient diagnosed with type 2 diabetes are presented in the section below as it relates to the invariant constituents of relationship building, treatment adherence, and contextual factors that impact treatment. From the perspectives of the providers, experiences that led to forming positive relationships with their patients included, the development of their understanding of the patient's life, listening to patients' stories, and building trust. Providers shared their experiences in promoting treatment adherence including sharing the decision-making process, promoting appointment attendance and what their expectations were of themselves as providers and from the patient. Additionally, providers shared their perspectives about contextual factors that impacted treatment. Such factors included the role of culture in treatment, individualizing care for Mexican and Mexican-Americans with type 2 diabetes and providing diabetes education.

**Relationship building.** The following represents themes that came to light in the analysis of providers' interviews about what helped them relate to their patients and develop trusting relationships with them.

***Understanding and empathy.*** From the providers' perspectives they first built relationships with their patients by finding ways to relate to their patients. Providers related to them as an individual, a patient, an immigrant, and/or a family member. For instance, one provider related to her patients' immigrant experience via her grandfather's stories about his immigration process:

> I realize what it's like being somebody in another country and come here and not have your degree behind you name, not have a trade, or your profession and having to bend or kneel to jobs that maybe weren't doing before. While having to depend on people for transportation or living in fear of not having certain rights or citizenship security that others have.

According to providers, they often care for multiple members of the patient’s family which further allowed the provider to understand the patient’s life. For instance, one provider shared the following:

> They bring up things that I may find comfort in and vice versa. So, for example, they’ll ask me, ‘How’s your new baby? How’s your little baby?’. And they’ll bring in their little baby and it’s comforting to see family, to see them bring in family and be happy.

***Listening to patients’ stories.*** While some initial understanding of the patient’s life may come from the provider’s own experiences, this understanding was furthered when the provider was willing and able to listen to the patient’s stories. Providers emphasized that this insight into their patients’ lives is developed over time rather than in one single visit. One provider demonstrated this process:

> Many times they don’t like coming to the doctor, once they start feeling a little more relaxed they start opening and talking and sometimes they tell you things that might seem silly, but they’re like telling you things from their families, their children…Sometimes it’s not that they don’t want to [adhere], meaning they can’t. Diabetes is a very expensive disease and talking to them about silly things you might learn that maybe they don’t have insurance, or they don’t have money. Then they have to decide ‘do I eat today, or do I buy a medication, or do I help my children?’ I found people that need to take insulin every day and try to save by taking it every other day to make it last longer. Then it’s like ‘you can’t do that because it’s not working’ and then that’s where the education comes. Then you say ‘okay let’s see how we can help you what we can do to help you with this’ by providing your

> services that's how they open again. What they do is just relax, I guess answering your question, and talking to you like they, like we're talking, like they trust you like they're kinda friends and then they tell me things that at first might seem silly but at the end it might be important.

***Building trust.*** Trust was identified as another important element of the patient-provider relationship that from the providers' perspective was promoted overtime and through different strategies. By better understanding the patient's experience providers were able to be intentional about how to promote trust with their patients:

> I think the first time I tell them they have diabetes it's a shock. I'm not going to lie I had my own blood work done maybe a month and the provider goes, 'Oh my gosh you're prediabetic'. At first, I was like 'you're lying, you are wrong that test is wrong, repeat it.' It turned out to be a wrong copy scanned…So, reflecting on that I was like wow 'No way, repeat it, I don't believe you'. So now I know that. So, when I tell you, 'Okay let me show you what I'm looking at, I'm not making this up. This is your chart, this your name, these are the four different tests that all tell me that you have diabetes. It's not just one.' It's getting them to realize that they actually have it and trust me that I'm not lying to them.

From the provider's point of view communication and trust go both ways and they wanted patients to communicate openly with them regarding their adherence. For providers their inability to trust that the patient will follow their recommendations can be a source of frustration:

> I had a guy I've been seeing for eight years, and then he brought in a backpack one day full of I think every pill I've ever prescribed. It just gutted me because it was like

> I’m an idiot. I’ve been giving you all of this medicine, and you’ve never taken a single pill…There’s a relationship here you know.

**Treatment adherence building.** The following represent themes found in the providers’ interviews about various strategies they use to promote treatment adherence overtime. These strategies included sharing the decision-making process with the patient, navigating patient preferences, and promoting concurrent appointment attendance.

***Sharing decision-making.*** According to providers, it was important for them to share the decision-making process with the patient as this promoted treatment adherence. For instance, one provider shared how she invited the patient’s participation in treatment:

> This is your health, this is your body in the end you are the one that will allow me to take care of it. Then I want to help you, but you are the one that’s gonna decide if you want me to help you or you feel comfortable with that. Then in some way that’s when we have this talk that I’m saying, that sometimes the talk might be silly about silly things, but just to let them feel comfortable and ask all these questions and let them understand that it’s your [the patient’s] decision.

According to providers, patients sought medical attention for a wide range of health concerns that were at times unrelated to their diabetes diagnosis. While providers may wish to focus on providing care for the patient’s diabetes, they negotiated the focus of the visit with the patient:

> You know people come sometimes with a list and, their list is so different than my list. Then the first thing just for time management you got to get through their list before you get through your list. They care about this, and I’m trying to make them

> care about that. You can't try to start changing somebody unless you've heard them first.

Other ways providers shared the decision-making process was by discussing the treatment approach with the patient and eliciting their participation in the decision process,

> I tell them my rationale for choosing certain medications. I'll make sure they have the education, I always want my patients to be engaged in their choice. I never want to just say, 'You have diabetes now take this.' So, I think that helps them and it helps them and me come to an agreement and a plan.

Providers also reported they listened to the patient's preferences regarding the use of medication and insulin, and adapted their treatment accordingly, "I feel like in general my Mexican and Mexican-American patients don't like to take medications. They are [instead] very motivated to make lifestyle changes that need to be done." From the providers' perspective when patients expressed hesitation towards the use of insulin, this stemmed from a variety of reasons including fear of pain associated with the uptake of insulin.

> What I sometimes will do is I will say, 'hey what if I just give you one shot of insulin now, I'll show you how easy it is and how it doesn't hurt how you think it will'. And sometimes they say yes, sometimes they don't. I'll show them, and a lot of times they're like, 'yeah that's actually not bad that's pretty easy, I think I can do that.' A lot of times that works. But if it doesn't then we come up with a second option that is definitely not as good, but it is comprised of oral tablets that they will take instead of doing insulin.

***Appointment attendance.*** Providers shared they were intentional about how they promoted patients' recurrent attendance. From their perspective, they noted there was a relationship between the patient-provider relationship, attendance, and treatment adherence. One provider shared, “Most of them, the ones who are controlled are all pretty routine in the way that they come to the clinic.” However, sometimes even when the patient’s A1C levels were not controlled, they continued to attend their appointments. One provider shared her insight as to why this might have been the case:

> We get along very well. Maybe it’s that same reason I don’t ever reprimand him. I always try to work with him, whatever he feels comfortable with, especially the insulin thing…so I think he’s hopeful that he won’t have to do that [take insulin], and that we’re going to give him good news when he comes in. Yeah, I think that and the relationship.

At times the positive relationship that the patient and provider shared got in the way of the patient’s appointment attendance, “Sometimes patients don’t want to disappoint me, so what they’ll do instead is that they’ll not show up to their appointment. Especially after the times they’ve indulged a little bit too much…There’s an anxiety attached to that.” To address or prevent this non-attendance, providers sought to “Find that balance to get them to keep showing up and not feeling like that every time they come that they’re being reprimanded or that they’re not doing what they’re supposed to.”

***Role expectations.*** From the providers’ perspectives their role or roles in treatment as the member of the patient-provider relationship with higher education, economic resources, and power in the relationship was to empower patients to become active participants in the treatment process. At the same time, they recognized there are responsibilities that patients had in engaging in treatment.

In addition to providing medical care for their patients, providers took on the role of educator in patients' health visits. For providers education was a way of empowering the patient to take ownership of their health and be an active participant in the treatment process. One provider shared, "I really try to empower my patients I tell them all the time, 'This isn't me fixing your diabetes, you're fixing it. I'm here giving you the tools to help you do it. I'm not building the house." The role of educator also extended to sharing information regarding resources that were available, "I'm really trying to approach care holistically, if you don't have a roof over your head or money to pay your bills or enough to purchase food…I bring those things into the visit".

While as providers they recognized their responsibility in providing the patient with the necessary tools to engage in treatment, they believed patients also had the responsibility to take an active role in the treatment process and their health.

> I think is like once we talk to you, we tell you what you have, what the plan of the treatment is. I think always to do your best to try to follow the plan. If you don't agree, if you don't like it, or you can't, it's very important to talk that with your provider to try to find the resources, the best way to do it and if you don't feel comfortable with the provider for whatever reason you switch. Try to find someone that you feel comfortable with that you can ask all these questions...ultimately you have to be an active participant.

While providers wished for the patient to be an active member of the process, they understood how culture influenced patients' "deferential" approach towards their providers.

> I think it's a cultural part too, many Central Americans don't understand that they are an active participant of their health. That in the end they're the ones that decide and

> they are the ones that have to be active asking these questions and looking for resources. They have in this head that the doctor's the boss and they're telling them what to do and they have to follow, and I say 'yeah, obviously that's an important part, but again it's your health, you decide'.

**Contextual factors.** The following sections demonstrate two important factors that from the providers' perspectives impacted the relationship and treatment delivery process. These could be organized as challenges and facilitative resources that they encountered at the patient-level (e.g., culture, education) and systemic-level (e.g., time limitations, poverty).

