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Examining Psychotherapeutic Treatment Approach Preference in a Hispanic Population

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Doctor of Philosophy

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ABSTRACT

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Minority groups are at a disadvantage when seeking psychological treatment. Interventions are often less effective for minority populations when treatment outcomes are compared to Anglo populations. Studies indicate that the stigma associated with mental health disorders and seeking psychological intervention within these minority subgroups may be at fault for this disparity. In this study, we explored this idea by examining what methods of intervention Hispanic-identified individuals are more likely to seek out. Participants were given the option to enlist in a biofeedback approach to intervention as well as a supportive talk psychotherapy. Participants were drawn from the community population in Utah County via Mountainlands Community Health Center. Before taking part in the study, they were asked to indicate their cultural identity based on a series of criteria as well as their perceived stigma associated with mental health interventions. Lastly, participants completed exit interviews to quantitatively explore their reasoning for choosing the treatment approach they did, what they liked about their approach, and why they did not choose the other approach. The data collected was analyzed using a modified approach to consensual qualitative research methods.

Keywords: biofeedback, minority populations, cultural identity, qualitative research

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Disparities in psychotherapy utilization and effectiveness between members of minority cultures and majority populations is a growing concern (Dignam, 2000; Harris, 2001; Kouyoumdjian et al., 2003; López, 2002; Silberholz et al., 2017). A number of studies have shown a persistent underutilization of mental health services by Hispanic, Latinx and other minority persons (Kouyoumdjian et al., 2003; López, 2002), significant disparities in treatment outcomes between cultural groups (Dignam, 2000; Harris, 2001), major differences in the delivery of treatment in health care services among members of different cultures (Hall et al., 2015), significant inequities in health care access (Harris, 2001), an underrepresentation of minority groups in health-related research (Miranda et al., 2003) and higher levels of attrition from psychotherapy services in minority populations compared to majority populations (Lester et al., 2010; Organista et al., 1994; Owen et al., 2012).

Several mechanisms underlying these disparities have been identified—the first of which is socioeconomic status (SES). According to the U.S. Census of 2016, 23.6% of the Hispanic population is living in poverty which is 10% higher than the general population and about 15% higher than white Americans (He et al., 2016). Similarly, The Center for Immigration Studies concluded in 2011 that 19.9% of immigrant families living in the United States live in poverty compared to 13.5% of natives (Camarota, 2011). Low-income has been positively associated with less access to mental and medical health care (Williams & Collins, 1995), poorer mental and physical health (Pickett & Wilkinson, 2015), and higher rates of mortality (Pickett & Wilkinson, 2015).

The relationship between low income and health is of particular interest because low income is more common in immigrant and Latino households than in Anglo families. Many researchers and scholars have suggested that the overall difference in socioeconomic status (SES) between minority and majority populations may be responsible for the discrepancies we see in psychotherapy outcomes (Harris, 2001). For example, a study examining minority youth with ADHD found that minorities were significantly more symptomatic following behavioral intervention than their majority culture counterparts (Arnold et al., 2003). Authors suggested that a major contributor to the treatment outcome disparities we see is the difference in SES between these subgroups that make accessing treatment more difficult for members of minority groups because when researchers controlled for SES, these differences in outcome disappeared (Arnold et al., 2003).

While SES is likely a significant contributor to the disparities in utilization of treatment and treatment outcome among minorities and majority populations, because it prevents individuals from having sufficient access to services (Harris, 2001), some research has demonstrated that it may not be the only significant contributor to these differences. For example, Dignam and colleagues (2000) closely examined women in treatment for breast cancer and found that after controlling for socioeconomic status and insurance coverage, white women still find intervention to be more effective than African American women and African American women were still less likely to seek out psychological intervention than people of the cultural majority (Dignam et al., 2000).