***The role of culture.*** All providers referenced ways in which patients' culture played a role in the relationship building process and treatment delivery. The cross-cultural differences that existed between Mexican patients and their providers were salient to providers and impacted their treatment approach:

> Goal is a hard word...an American born person might be more familiar with that term and that whole process. Usually it's not a goal as much as a plan. I know it's really trendy right now in medicine to talk about goals. But, again culturally it's more of a plan, and it's more of 'okay were going to do this now…I know my sugar is too high and I need to bring it down, and I'm going to do this'…how you're going to get to the goal, but we're not really talking so much about the goals as much as about the steps, the next steps…
>
> It really bothers me because we do these patient satisfaction surveys at the county. And, there's a question about, 'Did the provider set goals with you?' and we always score really low. It's just not fair because the word goal they're gonna to be like no. When they did leave with a plan. It's just not a goal.

Providers also noted differences in communication patterns in comparison to American culture. They described their patients' communication and interpersonal style in the following ways: "Very polite or respectful, more reserved", "deferential", "open to suggestions" "thankful", "patient", and "affectionate." One provider shares how the deferential aspect of Mexican culture comes up during treatment.

> I try to do a lot of shared decision making. But I feel like if I say something, they tend to just go with that or at least make me think that they are going to go with that. They don't ask a lot of questions, so I tend to try to give as much information as possible. But it is interesting they come in more deferential than other populations that I've worked with.

Providers also noted there were within group differences among Mexican and Mexican-Americans that exist based on acculturation levels in terms of expectations from the healthcare system:

> I think that those patients have, the young patients who were born here or immigrated here when they were young have higher expectations of healthcare. They might be a little bit more impatient, as opposed to the older generation that are very thankful, very patient, willing to wait, all about respect.

Providers highlighted their awareness about cross-cultural differences as they relate to their patient's beliefs, traditions, and interpersonal style and how those evolved over time.

> I'm constantly learning … I've made mistakes along the way of the expectations and understanding. There are big differences between the Mexican culture and [my] culture. It's been a learning process, but again asking questions and listening to [their] stories helps me understand where they're coming from.

Although providers believed that language generally helped with communication, for them having an understanding of other aspects related to the patients' culture such as traditional foods was crucial to making appropriate treatment recommendations that were culturally congruent and offered in a sensitive manner:

> I often find that they're motivated, but then we have to kind of bridge and modify this cultural expectation of, 'well my culture eats all of these foods'. Which, in general for diabetics is disastrous because it's a lot of carbohydrates, It's tortillas, it's sodas, and it's a lot of misconceptions too. A lot of times when I have my patients come in it's a lot of teaching.

Sometimes providers came across health behaviors that patients engaged in that they were unfamiliar with. In such cases the provider approached it with a sense of humility:

> I always ask 'why do you do that? Or What's the meaning of that' and as long as it's not something that is really dangerous for their health, why not? If you feel better why not? Most of the time it's actually really healthy.

***Reality based medicine: Individualizing care for this population.*** Providers used their understanding of their patient's background to tailor their treatment approach for type 2 diabetes. They shared strategies they use to overcome contextual limitations that are pertinent to the patients (e.g., education level, occupation, economic level) or the health setting (e.g., time limitations) in which treatment is provided.

Providers emphasized the importance of formulating treatment recommendations in a way that set up the patient for success in terms of being able to adhere. With this in mind providers set realistic goals for treatment and communicated these with the patient. For providers, they recognized that the goals set by professional organizations such as the

American Diabetes Association may not be always feasible to attain for all patients, "There are limits to what we can do here and we're going to work within those. I call that reality-based medicine instead of evidence-based medicine." One provider explained:

> We have all these measurements and evidence-based medicine where you're looking at studies and what the recommendations are in scientific-based research. I realized more along my career that doesn't always work there's always outliers to everything, and certainly with our population where we don't have access to medications through the insurance barriers, and immigration barriers. You can't follow guidelines exactly, so you work with what you have.

At the same time, providers also kept in mind that patients may focus less on the A1C measurement as a goal and more on what having a lower blood sugar level would do for their lives, "My patient's goals are to feel better, to be able to live an active healthy life, and to work too. That's a huge goal that my patients have."

Another aspect of practicing "reality based medicine" related to time limitations that providers face. As such, providers also turned to resources available within the health clinic.

> We also have a nurse whose very well versed in diabetes. If I see a lot of barriers. We're given 15 minutes during this time to tell you all these things and it needs follow up, we have a nurse that can have a one on one conversation who can go over their diet, go over their medications, how to keep blood glucose log, what to expect, you know those kinds of things. Someone who can also give them reinforcement of education. We can refer them to nutrition programs… and diabetes education sessions once a week…We partner with [name of clinic] and the food bank. We not only bring in fresh bags of vegetables and produce. They go over with the diabetes educator

> what diabetes is, all the different things it can affect. They monitor their sugar, they monitor their weight, tell them why it hurts their eyes, hurts their kidney. They teach them how to cook, change, and modify their diets.

Providers articulated a connection between social determinants of health (e.g., education, income level) and patients' ability to understand and follow treatment recommendations. As such providers spent time providing health education or connecting the patient to additional sources of information that could help the patient understand their diagnosis and clarify misconceptions that patients had regarding diabetes.

> I have patients that can't read and write, so those patients have a lot of difficulty…If you're not able to read, and access internet and do your own research then you're going to get your information from your family and the stories you are told…I don't blame so I don't say, 'Your diabetes is out of control because you're doing bad things or your wrong because your family doesn't know what they're talking about'… I'm never pointing the finger at them or making them feel like it's their fault. I'm more of what of the institution itself is preventing you from staying healthy… Because it's not their fault that they can't read it's that they don't have access to information.

As providers saw it, patients' socioeconomic status limited not only the type of care they can access, but the quality of such care. At times this made them subject to discrimination within the health system:

> This is a community health clinic that's federally funded and the patient population that we see here is primarily people who are below the federal poverty line, substantially below. That is why they qualify for medical insurance. They're very thankful for their care because a lot of times what happens is, they come to us with

> advanced disease states or very uncontrolled diabetes and they have haven't gotten much respect regarding this. They might have gone to a private clinic and found out their options were very limited because they were unable to pay or they're treated differently there's sort of a prejudice that occurs.

From the point of view of the providers, income limitations may also impact the patients' ability to follow treatment recommendations given the costs associated with treatment of type 2 diabetes, "Diabetes is a very expensive disease …Then they have to decide "do I eat today, or do I buy a medication, or do I help my children". Hence, providers help patients navigate these barriers by facilitating access to financial resources that are available at the health clinic to allow the patient to follow treatment recommendations.

> We have kind of a one stop shop. We have people who help you with your insurance, we have people who help connect you to food banks, to catholic charities, to [community center]. Different agencies that may help you get the clothes or food that you need. We also have you know affordable lab prices so they can get their labs drawn. Eye exam programs. Most people who are uninsured can get almost free imagining if they call for it, and if they're uninsured we can get MRIs. They have mental health and behavioral health team, counselors, psychiatrists, you know our own pharmacy here. It makes it easy for the patient's access.

***Diabetes education.*** Providers stated promoting treatment adherence during the health appointment by educating patients about their diagnosis and treatment. To do so providers prioritized the type of diabetes information they provided to patients throughout multiple visits:

> Once they understand what they have and that they need to take care of that, and that they need to change then they start asking questions like, ‘how can I do it?’ for instance, nutrition. Okay, I give the papers, they read it, and then they start asking me, ‘okay what if I eat this? what if I eat that?’ we always say, ‘okay you need to eat healthy’ well what does eating healthy mean? then we start talking about the basics, ‘avoid red meat, you can eat it once a week.’ or ‘I know you eat a lot of pork. Pork is not very healthy then maybe once a month.’ then ‘you need to eat chicken or turkey are the best meats’. Then, ‘you need to grill your food’

In the earlier stages of treatment providers focused in helping the patient accept their diagnosis and understand the importance of caring for the disease before imparting information about treatment:

> It is a constant process. It’s not like a thing that you get in a day or in a month. For some people yes if they have some background and they know like some people that died of diabetes cause its not taken care of or cut the feet then they must be a little more concerned because they already know. But, if someone that didn’t, then they might take time…

Providers reported imparting diabetes education in a way that patients could relate to and understand it. To do so, they scaffolded treatment recommendations in ways that were manageable based on the patient’s lifestyle limitations.

> Dietary recommendations, how many tortillas are you eating? You can use a hoja de lechuga with anything you would use a tortilla with, you can fill your lettuce leaf like you would a tortilla…depending on where they’re at, what they need to hear. I try to

> pinpoint the one thing that maybe is causing them a hardship… Just pick one thing…just talk about where they're at, and then what they can do to change it.

**The essence of the phenomenon**

The phenomenon of the patient and provider working together to promote treatment adherence is characterized as a process that builds on the quality of their relationship and that evolves overtime. The personal bond that develops between patients and providers begins with the provider's intentionality about understanding their patient population. The provider's initial understanding of their patient comes from relating to some aspect of the patient's life and expands overtime by actively listening to their patients' stories. When providers approach the patient in a warm and empathic manner, and take personal interest in their lives, the patient opens up during the health visit. This approach allows patients to feel comfortable sharing challenges they face regarding their personal lives, living with diabetes, and in following treatment recommendations. It is at this point that the provider invites and empowers patients to actively participate in treatment by sharing the decision-making process regarding treatment recommendations. As a result, the patient is able to work collaboratively with the provider during the health visit to overcome challenges they face.

The personal bond and collaborative approach developed between patients and providers promotes the patient's treatment adherence. When patients feel understood and heard by their providers they are able to trust that providers have their best interests in mind and thus are more likely to follow their recommendations. Also, these recommendations are more relevant and easier to follow when the provider understands how the patient's socioeconomic status and cultural background impact treatment. The patient-provider relationship also promotes adherence by increasing the likelihood that patients will keep their health appointments. That is, patients return to the provider for their regular check-ups regarding their A1c levels as well as when they run into problems in trying to implement treatment recommendations. Thus, affording the provider an opportunity to promote treatment adherence by clarifying misconceptions, addressing challenges, and encouraging the patient to adhere to recommendations. In turn, the patient's treatment adherence may lead to their experience of progress in treatment in terms of physical, emotional, and/or A1C factors which further enhances the overall treatment experience and promotes long-term adherence. It is this positive treatment experience that keeps patients coming back to the provider, thus allowing for more opportunities to deepen the patient-provider relationship and to continue promoting treatment adherence. Therefore, the phenomenon can be described as a feedback loop that evolves with each encounter (see figure 2). Although the relationship and adherence are built overtime rather than in one single patient visit, each health visit is instrumental given that it represents an opportunity to further the patient-provider relationship and to promote adherence.

# Chapter Five: Discussion

This study sought to understand the phenomenon of what it is like for Mexican nationals living in the U.S. and their providers to work together to promote adherence to treatment for type 2 diabetes. The findings include participants' insights about what were ways patients and providers related to each other, how they promoted adherence, the challenges they faced in doing so, and the resources they utilized to overcome such challenges. Data analyses indicated that participants developed positive relationships over time, that these promoted treatment adherence, and that the treatment experience was impacted by contextual factors. Findings also pointed to the cross-cultural nature of the patient-provider relationship in which there were at times marked differences in any of the following dimensions: language proficiency, communication style, education level, socioeconomic status, and health literacy. These findings contribute to the literature on the treatment adherence of Mexican nationals diagnosed with type 2 diabetes by highlighting the synergistic process that occurs between the patient-provider relationship and the patient's adherence to treatment recommendations. This study also features the perspectives of the individuals receiving treatment at a community health clinic and the providers who serve this population.

## Relationship building

For participants the patient-provider relationship was a process that evolved over time. From the provider's perspective their ability to develop trusting relationships with their patients was intentional in that they actively sought out ways to understand the patient's experience. They did so by first relating to the patient and expanding their understanding of the patient's lifeworld through actively listening to their stories during their visits. Their intention in doing this was to promote trust and willingness from the patient to openly share who they were, struggles they faced, and ask questions about treatment when necessary. From the patient participants' perspective, the provider's ability to communicate with them in Spanish, to convey empathy, and to maintain a professional attitude during their visits helped them develop a trusting relationship with their provider. This bond was further developed when patients and providers shared a common understanding of the patient's life (e.g., culture, beliefs, health practices) and health status (e.g. diagnosis, how to care for the disease, health related education). When patients and providers were able to develop this personal bond they expressed it a sense of closeness that invited trust. These findings contribute to the literature on cultural values such as *confianza* (trust; Bracero, 1998) and *personalismo* (caring in a personal manner) by exemplifying how such values play a role in the patient-provider relationship and treatment experience from the perspective of both the patient and their providers.

From the participants' perspective a sense of *confianza* and *personalismo* aided in not only developing a collaborative patient-provider relationship but also in promoting utilization of health services. This is consistent with the literature indicating that providers who are perceived as warm and personal are likely to promote continued utilization of health services (Larkey, Hecht, Miller, et al, 2001). This study contributes to the literature by highlighting ways in which providers can demonstrate *personalismo* (e.g., taking their pain seriously, providing necessary referrals to specialists, inquiring about their personal lives, among others) in a way that patients who are Mexican nationals with type 2 diabetes may find acceptable and meaningful. It also contributes participant providers' insights about how they demonstrate *personalismo* (caring in a personal manner; Consoli & Sheltzer, 2017) and build *confianza* within the constraints of a 15-minute appointment (e.g., remembering details shared in previous appointments, asking about the patient's life not just health-related concerns, paying special attention to how they are greeting patients, among others). While engaging in small talk could be seen as counterproductive to some providers given the time limitations they are under during health visits. From the patients' perspective, engaging in small talk with patients helped them trust the provider and promoted the development of a personal bond. Moreover, for patient participants the trusting relationship they built with providers promoted their attendance to subsequent health visits and their desire to continue such appointments with their provider of choice.

Findings highlight the role that language plays in patient-provider communication. Patients reported feeling comfortable when providers were fluent in Spanish as it allowed them to openly communicate their symptoms and ask questions. Language facilitated the treatment experience by not requiring patients to rely on a third party to translate their concerns thus making the health visit a more comfortable experience. This finding builds on the literature identifying limited English proficiency (LEP) as one of the obstacles to utilization of formal health services for Mexican immigrants considering the scant number of Spanish-speaking professionals. Such literature posits that LEP may get in the way of communicating one's needs to health professionals, understanding health related information, and navigating the healthcare system overall (Mulvany-Day, Alegría, & Scribney, 2007; Interian, Ang, Gara, Rodriguez, & Vega, 2011). However, this study expands on such literature by presenting examples in which LEP did not represent a barrier to developing a positive patient-provider relationship. Some patient participants reported having positive treatment experiences even when providers did not speak Spanish. When these patients encountered providers whose fluency was limited, their experiences varied based on the patient's assessment of the provider's non-verbal communication. That is, patients observed their provider's approach towards them and the degree to which providers attempted to connect with them. This is consistent with literature suggesting that non-verbal communication and the use of nonclinical language can facilitate patient-provider understanding (Gonzalez, Salas, & Umpierrez, 2011). This study's findings suggest that such non-verbal communication may not only facilitate mutual understanding, but also the development of a personal bond between patient and provider. From the patients' perspective when they perceived their provider as empathetic and demonstrated their effort to communicate with the patient despite language barriers, this facilitated a positive-patient provider relationship.

Some patients commented that even when the provider shared the same language and ethnic background negative experiences still occurred. This suggests that while the provider's Spanish language fluency facilitates open communication between the patient and provider regarding symptoms and concerns about treatment, fluency alone may not promote a collaborative relationship. Instead, non-verbal behavior such as the provider's attempt to communicate with the patient despite language barriers and their warm demeanor when greeting patients may also help develop a trusting relationship. This is consistent with research underscoring the importance for Latinx patients to receive treatment in a warm and friendly manner and that these aspects can be communicated by the provider verbally and/or non-verbally (Campos, 2007). When patients and providers were able to form positive and trusting relationships this impacted the patient participants' treatment adherence. The following sections demonstrate the synergistic process through which adherence was facilitated by the quality of the patient-provider relationship.

## Treatment adherence

Participants reported various ways in which they promoted treatment adherence and emphasized how this process evolved over time throughout the treatment experience. This process was facilitated through the patient-provider relationship and through the provider's intentionality in promoting patients' appointment attendance. From the providers perspective the treatment adherence process built on each health visit the patient attended. As a result, providers reported being intentional about promoting patients' appointment attendance. This finding is noteworthy given that the literature points to the importance of maintaining regular check-ups for individuals with diabetes in order to prevent complications related to the disease (Bowser et al., 2010). It is also considered a form of self-care behavior that is part of a standard treatment regimen for patients living with type 2 diabetes given that poor appointment attendance may indicate poor adherence to others self-care behaviors such as maintaining a healthy diet or a regular exercise routine (Hashim, Franks, & Fiscella, 2001; Schechtman, Schorling, & Voss, 2008). In general, providers and patients reported patients attended regularly to their health visits. This finding relates to the literature that points to poor attendance rates (up to 50 percent) from individuals living in poverty who receive treatment in community health centers (Cashman et al., 2004; Moore, Wilson-Witherspoon, & Probst, 2001). From the providers' perspective they promoted their patients' attendance by helping them feel comfortable during their health visits given that many were often afraid to go to the doctor, by developing positive relationships with their patients, and by not reprimanding their patients when non-adherence to treatment recommendations occurred. From the patients' perspective, they requested appointments with providers they had developed a trusting relationship with. They shared turning to such providers for help, particularly when questions arose regarding implementing lifestyle changes that are recommended for patients with type 2 diabetes. In contrast, patients provided examples of times when negative experiences with a provider discouraged them from continuing services with such providers.

From the participants perspectives the treatment adherence process evolved over time through several interactions between the patient and provider during health visits. Patients described following treatment recommendations regarding lifestyle through as a process: first, the patient receives a recommendation such as increasing physical activity, such recommendations may or may not be culturally congruent; Second, the patient attempts to follow the recommendation, but encounters challenges related to their limited physical functioning as a result of their diabetes or due to their dislike of the activity recommended; Third, they may or may not report these challenges to their provider. When patients report such challenges, they often work with their provider to make an alternative recommendation or the patient may independently opt for an alternative that is preferred. Ultimately, the patient sticks to an activity that is easiest, most accessible, and familiar to them. For example, regarding increasing physical activity, patients often opted to walk as their primary source of exercise. This finding is consistent with the literature on preferences regarding physical activity found among Mexican and Mexican-Americans living along the Texas-Mexico border diagnosed with type 2 diabetes (Mier, Medina, & Ory, 2007). While this study was conducted in a different geographical area of the United Stated, is important to note that geographical differences did not exist in terms of physical activity preferences. One possible explanation for this finding could be that participants reported having limited means of transportation. As a result, patients use walking as a form of transportation and thus opt to increase their walking output given this is an activity that it is already familiar and accessible to them. Additionally, increasing their walking may be easier and require less effort or motivation on their part. This finding is consistent with the literature on the importance of self-efficacy in following treatment recommendations in that individuals who have highly self-efficacious in implementing lifestyle changes that are meaningful to them are more likely to adhere to treatment recommendations (Senecal, Nouwen, & White, 2000; Sousa, Zauszniewski, Musil, Lea, & Davis, 2005). One way in which providers may help further support the patient in increasing their physical activity may be by making initial treatment recommendations based on the patient's preferences, familiarity with the activity suggested, and accessibility. This may help the patient avoid or limit the number of unnecessary attempts to incorporate physical activities that are unfamiliar and require a higher level of motivation to adhere.