The research on SES as a contributing factor to treatment disparities has led many researchers to look into other potential moderators or mediators to the relationship between low SES and poor treatment outcomes. Variables such as stigma, cultural competence in the

deliverance of treatment, and intervention approach have all been studied. In this proposal I will first summarize the findings from each of these areas of research. Next, I will outline a research design that incorporate qualitative data collected via semi structured interviews with participants in order to capture the unique perspective of Hispanic and Latinx identifying participants who seek out treatments.

Stigma

Stigma has been researched extensively when looking into treatment outcome disparities between ethnic and culture groups. Broadly speaking, stigma refers to "a collection of negative attitudes, beliefs, thoughts, and behaviors that influences the individual, or the general public to fear, reject, avoid, be prejudiced, and discriminate against people with mental disorders" (Gary, 2005). The U.S Department of Health and Human Services has considered it "the most formidable obstacle to future progress in the area of mental illness and health" (1999).

Researchers have studied the direct impact of stigma on the process of seeking out mental health care and found that high levels of stigma are associated with less help-seeking behaviors (Clement et al., 2015; Corrigan et al., 2014). However, studying the effects of stigma on mental health outcomes has been difficult because of the many facets that go into measuring stigma. Various researchers have attempted to clarify the operationalization of stigma in order to better measure and understand its effects. For example, Clement and colleagues (2015) have managed to identify separate factors within the construct of stigma: anticipated stigma, experienced stigma, internalized stigma, perceived stigma, stigma endorsement, and treatment stigma. Of these, researchers have determined that perceived stigma, treatment stigma, experienced stigma and internalized stigma are significantly associated with poor help-seeking behaviors (Clement et al., 2015).

Similarly, it has been well-documented in the literature that while most groups perceive some stigma associated with mental health, minority groups such as African American and Hispanic/Latinos have a more negative perception of mental health services than their white/US born counterparts (Alvidrez, 1999; Keyes et al., 2010; Nadeem et al., 2007;). However, not much is known about why we see cultural differences in the level of perceived stigma (Gary, 2005). Again, Clement and colleagues (2015) propose that internalized stigma and experienced stigma (factors of stigma that are negatively associated with help-seeking behaviors) are the result of the discrimination and prejudice faced by members of minority groups living in America and can therefore explain why ethnic minorities experience more stigma associated with mental health services than white Americans.

Nevertheless, social stigma and the lack of cultural acceptance appear to be major contributors to the differences in treatment utilization and effectiveness of psychological interventions (Keyes et al., 2010; Nadeem et al., 2007). Minority cultures (particularly immigrant populations and those with strong cultural identities) are more likely than US born whites to have higher perceived stigma associated with psychological disorder and psychological intervention (Keyes et al., 2010). In another study, Conner and colleagues (2009) examined the relationship between race and attitudes towards mental health intervention and found that stigma mediated this relationship (Conner et al., 2009). That is, minority groups such as African Americans and Latinos were more likely to have a negative attitude towards mental health services because of the perceived stigma of mental health within their subgroups. This has significant implications on treatment outcomes because we know from the research that this stigma can prevent individuals from seeking out professional help (Corrigan et al., 2004). Similarly, even when

individuals elect to seek treatment, many will neglect the proposed treatment intervention or discontinue treatment early (Gary et al., 2005).

Cultural Competence

Cultural competence in psychotherapy delivery may play a role in treatment disparities (López, 2002; Sue, 1998; Whaley & Davis, 2007). Culture is an essential component in individual and group identity (Comas-Diaz, 2006). The way in which people interact with their surroundings is deeply influenced by their cultural background and the values instilled by identifying with a group of similar individuals. We see evidence of cultural differences in many areas of life. In parenting, for example, research has found that eastern cultures tend to place more emphasis on punishment while western cultures score higher on nonrestrictive parenting (Kelley & Tseng, 1992). Similarly, research has found that Hispanic parents place higher emphasis on teaching children to exhibit self-control and to succeed in school than their white counterparts (Julian et al., 1994). Additionally, emphasis placed on formal education is quite different between cultural groups (Ogbu & Simons, 1998). Hispanic Americans see education as an important component to success more so than white Americans—an interesting finding that perhaps points to issues within a larger system, considering that Hispanic Americans perform worse academically than their white counterparts (Julian et al., 1994).