Regarding treatment adherence to lifestyle changes, participants highlighted ways in which intrinsic motivators such as progress and family helped promote adherence to recommendations. From the patients' perspective, their motivation to make lifestyle changes came from a desire to live long enough to be present and enjoy their families. One insight patient participants shared is that their motivation to change also included their desire to care for themselves and to live, as well as fear for the negative consequences of complications with type 2 diabetes. Patients shared learning about the negative ramifications that the disease has on one's body by seeing the examples of others in their family or community (e.g., neighbors, friends, other patients in the waiting room). In such cases patients reported first hand experiences with the death of family members from complications with type 2 diabetes and/or learning about other's amputations due to the advancement of the disease.

From the providers' perspective, strong motivators for the patient to make lifestyle changes included their desire to work, to avoid medication, and to avoid insulin. Though it is important to evaluate within group differences among the Latinx population, this finding is consistent with the literature regarding treatment preferences of Latinx patients with diabetes in which natural treatment alternatives are preferred (Coronado, Thompson, Tejeda, & Godina, 2004). From the provider's perspectives, patients' preferences for natural alternatives was an asset in facilitating treatment adherence to recommendations that focused on making lifestyle changes. This is an important finding given that the way in which providers conceptualize culturally held health beliefs may impact their approach to the treatment process. It is possible that when participant providers understood and conceptualized these preferences as facilitative rather than as a barrier to treatment adherence, they were more likely to be adept at conveying the importance of implementing lifestyle changes in relationship to patients' treatment preferences.

From participants perspectives continued treatment adherence is sustained when progress is observed and when providers encourage patients' efforts to maintain adherence. This is consistent with literature regarding motivation for adherence indicating that when individuals see improvements in functioning and perceived symptom relief, they are more likely to continue adhering (Cabassa et al. (2008). This study's findings further contribute to this literature by identifying ways in which patient's assess progress and connect lifestyle changes with progress in their physical and emotional well-being. From the patients' perspective their sense of progress was assessed in the following ways: A1C scores reported by providers during their health visit, increased physical mobility, increased positive mood, increased energy, decreased number or amount of medication/insulin needed as reported by their providers. Patients reported that progress in these areas in addition to receiving the provider's encouragement promoted their adherence to lifestyle changes. Patients also demonstrated an understanding of how increases or decreases in their blood sugar levels translated to changes in mood and energy levels. This finding is inconsistent with those reported in a study by Hansen & Cabassa (2012) in which individuals reported having a limited understanding on the connection between their physical and emotional symptoms (Hansen & Cabassa, 2012). In such study, individuals limited understanding delayed their decision to seek care and influenced how they conceptualized their symptoms. These findings may be due to differences in the population recruited in both studies. It is possible that patients who adhere, such as those recruited in this study, were able to experience how lifestyle changes can improve emotional functioning. In contrast, when patients do not adhere, the opportunity to learn the connection between somatic and emotional symptoms is limited. Therefore, findings may suggest that it is important for providers to help the patient learn about how lifestyle changes can impact their physical and emotional well-being.

Also noteworthy, are the various dimensions (e.g., physical and emotional) along which patients may experience progress. Given that the patient's A1C levels are assessed every three months as is customary in type 2 diabetes, it may helpful for patients to learn about other ways in which they can assess their progress in treatment. As a result, when providers help patients connect how their behavior changes impact alternative areas in which they can experience progress in a more frequent manner such as mood, mobility, and energy, these reinforcements can further motivate the individual to continue adhering to changes. This is consistent with literature on positive reinforcement schedules (Skinner, 1953) that points behavior can change when a positive reinforcement is experience closely to the time when the behavior is performed. In this case, positive reinforcement can be improvements in mood, energy and/or mobility. Furthermore, this is also consistent with literature on intrinsic motivation and behavior change that demonstrated intrinsic motivators help internalize behavior changes more effectively than when extrinsic motivators (e.g., money, gift cards) are provided (Ryan & Deci, 2000). Thus, providers may further support patients by helping them identify areas in which they may see progress that does not solely relate to the A1C measure given that it is difficult to maintain behavior changes for such long periods of time without any sense of reward on their efforts. This has implications for interventions that seek to increase health literacy regarding type 2 diabetes among this population. For example, it is possible that patients may benefit from learning early in treatment about different areas they can expect to experience progress outside of their A1C levels. This may in turn improve patients' self-assessment of their progress and adherence to recommendations that contribute to such progress.

Participant providers also recognized the emotions that patients experienced throughout treatment and assisted them in managing their emotional wellbeing along the process. When patients implemented lifestyle changes that were recommended for their diagnosis they experienced distressing emotions such as fear, depression, denial, frustration and anxiety among others. This is congruent with literature pointing to the emotional toll that the diagnosis of diabetes, the difficulty in managing the disease, and its limitations on daily functioning can have on Latinx individuals living with the disease (Cabassa, Hansen, Palinkas, and Ell, 2008; Cherrington et al., 2006). Some of the emotional reactions reported by patient participants in this study related to the following: incongruence between health education and beliefs about diabetes (e.g., diabetes as a hereditary disease); frustration when their A1C results did not show improvement despite efforts in implementing lifestyle changes; fear, denial and anxiety related to financial challenges in accessing necessary medication/insulin to treat their diabetes. One important finding this study contributes to this literature is that from the participants' perspectives the patient-provider relationship offered opportunities to care for the patient's emotional well-being as it related to these challenges. The trusting relationship that was built between these patients and providers allowed patients to share their frustrations and difficulties in following treatment recommendations. The relationship also allowed the patient to be forthcoming when they felt the provider was likely to understand and encourage them rather than reprimand them about their inability to follow recommendations. It is likely that this in turn afforded the provider opportunities to make changes in treatment that could better serve the patient and increased the patient's self-efficacy in their managing diabetes. Providers reported it was important to them to build *confianza* with their patients to help them be forthcoming about how they are implementing lifestyle changes and challenges they face. Providers also reassured their patients when their A1C results did not convey a sense of progress in treatment despite their efforts to follow recommendations. They did so by offering encouragement for the patient's efforts, formulating a plan with the patient about what changes are needed moving forward, reminding the patient of meaningful motivators to implement changes (e.g., family), and avoiding reprimanding the patient or threatening the patient about the possibility of using medication or insulin if changes were not made. This finding has implications regarding the training of medical personnel who serve Mexican nationals with type 2 diabetes. It is possible that medical staff can benefit from training regarding patient communication about treatment progress and the importance of caring for the patient's emotional well-being alongside their diagnosis as a way to encourage adherence to treatment recommendations.

**Contextual factors**

Factors such as the patient's culture, the patient's understanding of their diagnosis, systemic challenges, and resources available impacted participants' experience of their relationship and treatment. Regarding treatment adherence and the cultural traditions of Mexican nationals that participated in this study, both providers and patients reported integrating dietary recommendations with traditional foods (e.g., pozole, pan dulce, tortillas). The literature on culturally congruent interventions for type 2 diabetes indicates that when nutritional recommendations are made with the patient's traditional foods in mind this helps patients implement such recommendations (Brown et al., 2002; McEwen & Murdaugh, 2014). This study expands on our current knowledge about how culturally congruent interventions work by highlighting how providers are able to make nutritional recommendations with the patient's culture in mind. It also adds to this literature by shedding light on the experience of patients in implementing the provider's nutritional recommendations. From the providers' perspective, their understanding of the Mexican culture allowed them to make recommendations that were culturally congruent and empathetic to the challenges Mexican national patients face in changing their diets. For patients, they were able to maintain traditional foods in their diets by limiting the portion sizes and the frequency with which they ate them.

A unique finding of this study related to dietary recommendations for type 2 diabetes, is associated to patients' recollections of traditions and/or behaviors they learned during their childhood regarding their nutrition. Patients often reported living in poverty as children in

Mexico with limited access to foods such as meat, *pasteles* (cakes), or other treats, *dulces* (candies) that were beyond their family's financial means. In contrast, patients reported that while growing up they often ate nopal as a treat, ate meat once a week, and ate mainly vegetables and fruits as a result of their family's financial limitations. While these behaviors may or may not have been practiced with the intention to promote health, they provide important information regarding behavior changes that could be construed as "healthy" within the context of dietary recommendations for the treatment of type 2 diabetes. This may point to ways in which changes in socioeconomic status or increases in purchasing power from living in Mexico as children to living in the U.S. may contribute to the adoption of unhealthy behaviors that can lead to the development of type 2 diabetes over time. That is, when Mexican immigrants have higher economic means in comparison to living in poverty in Mexico, their diets may see an increase in foods that can lead to type 2 diabetes. Previous studies have explored ways in which the health status of Mexican nationals change as a result of immigration to the U.S. One such study, found that the longer the individual remained in the U.S., the more likely they were to engage in risk behaviors that negatively impacted their health status over time (Carter-Pokras et al, 2008). Although, it is likely that harmful dietary changes that occur are related to other factors (e.g., environmental changes, immigration stress, targeted marketing) than solely a result of increases in purchasing power, more research is needed to better understand this finding. However, one take away from this finding is that there may be some value in providers helping the patient connect past dietary behaviors they engaged in as children with current dietary recommendations for patients with type 2 diabetes. Such behaviors (e.g., limiting meat intake, eating lots of fruits and vegetables, limiting sweet treats) can help the patient connect with familiar but likely forgotten habits that could be re-implemented to improve their health.

Other ways in which the patients' culture impacted treatment related to the patients' conceptualization of type 2 diabetes. Patient participants demonstrated they integrate biomedical and folk explanatory models to conceptualize the origin of their diabetes and its treatment. This is consistent with the literature that illustrates ways in which individuals of Mexican origin utilize both a biomedical and folk explanatory model to treat type 2 diabetes (Coronado et al., 2004). Regarding patients' attributions of their development of type 2 diabetes, out of seven participants, two attributed their diagnosis due to strong emotions such as a stressful event (e.g., the death of a child) or the experience of *susto*. However, for the majority of patients interviewed, they attributed their diagnosis to dietary choices and family history. This was consistent with literature reporting within group differences among Mexican immigrants about the endorsement of the experience of *susto* as the cause for developing type 2 diabetes (Palmquist, Wilkinson, Sandoval, and Koehly, 2012). Despite the endorsement of *susto* as the origin of type 2 diabetes by two participants, all seven patient participants interviewed reported following provider's recommendations regarding implementing lifestyle changes and when recommended, taking medication and/or insulin. This is important to note given in that in this study the attribution of the disease to *susto* was not a barrier to treatment adherence.

In reference to the treatment of type 2 diabetes, patient participants also reported incorporating herbal and natural remedies in order to care for their diabetes in addition to following provider's recommendations regarding making other necessary dietary changes. This finding supports previous research on the natural treatment preferences of Mexican immigrant patients with type 2 diabetes (Coronado, Thompson, Tejeda, & Godina, 2004). However, this study illustrates how natural treatment preferences are integrated into treatment by patients and how providers manage these preferences in making treatment recommendations. From participants' perspectives it is clear patients integrate health recommendations given by their providers while also supplementing treatment with other natural treatment that are familiar to the individual. Patient participants reported learning about these natural treatments from their parents, through friends, while traveling in Mexico, and/or through the media (e.g., Facebook, TV shows). From the providers' perspective, they approached conversations with their patients regarding natural remedies with cultural humility. During health visits the provider inquires about the patient's method for caring for their diabetes and attempts to understand how the patient hopes to accomplish with the use of the natural remedy so as to learn from the patient and better assess the role of the remedy in treatment. Providers assess whether the patient's use of the natural remedy is detrimental to their health and makes a recommendation based on this assessment. Providers reported understanding the importance of such remedies to patients and often encouraged the patient's desire to care for their diabetes while also reminding the patient to integrate such natural remedies with other treatment recommendations made by the provider. This finding underscores the importance of providers utilizing cultural humility when approaching discussions regarding natural remedies. This likely conveys a sense of respect to the patient in acknowledging that the patient can contribute important knowledge that can be used in treatment. Therefore, promoting a more egalitarian stance that is conducive to a collaborative patient-provider relationship.

The influence of culture was also present in the way patients and providers related to each other. Given that in this study the patients' and providers' background differed, their interactions during health visits were a cross-cultural encounter. The cross-cultural nature of the patient-provider relationship influenced how providers invited the patient to participate in treatment. Due to the marked differences that exist between patients and providers in terms of language proficiency, communication style, education level, socioeconomic status, and health literacy, providers are intentional about how they invite the patient to be an active participant of the treatment process. From the providers' perspective they invite the patient's participation in the following ways: by, communicating empathy and warmth verbally or non-verbally, acknowledging the patient's efforts, eliciting the patient's treatment preferences, and sharing health education in a culturally humble manner. From the patients' perspectives they felt most comfortable when providers engaged with them in this way and often referred to such providers as supportive friends and family. As such, it was important for both patients and providers to communicate openly about the treatment process whether it was about treatment preferences, challenges and questions. When providers and patients are able to work collaboratively in this manner, this promotes the patient's treatment adherence to treatment recommendations that are formulated by the provider with the input of the patient. Moreover, other factors such the patient's desire to live, work, and be present for their families, along with the patient's perception of progress, and the encouragement of the provider help promote treatment adherence.

The cross-cultural nature of the patient-provider relationship also influenced how providers promoted physician trust. In the case of the provider, they may have marked privileges in terms of their social status in comparison to their patients. As the member of the relationship with significant advantages in terms of their knowledge of the health system, health literacy, English language proficiency, and power in the relationship given their role as the health “expert”, they are intentional in the way they manage these discrepancies in order to promote physician trust. As such, providers use the following strategies to help the patient participate in the treatment process: They welcome patients with warmth, they express genuine interest in the patient, they aim to learn the patient’s life story, they attempt to communicate with the patient even with limited Spanish proficiency, they approach the patient’s perspective, values, and traditions with cultural humility, they share the rationale for health decisions they make, and connect the patient to financial resources.

From the patient’s perspective they value when providers engage with them in this way. This allows the patient to relax, express their concerns, ask questions openly, and trust that the provider has their best interest in mind. This is consistent with findings by Julliard et al., (2008), indicating that Latinxs patients are not only able to trust their provider, but also disclose sensitive information related to care when they experience the provider as respectful, compassionate and caring towards them. This sense of “*confianza*” (trust) allows the patient to participate in the health visit in a more active manner by sharing and requesting relevant treatment information. In this study, when patients could openly express themselves without fear of judgement or discrimination there was a sense of intimacy between the patient and the provider which allowed the patient to relate to the provider as a friend or family member and this promoted trust. Moreover, given that Latinxs in comparison to White non-Latinx patients are less likely to trust the provider’s medical judgement, ability to prioritize the patient’s needs, and to care for them as a person (Sewell, 2015), providers need to be intentional about how they earn the patient’s trust when serving Mexicans with type 2 diabetes. This study highlights ways in which providers can build trust with their Mexican patients with type 2 diabetes in ways that are meaningful to these patients. In contrast, from the patient's perspective, they distrusted and were discouraged to utilize health services from providers with which they experienced discrimination or judgement about their language abilities or cultural beliefs. These findings are consistent with literature suggesting that physician distrust negatively impacts utilization of health services and adherence (Whetthen et al., 2006).

This study's findings regarding physician trust and adherence expand on the research findings from the study conducted by White, Osborn, Gebretsadik, Kripalani, & Rothman (2013), in which a cross-sectional analysis of 140 adult Latinxs diagnosed with diabetes found that low levels of health literacy were linked to high levels of physician trust, and high self-reported levels of adherence. Although the relationship between physician trust, literacy, and adherence needs to be explored further, this study highlights ways in which providers engage in ways that empower the patient with health education that is necessary for them to actively participate in treatment thus gaining greater agreement on health recommendations that the patient can adhere to.

Some of the barriers related to contextual factors to treatment seeking behaviors provided in the literature about Mexican individuals living with type 2 diabetes have included, financial reasons, denial, "self-reliant" attitudes, and the endorsement of fatalistic attitudes (Hansen & Cabassa, 2012). This study contributes to this literature by highlighting ways in which discrimination may also contribute to feelings of mistrust and avoidance in patients' treatment seeking behaviors. Both poverty and discrimination represent barriers not only to treatment seeking but also in utilization of health services and treatment adherence. In this study, patients shared negative experiences in which they felt mistreated, looked down upon, or judged for their cultural beliefs or inability to communicate proficiently in the English language. In such instances, patients reported not continuing to seek services from the provider. It is important to note that when patients reported feeling comfortable with their provider their utilization of medical services was more consistent.

Regarding the endorsement of fatalistic attitudes as a barrier to both, treatment seeking and adherence (Rustveld et al., 2009). In this study, neither of the seven participants endorsed fatalistic views as described in the literature regarding barriers to treatment adherence. It is possible that given these individuals had experienced progress in their treatment they may have a sense of control in the outcome of their treatment. Alternatively, it may be that patients who do not endorse fatalistic views of their health are more likely to seek treatment and adhere to treatment recommendations. More research exploring differences between individuals who adhere to treatment recommendations in comparison to those who do not is needed.

In terms of socio-economic status, Mexican nationals who participated in this study reported living in or near poverty. The participant population was representative of reports that indicate there are high rates of poverty among Mexican nationals living in the U.S. (Flores, Lopez, & Radford, 2017; U.S. U.S. Department of Health and Human Services, 2015). The patient's socioeconomic status inevitably had an impact on the patients' and providers' treatment experience. This study's findings contribute to the limited literature on the treatment experience of Mexican nationals living in the U.S. diagnosed with type 2 diabetes (Longest, 2006; Cabassa et al., 2011). It does so by offering an inside look at how patients and providers overcome barriers associated with living in poverty. From the patients' perspective they reported sometimes feeling frustration and denial during the treatment process. In particular, patients shared how economic limitations sometimes impacted their ability to accept the diagnosis of type 2 diabetes for fear of the costs associated with the disease. Patients also experienced distress when they were recommended to purchase insulin to treat their diabetes. They reported worrying about being able to afford other necessities such as food, paying their bills while also being able to purchase necessary insulin/medication. According to patients, their socioeconomic status explained why they may engage in behaviors that are detrimental to their health. Their need to maintain multiple jobs and care for family members at times prevented them from taking care of their health.

One hopeful finding is that when patients decided to share with their providers such limitations, they often found support in the way of resources available to them to purchase necessary medication or insulin. Due to the providers' awareness of the socioeconomic status of the population being served at the clinic, they often inquired about the patient's economic limitations and provided resources available through the clinic to help patients overcome such barriers. Patients and providers often worked together to help the patient overcome barriers that were related to the patient's socioeconomic status. For example, when recommending medication as part of the treatment for type 2 diabetes, providers often elicited the patient's perspectives regarding their ability to pay for such medicine. When the patient felt comfortable disclosing their inability to afford insulin or medication, providers referred the patient to subsidized programs that could help the patient gain access to necessary medication. Providers were also mindful about how insurance coverage changes impacted the patient's access to necessary medications and made prescription changes when necessary to help the patient adhere to a medication protocol.

Other contextual factors such as education level differences between patients and providers also impacted the treatment process. The providers' awareness of the high degree of educational and health illiteracy that patients at this health setting might have, influenced their approach to treatment recommendations. As a result, providers broke down educational information related to the diagnosis in small sets and deliverd it in a repetitive manner over various health visits to help the patient internalize such information. From the patients' perspective they appreciated when providers took the time to explain their reasoning behind their recommendations and had patience with them in learning how to best care for their diabetes. In some cases, information was also provided in written format and by involving other family members that could help the patient care for their diabetes.