However, despite the many differences between cultures and the important implications culture has on individuals, psychotherapy is still a "culturally encapsulated healing process" (Wampold, 2007). That is, psychotherapy interventions are created from and even directed to a specific cultural context (Benish et al., 2011). Fortunately, there has been a push within the field of psychology and other health-related fields to increase cultural awareness and cultural sensitivity. Over the last several years we have seen a rapid development of "culturally adapted"

interventions and training programs geared towards teaching cultural competence to new psychotherapists (Benish et al., 2011; Duarté-Vélez et al., 2010). In such approaches, researchers and practitioners introduce new culturally sensitive elements to traditional, evidence-based therapies. For example, some versions of culturally adapted Cognitive Behavioral Therapy (CBT) have included family members in therapy sessions for clients who identify with more collectivist cultures (Griner & Smith, 2006). Within Latino populations much has been done to try to identify the specific components of Latino culture that should be incorporated in culturally adapted interventions that would best serve that subgroup. For example, Comas-Diaz (2006) pointed out the healing culture for Latinos looks a lot different than American healing culture. She points out that Latino healing culture includes telling stories, the use of proverbs to teach change, and incorporation of spirituality (Comas-Diaz, 2006). Comas-Diaz (2006) suggests that these elements should be incorporated in therapy interventions as well.

Another example of cultural adaptations to interventions is providing services in the client's native language (Griner & Smith, 2006). In a meta-analysis of 76 studies, Griner and Smith (2006) compared culturally adapted interventions and found that the therapies that were conducted in the client's native language (other than English) were twice as effective as interventions conducted in English.

While these approaches are certainly a step in the right direction, there are still notable limitations in the development of culturally adapted treatment approaches. Castro and colleagues (2010) introduce the "fidelity-adaption dilemma". Here the researchers point out that culturally adapted interventions are tested for general efficacy, not reliability. Castro highlights that evidence-based interventions are tested for reliability and by changing the protocol to include culturally relevant interventions, we essentially change the entire intervention. This new

approach must now be validated and tested for reliability. The authors also argue that procedures for creating cultural adaptations should be standardized. Another limitation to consider is that culturally adapted interventions still do not lift the stigma of psychological intervention. Individuals who chose not to seek out psychological services may still not pursue it even if it were given to them in their native language (Huey et al., 2014).

In regard to cultural competence training, more research is needed to test the effectiveness of such interventions. Currently, we know from the research some therapists are better at working with minority ethnicities than others (Hayes et al., 2016; Hayes et al., 2015; Imel et al., 2011; Saha et al., 2003); however, the research on whether or not this competency can be trained has varied in findings. Mostly, the research suggests that these interventions have only been minimally successful (Benish et al., 2011; Huey et al., 2014; Yuen et al., 2004). For example, some meta-analyses suggest that training new therapists to "cultural tailor" their interventions may slightly enhance treatment effectiveness for ethnically diverse groups (Benish et al., 2011) while others demonstrate that some form of cultural tailoring may provide no benefit and perhaps even reduce treatment effectiveness (Yuen et al., 2004).

Intervention Approach and Biofeedback

Intervention approach may play a key role in addressing treatment disparities. Specifically, researchers have tried to determine if minority persons have a preference to a specific type of intervention (Cooper et al., 2003), if traditional treatments used with white American populations are equally as effective with minority populations (Chavira et al., 2014; Organista et al., 1994), and if they respond better to a theoretical orientation and corresponding intervention approach over another (Ishikawa et al., 2014). Research has demonstrated that there are notable cross-cultural differences found in acceptable and preferred treatment modalities

within a culture (Cooper et al., 2003). For example, Hispanics are more likely to seek out medical interventions and are less likely to find counseling acceptable when compared to white Americans (Cooper et al., 2003). This finding was also demonstrated in a recent study by Ishikawa and colleagues (2014). In their study, researchers followed-up with 96 Latino patients who received recommendation from the primary care doctors to seek out treatment for depression. Patients who were recommended by their doctors to take medication for the treatment of depression were significantly more likely to follow through with the recommendation than those who were recommended to seek out psychotherapeutic interventions (Ishikawa et al., 2014).