The setting in which treatment took place, a federally funded community health clinic, also impacted the patient-provider relationship and treatment adherence process. In this study, the treatment setting primarily served individuals living in poverty. From the patients' perspective long wait times for appointments were part of the challenges they experienced in receiving services at this setting. Once patients gained access to an appointment with their preferred provider their health visit time was also limited to between 15 and 30 minutes. This experience is consistent with reported time limitations in such settings found in the literature (Carmona, 2007; Hansen & Cabassa, 2012). Although patients expressed being understanding of the time limitations placed on providers given the high demand for their services in such settings, they expressed wishing more time was allowed for patient care.

From the providers perspective their awareness of the population served in this setting (e.g., individuals living in poverty) and its time limitations impacted the manner in which they approached the health visit. As a result, providers prioritized how they utilized their time during health visits. To do so, providers shared the appointment agenda with the patient, listened to the patient for relevant health information that could be utilized in tailoring treatment recommendations to the individual, and shared pointed health information in a limited manner so the patient could understand and remember it.

According to patient-centered models of medical practice, it is important for patients to participate in the treatment process in an active manner. However, this active participation cannot occur without the patient's understanding of their diagnosis, how treatment works, and why providers make the decisions they make. When providers shared this information with the patient in an empathic and culturally humble manner, they not only bridged the gap in education and health literacy that existed between the patient and provider, but also empowered the patient to actively participate in treatment. This is an important finding in the promotion of treatment adherence given that according to a study by Weller, Baer, García de Alba García, and Salcedo Rocha (2012) discrepancies may exist in the conceptualization of diabetes and its treatment between patients and health providers. The study by Weller et al., (2012) evaluated the differences that existed between patients and providers in the U.S. and in Mexico on the conceptualization of diabetes. The study found that the differences in the beliefs attributed to the diagnosis and treatment of diabetes were greater between the patients and physician in Mexico, despite a shared culture and language. The study noted that these results may be a function of how beliefs about the etiology and treatment of diabetes vary based on discrepancies between the education and social class status of the patient and provider rather than a sole function of differences in language and culture between patient and provider in the U.S. Unfortunately, the health system was not built in a way that promotes equal participation from the patient and provider given it has traditionally been a hierarchical system. Therefore, providers must share the power with the patient and help bridge the gap that exists not only in decision-making power but also in resources (educational, health, financial, literacy wise, language wise, etc.). Ultimately this helps build trust, a positive patient-provider relationship, treatment adherence and hopefully treatment progress.

Moreover, this study contributes to the broader discussion on the conceptualization of treatment adherence for individuals of underserved communities. In the health literature, adherence has traditionally been defined as the congruence between the patient's behaviors and the healthcare provider's recommendations (Sackett & Haynes, 1976). Such definition may represent adherence from a hierarchical perspective in which the provider recommends and the patients follows. Though the medical field is moving towards a patient-centered model that better acknowledges the patient's autonomy, the rate and degree to which this model is adopted across medical settings varies (Vermeire, Hearnshaw, Van Royen, & Denekens, 2001). This study's findings highlight the importance of conceptualizing treatment adherence from a social justice perspective in which the contextual barriers (e.g., poverty) and facilitators (e.g., positive patient-provider relationships) that exist for underserved communities are acknowledged. For instance, while a provider may conceptualize a patient's non-adherence as denial of the disease, such attitude may better represent the financial challenges or fear about the disease the patient experiences. By acknowledging these contextual barriers, providers may more effectively promote the patient's adherence by providing resources that address such barriers. Another example of using a social justice framework to conceptualize adherence is by evaluating the role that culture plays in the treatment adherence process from a strength-based perspective rather than through a deficit lens. In this study, participants shared ways in which cultural preferences and practices (e.g., walking as a form of transportation, a preference for natural approaches such as lifestyle recommendations over medication) served as facilitators to treatment adherence. While this study is limited in scope in the number of participants interviewed, it presents clear examples of ways in which providers can utilize culturally held health beliefs and practices in ways that promote treatment adherence among Mexican immigrants diagnosed with type 2 diabetes. Additional research studies that utilize a strengths-based and social justice framework are needed in order to better understand and identify facilitators of treatment adherence among individuals with type 2 diabetes from underserved communities.

Succinctly, this study contributes to the scant literature that exists about the treatment experience of Mexican nationals living in the U.S. diagnosed with type 2 diabetes that receive services at a community health clinic. It achieves this by presenting ways in which education, social class, ethnic and language differences influence the patient-provider relationship and treatment adherence. It provides examples of ways in which providers culturally adapt their treatment approach to better serve their Mexican national patients with type 2 diabetes. The study also demonstrates ways in which patients relate to their providers, participate in treatment, and promote their own adherence. Furthermore, this study sought to understand the phenomenon of what it is like for Mexican patients and their providers to work together to promote adherence to treatment for type 2 diabetes. The findings showcase participants' insights regarding the phenomenon and elucidate it as a synergetic process that is promoted through the development of a collaborative and trusting patient-provider relationship. The study underscores that both the patient-provider relationship and treatment adherence develop over time by building on each health visit encounter. The study also illustrates ways in which contextual factors such as the health setting, cross-cultural differences, and socioeconomic status, effect the treatment experience, as well as, it points to effective strategies providers use to mitigate the negative ramifications of some of these contextual factors. Lastly, this study features the voices of individuals who are monolingual, Spanish-speaking, Mexican immigrants women living in poverty, who are traditionally difficult to engage and retain in both treatment and research efforts. In doing so it provides an example of the insight and wisdom that such patients possess regarding their own treatment experiences and adherence.

## Limitations & Future Directions

These findings contribute to the literature on treatment adherence experiences of Mexicans diagnosed with type 2 diabetes by featuring the voices of the individuals receiving treatment at a community health clinic and the providers who serve this population. These voices have been portrayed in the research literature in limited ways and the perspectives of both the patients and providers are rarely presented together. This study was possible through a collaborative approach to research with the community health setting in which the researcher worked alongside clinic administrators to conduct the study in ways that were minimally disruptive to patient care and were sensitive to patient confidentiality. In line with the time constraints of the setting, the providers, and the patients, participants were not included in the triangulation process including them in the triangulation process could have decreased the potential for the researchers' biases in interpreting participants' accounts. Conversely, this would have added to the time commitments of already taxed individuals.

Although this study presents the perspectives of both patient and providers, these perspectives were limited to the participation of cisgender women. Thus, limiting the field's understanding of the treatment experiences of Mexican men living with type 2 diabetes. Findings shed light regarding how patients and providers manage cross-cultural differences within the context of same gender relationships. As a result, more research is needed to explore how the intersection of gender and cross-cultural differences impacts the treatment experiences of Mexican nationals living with type 2 diabetes.

The findings of this study present the perspectives of patients and providers. However, the perspectives of the patient's family and clinic administrators were not included and could have provided a countering or supportive view of the participants' reported treatment experience. Family members' perspectives may help further illuminate how Mexican patients adhere to treatment recommendations and ways in which family members promote or hinder this process. Also, It is clear from the participant interviews that contextual factors such as the treatment setting influence the manner in which patients and providers relate to each other, the strategies used by providers to promote treatment adherence is promoted, and ways in which a collaborative and patient-centered model of care is encouraged and/or limited. Therefore, the perspectives of clinic administrators would may be helpful in understanding ways in which administrators who have decision-making power in the limitations and resources available at the health setting view the treatment adherence process for type 2 diabetes among Mexicans immigrants.

The study's recruitment efforts initially focused on interviewing Mexican and Mexican-American patients living with type 2 diabetes. However, all patient interviewees identified as Mexican immigrants. As a result, more research is needed to identify how other generational factors, acculturation processes, and differences in documentation status impact the treatment experiences and adherence of Mexican and Mexican-American individuals with type 2 diabetes.

Future studies that include the perspectives of the patient, provider, family, and clinic administrators can contribute a multi-level insight about the treatment experiences of Mexican patients with type 2 diabetes, and facilitative resources and challenges they encounter in promoting treatment adherence. Lastly, this study highlights patients' and provider's accounts of how they work together to promote adherence to treatment recommendations for type 2 diabetes among Mexican patients receiving services at a community health clinic. It does so by offering an in-depth perspective that uses a strength-based approach in that the study focused on how patients and providers develop trusting relationships that can lead to a collaborative approach to treatment hence promoting treatment adherence to recommendations formulated by the provider with the input of the patient.

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## Appendix

### Table 1

*Providers' demographic information*

| Provider # | Gender | Ethnicity | Race | Born in U.S.? | # of years in the U.S. | Educational Status | # of years in practice | Credentials |
|---|---|---|---|---|---|---|---|---|
| 1 | F | Latina, Spanish | White | No | 15 | Graduate Level | 12 | NP |
| 2 | F | Not Hispanic | White | Yes | N/A | Graduate Level | 16 | MD |
| 3 | F | Latina, Cuban | White | Yes | N/A | Graduate Level | 3 | NP |
| 4 | F | Latina, Salvadorian | White | Yes | N/A | Graduate Level | 6 | NP |
| 5 | F | Not Hispanic | White | Yes | N/A | Graduate Level | 8 | MD |

### Table 2

*Patients' demographic information*

| Patient # | Gender | Ethnicity | Race | Years in the U.S. | Educational status | Yearly family income | # of dependents |
|---|---|---|---|---|---|---|---|
| 1 | F | Latina, MX | White & Other | Unknown | High school | $0 (due to injury) | 1 |
| 2 | F | Latina, MX | Other/ "morena" | 16yrs | High school | $30,000 | 2 |
| 3 | F | Latina, MX | Other | 39yrs | Elementary | Dependent | Unknown |
| 4 | F | Latina, MX | Other/Hispanic | 24yrs | No formal education | Dependent | Unknown |
| 5 | F | Latina, MX | Other | 25yrs | High school | $35,000 | 2 |
| 6 | F | Latina, MX | Other | 40yrs | High school | $30,000 | 3 |
| 7 | F | Latina, MX | Other | 29yrs | High school | Dependent | 2 |

**Table 3**

*Invariant constituents and themes that emerged from the patients' interviews*

| Patients' Constituents & Themes | Definition | Example Quote |
|---|---|---|
| **Relationship building** | Experiences that have helped patients relate to their provider, develop trust, and form positive relationships. | "Me explican lo que me está pasando…ella me mando con un especialista. ¿Si ella no se preocupara de mí, para que me manda?" |
| Personal bond | Patients and providers develop a personal bond that is built on empathy, personal interest, and trust. | "Es una muy buena persona aparte de doctora, es muy humanitaria…tiene mucha paciencia te escucha." |
| Language | Patients share their perspectives about how providers' level of fluency in the Spanish language impacted their treatment experience. | "Se siente uno segura de platicar lo que uno tiene…eso ayuda mucho… Me da confianza que ella ya habla español." |
| Professionalism | Patients share their perspectives about how they evaluate the provider's level of professionalism and how this impacts their treatment experience. | "El trato, la atención que tiene para responderme mis preguntas y pues el interés que veo que tiene, de explicarme y la paciencia que tiene." |
| **Treatment adherence** | Experiences that have helped patients develop treatment adherence overtime. | "Yo quiero estar bien para ver mis nietos. ¡Quiero estar sana!" |
| Motivation to change | Patients share what motivates them to follow treatment recommendations. | "Por mi salud y por mi familia y por todos." |
| Implementing lifestyle changes | Patients share their experiences implementing lifestyle changes recommended by their providers as | "El dolor de los huesos, el dolor del cuerpo a veces que no lo aguanto. Que quiero hacer |

| | | |
|---|---|---|
| | well as barriers they face in implementing such changes. | ejercicio y no puedo, me duelen mucho mis pies” |
| Encouragement | Patients share how their provider’s encouragement helps promote their adherence. | “Me hace sentir bien y echarle más ganas.” |
| Role expectations | Patients share what they expect from providers and what they believe is their responsibility as patients. | “En tu vida nadie puede tener responsabilidad como tú. Si tu quieres vivir, quieres hacer algo en la vida, es tu decisión.” |
| **Contextual Factors** | Patients’ perspectives about the impact that culture, diabetes understanding, and systemic challenges has on their treatment experience. | “En mi niñez, allá no había un doctor no había nada. Si teníamos una calentura mi mama nos daba…de cualquier yerba que encontraba en el monte.” |
| Culture | How culture influences the patient-provider relationship, the treatment experience, and the treatment adherence process. | “Es la tradición hay que conservarla... Si la posibilidad económica no era buena… convivir con un nopal de dulce ese era el premio y la convivencia de aquella fiesta.” |
| Diabetes Understanding | Patients’ understanding about their diagnosis and sources of information that contributed to their understanding. | “Yo desde niña de parte de mi mama yo siempre escuche que la familia de ella [mi mama] fallecía de diabetes y de echo les faltaba, cuando morían ya les faltaban varias extremidades.” |
| Systemic challenges | Patients’ experiences navigating systemic challenges (e.g., discrimination, poverty, time limitations). | “Realmente hay mucha discriminación” |

*Note*. Bolded headings represent the invariant constituents through which the data was organized.

**Table 4**

*Invariant constituents and themes that emerged from the providers' interviews*

| Providers' Constituents & Themes | Definition | Example Quote |
|---|---|---|
| **Relationship building** | How providers relate to their patients, develop trust, and form positive relationships with their patients. | "I realize what it's like being somebody in another country and come here and…not have your degree behind you name…and having to bend or kneel to jobs that maybe weren't doing before." |
| Understanding | Providers form relationships with their patients by finding ways to relate to them. | "They'll bring in their little baby and it's comforting to see family, to see them bring in family and be happy." |
| Listening | Providers deepen their understanding of their patient's life by listening to their stories. | "Once they start talking to you, they'll relax, many times they don't like coming to the doctor, once they start feeling a little more relaxed, they start opening up." |
| Building trust | Providers share their perspectives about the role that trust has on the treatment experience. | "I think just communicating with the patient. You know, keeping them in constant communication." |
| **Treatment adherence** | Providers utilize various strategies to promote treatment adherence overtime. | "I feel like in general my Mexican and Mexican-American patients don't like to take medications. They are very motivated to make lifestyle changes that need to be done." |
| Shared decision-making | Examples of ways in which providers share the decision-making process with the patient to promote treatment adherence. | "I try to give them choices, 'like you can either add this medication now or we can give it a few more months, and these are things you can work on'." |

| | | |
|---|---|---|
| Appointment attendance | Providers’ perspectives about the role that appointment attendance plays on adherence. | “Most of them, the ones who are controlled are all pretty routine in the way that they come to the clinic.” |
| Role expectations | Providers’ perspectives about what their expectations are of themselves and of the patient. | “I really try to empower my patients I tell them all the time, ‘This isn’t me fixing your diabetes, you’re fixing it.” |
| **Contextual Factors** | Challenges and facilitative resources that providers encounter at the patient-level and systemic-level that impact treatment. | “It is interesting they come in more deferential than other populations that I’ve worked with.” |
| Culture | Examples of ways in which providers believe that the patients’ culture impacts treatment. | “Goal is a hard word…it’s not super cultural “goals” the way an American born person might be more familiar with.” |
| Individualizing care | Examples of ways in which they tailor treatment to the Mexican population for type 2 diabetes and strategies they use to overcome systemic limitations. | “Certainly, with our population where we don’t have access to medications through the insurance barriers, and immigration barriers. You can’t follow guidelines exactly, so you work with what you have.” |
| Diabetes Education | Examples of ways in which they provide diabetes education to promote treatment adherence utilizing their 15-minute health appointment. | “It is a constant process. It’s not like a thing that you get in a day or in a month.” |

*Note*. Bolded headings represent the invariant constituents through which the data was organized

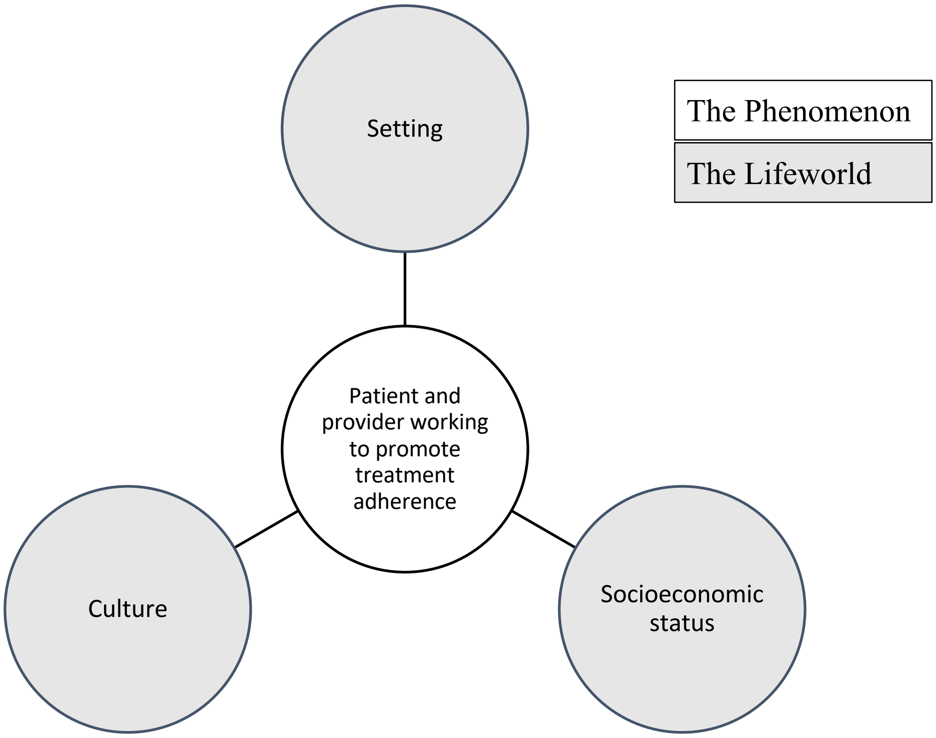

*Figure 1.* Conceptual framework highlighting the phenomenon and the lifeworld of this study.

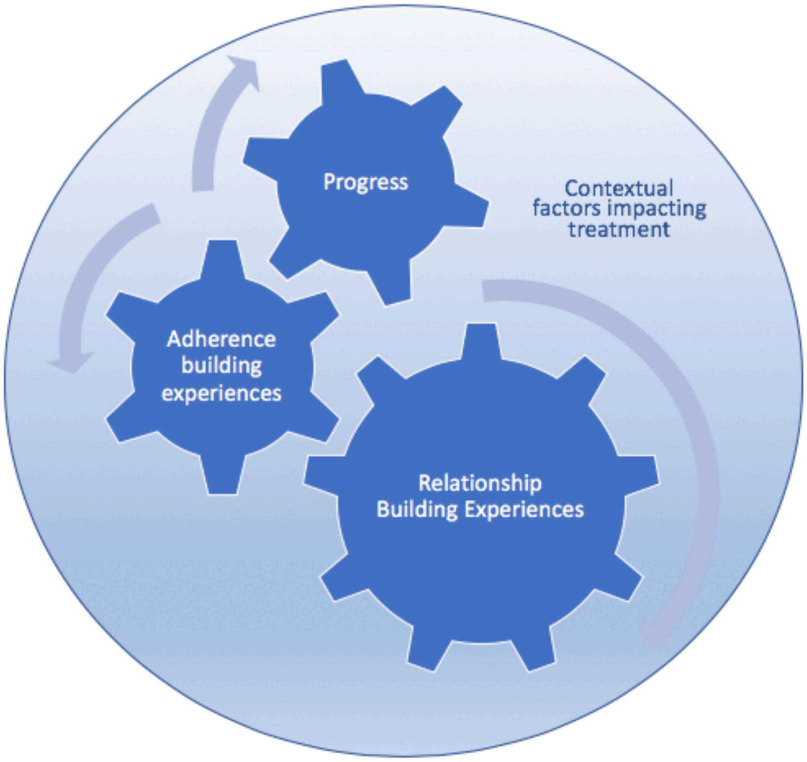

*Figure 2.* The essence of the phenomenon. This figure displays the process of working together to promote treatment adherence.