Similarly, researchers have studied the effectiveness of various treatment protocols with minority populations specifically (Chavira et al., 2014; Organista et al., 1994). As mentioned earlier in this paper, minority groups are underrepresented in the research used to develop, standardize and determine effectiveness of treatment interventions (Alvidrez et al., 1996). A meta-analysis by Miranda and colleagues (2005) found that of the 9,266 participants involved in efficacy studies, only 6% were African American/black, and 1% were Latino. Similarly, Matt and Navarro (1997) conducted a meta-analysis of 63 psychotherapy outcome studies with minority population samples and found that only 5 of them reported on the breakdown of participant ethnicity. Given this, there has been a push to determine whether or not the intervention we are using are effective within a minority sample. The findings have demonstrated general effectiveness for Latinos in treatment such as CBT, Behavioral therapy, and interpersonal therapy (Chavira et al., 2014); however, these findings were not compared to a white American sample in order to check for discrepancies.

While researchers have looked into minority group preferences and have looked into what therapies are effective within a Latino population, very little research has been done to date that has compared the treatment outcome effectiveness of different intervention approaches. One recent review (Collado et al., 2016) compares the results of 36 studies that use various approaches to treating depression Latinos to conclude that there is evidence to support the effectiveness of cognitive behavioral therapy (CBT) and Behavioral Activation (BA) when treating Latino samples; however, researchers point out that there was significant variability in the quality of the randomized control trials (RCT) used in this sample.

Biofeedback is considered a "behavioral medical" approach to treatment (Lehrer et al., 2003). The purpose of biofeedback is to learn to use the connection between mind and body to change physiological activity and improve physical and mental health (Yucha & Montgomery, 2008). Biofeedback is used to help clients gain insight into how they have control over their body's physiological responses. Building that awareness has been shown to be effective in a variety of treatment interventions such as the management of stress (Goessl et al., 2017), depression (Karavidas et al., 2007), anxiety (McAusland & Addington, 2016), pain management (Sielski et al., 2017), and more. In order become more aware of the body's physiological response, individuals practicing biofeedback use physiological indicators such as heart rate, blood pressure, skin temperature, and breathing to gain understanding of the functioning of their bodies and the impact these responses have on their emotions, thoughts, and behaviors (Lehrer et al., 2003). Essentially, biofeedback uses physiological responses to provide information to the client which will in turn increase awareness of the influence of these functions on overall functioning. Individual's practicing biofeedback learn to control their physiological responses in order to better their emotional states and overall well-being (Lehrer et al., 2003).

Research has compared the effectiveness of biofeedback interventions with other traditional therapy interventions to find that these interventions are just as efficacious (Flor et al., 1993; Martin et al., 2007; Newton-John et al., 1995). To date, no research has been done examining the effectiveness of biofeedback within a minority population; however, given the nature of biofeedback and how it is seen as a more medical approach to therapy, we speculate that this population will respond well to this treatment over traditional psychotherapy.

Attrition

As mentioned, minority groups such as Latino Americans have high rates of attrition than the majority group counterparts (Aguilera et al., 2018; Lester et al., 2010; Organista et al., 1994; Owen et al., 2012). For example, Organista and colleagues (1994) looked at adult patients receiving Cognitive Behavioral Treatment (CBT) in a primary care setting and found that African Americans were more likely than Caucasians to drop out of treatment prematurely. Similarly, Lester and colleagues (2010) looked at a sample of patients with PTSD and found that African American clients were less likely than Caucasian clients to complete treatment (45% of Caucasians versus 74% of African Americans). These differences held even when controlling for education and income. Owen and colleagues (2012) found similar results when studying a group of college aged students at a counseling center. In this sample, minority clients were more likely to terminate therapy without discussing their decision with their therapist (Owen et al., 2012). Aguilera and colleagues (2018) looked specifically at a low-income, Hispanic sample and found that about a quarter of their sample dropped out of group CBT after 1 session and more than half of their sample of participants received less than half of prescribed number of sessions (4 or less sessions out of 8).