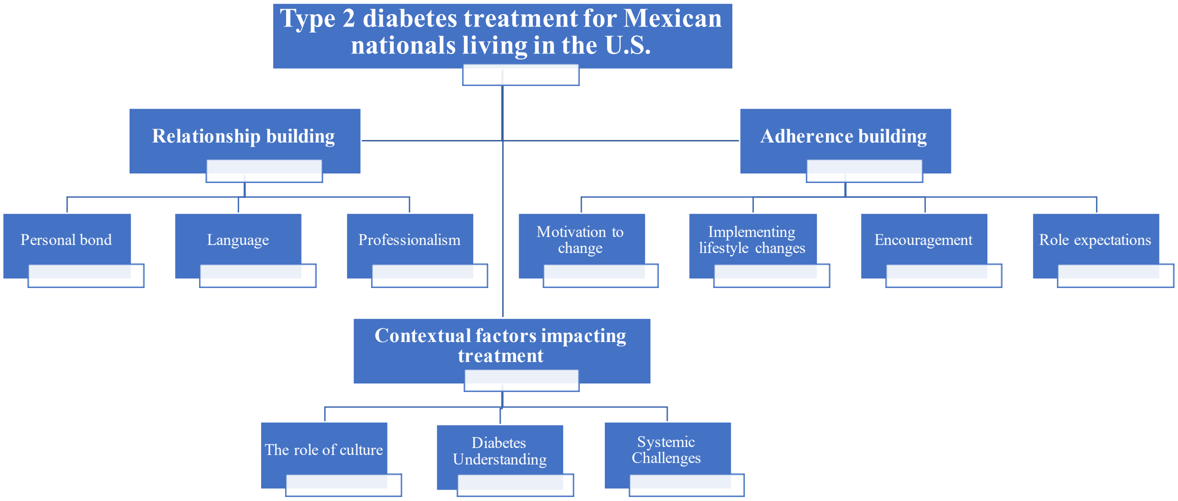

*Figure 3.* The patients' lifeworld. This figure displays the invariant constituents and themes that emerged from the patients' data describing their experience of the phenomenon.

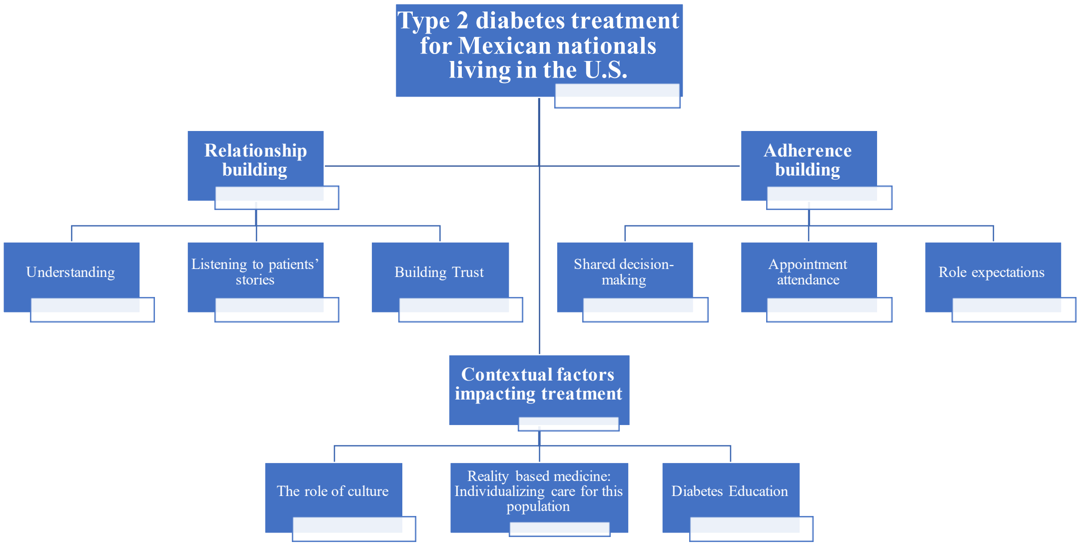

*Figure 4*. The providers’ lifeworld. This figure displays the invariant constituents and themes that emerged from the patients’ data describing their experience of the phenomenon.

TREATMENT ADHERENCE

## Patient Protocol

- Bond/Relationship between the patient and the health professional

*Prompt: we are interested in the relationships you have established with providers here in this clinic.*

  - At the clinic, who are the providers that you typically see?

*Prompt: As you answer the following questions, I want you to be thinking about (name providers & emphasize confidentiality)*

  - How would you describe the relationship with (name the providers)?
  - What do you think has helped you form a positive relationship with x?
  - What things do they do that let you know they care about you?
  - What things do they do to let you know they respect you?
  - What things do they do to let you know they understand what you are going through?

*Prompt: I'm going to ask you now some questions about your culture, meaning your values and traditions. What comes to mind when you hear these words?*

  - What would you say are your values when it comes to your health?
  - What would you say are traditions your family has in regard to health or food?
  - What things do your providers do that let you know they are mindful or respectful of your values and traditions when it comes to your health?

- Goals & Tasks/ Patient participation and involvement
  - When you see provider x, what do you hope they help you with?
  - What do you think your provider is trying to help you with during your visits?
  - What sort of recommendations does (insert providers' names) make to help you care for your diabetes?
  - What do you do if you have questions in regard to caring for your diabetes?
  - It's common for individuals to sometimes disagree with the recommendations providers make for a variety of reasons, have there been times when you and one of your providers have disagreed on how you should care for your diabetes?
    - If so, tell me about a time when you disagreed with the recommendations

      - *Probe if necessary*
        - What was the recommendation provided?
        - Why did you disagree with their recommendation?
        - How did this impact your willingness to follow your provider's recommendations?
        - Did you let them know? If so, how did you let them know?
        - How did they respond to your disagreement?
        - What happened in the end?
        - How did you agree to move forward?
    - Sometimes people worry their treatment may not work. Have there been times when you worried about the outcome of the treatment?
      - If so, tell me about a time when you worried the treatment would not work
      - *Probe if necessary*
        - What made you think it would not work?
        - How did this impact your willingness to follow your provider's recommendations?
        - Did you let your provider know? If so, how did you let them know?
        - How did they respond to your concerns?
        - How did you agree to move forward?
    - In your view, what are the responsibilities of your provider and what are your responsibilities in improving your health? How did you come to learn this?

  - Treatment Adherence
    - To what degree would you say you follow your providers' recommendations?
    - What are some things that you do to help you follow their recommendations?
    - What are some things that your providers do to help you follow their recommendations?
    - How do you think your relationship with your providers has helped you accomplish your goals?
    - What do you think prevents you from following your providers' recommendations?
    - How do you think your relationship with your providers has prevented you from accomplishing your goals?

**Provider Protocol**

- Bond/Relationship between the patient and the health professional

  *Prompt: I'm interested in learning about the relationships you form with your patients. In particular, I'd like you to think of your patients who are Mexican or Mexican-American with type 2 diabetes who you have developed a positive relationship with. Please answer the following questions with these patients in mind.*

    - Tell me about your relationship with these patients?
    - What do you think helps establish a strong relationship with these patients?
    - What do you do to help you form a strong relationship with some of these patients?
    - What do you think the patients do that help you build a strong relationship with them?
        - *Probe if necessary*
            - What things do patients do that let you know they are motivated?
            - What things do they do to let you know they understand your recommendations?
            - How do you know they listen to your recommendations?
    - What role do you think your culture and/or your patients' culture has played in the development of a strong relationship between the two of you?

- Goals & Tasks/Patient participation and involvement
    - When working with these patients what do you think is their hope in seeking treatment from you?
    - How are the goals for treatment set and/or communicated with these patients?
    - How do you determine what is the best way to accomplish the treatment goals set with these patients?
    - What sort of recommendations do you make to help these patients accomplish their treatment goals?
    - It's common for individuals to sometimes disagree with the recommendations providers make for a variety of reasons, have there been times when you and your patients disagreed on how they should care for their diabetes?
        - If so, tell me about a time when a patient disagreed with the recommendations you made

        - *Probe if necessary*
            - What was the recommendation provided?
            - Why do you think they disagreed with your recommendation?
            - How do you think this impacted their willingness to follow your recommendations?
            - Did the patient communicate any concerns about the recommendation with you? How did the patient let you know?
            - How did you respond to the disagreement?
            - What happened in the end?
            - How did you agreed to move forward?
    - Sometimes patients worry the treatment may not work and they may or may not share this concern with providers. Have there been times when you have thought your patients worried the treatment would not work?
        - If so, tell me about a time when this happened?
        - *Probe if necessary*
            - What made you think the patient believed treatment would not work?
            - Did they let you know? If so, how did the patient let you know?
            - How did this impact your approach to their treatment?
            - How did you respond to their concerns?
            - How did you agree to move forward?
    - What do you think are the responsibilities of you as a provider and the responsibilities of your patients in improving their health? How did you come to this stance?

- Treatment Adherence
    - How do you determine if your patients are adhering to the treatment recommendations you make?
    - What are some things you do to help promote treatment adherence with your patients?
    - What do you think facilitates treatment adherence among this population?
    - What do you think are the challenges in promoting treatment adherence with Mexican and Mexican-American patients with type 2 diabetes?
    - What are some ways the patient-provider helps promote treatment adherence?
    - What are some ways the patient-provider relationship prevents treatment adherence?

- What are some things you or other providers do that prevent treatment adherence among this population?