Present Research Study and Hypotheses

The goal of this study was to capture qualitative data around the perspectives and preferences of Hispanic individuals seeking out mental health treatment. To examine preference of treatment, we gave subjects an option of receiving traditional psychotherapy or biofeedback. We hypothesized that because biofeedback is seen as a more medical approach to therapy, and because minority groups are more likely to seek out medical intervention over psychotherapy (Cooper et al., 2003), the Latinx-identified subjects in our study would seek out this intervention more so that traditional psychotherapy. We also collected quantitative data on treatment outcomes and treatment attrition. This quantitative data is limited to basic descriptive statistical analysis because of the limitations of the study design. We suspected that attrition rates will still exist in our sample; however, because clients will perceive less stigma associated with the biofeedback intervention compared to the supportive talk therapy group, they will see less attrition in the biofeedback group. We suspected that once participants begin to receive biofeedback, they will perceive it as more of a medical approach and therefore stay with treatment longer. Similarly, we suspect that the biofeedback group will improve faster (as indicated by better treatment outcomes in earlier sessions) and have more significant decreases in distress than the supportive talk therapy psychotherapy group.

The qualitative data collected examined treatment preference for Hispanic-identifying subjects in Utah county by offering participants the option of completing an exit interview after termination of treatment or drop out. Qualitative data was used in order to capture insight into participant preference. The qualitative data also gathered information around how participants view therapeutic treatment. The data collected was analyzed using qualitative research methods guided by an abbreviated and adapted version of Clara Hill's Consensual Qualitative Research

methods (CQR) (Hill, 2012). Hill's method of qualitative research has been used and validated in recent psychological research (Hill, 2012). Hill's CQR methods include the element of consensus and values the mutual influence of researcher and participant (Hill et al., 1997). In the presented study, CQR methods were adapted and abbreviated due to logistical issues of location and time and limited funding. Specific modifications to the CQR protocol are described below.

Qualitative methods, such as CQR, are used to explore topics for which little is known and/or populations that are under-researched (Patton, 2002). Similarly, Marshall and Rossman (2011) propose that qualitative research is especially important to research questions that explore complex processes and ignored issues of marginalized groups. As discussed, the disparities in treatment utilization and treatment outcomes between members of majority and minority groups continues to be only vaguely understood. The hope of this present research study is to add qualitative richness to the current body of research on the topic such that the varied and complex voices that experience these disparities can be taken into consideration. Creswell (2013) offers the following description of qualitative research:

To study a problem, qualitative researchers use an emerging qualitative approach to inquiry, the collection of data in a natural setting sensitive to the people and places under study, and data analysis that is both inductive and deductive and establishes patterns or themes. The final written report or presentation includes the voices of participants, the reflexivity of the researcher, a complex description and interpretation of the problem, and its contribution to the literature or a call for change.

Hill's (2012) outlines the 9 key components of CQR: (1) inductive data analysis, (2) the use of open-ended questions to elicit rich, non-coerced responses, (3) words and narratives are primary, (4) each element is understood within the context of the whole (5) a small number of

cases are studied in depth (6) researchers rely on a team of multiple individuals with different perspectives (7) consensus among team members (8) an emphasis on ethics, trustworthiness, and the role of culture, (9) continual return to raw data to verify emerging theories.

Deviations from CQR

The length of the interview data captured from participants were substantially shorter than typical interviews used in CQR analyses. Interviews averaged 7-12 minutes long. Clara Hill's methods (2012) recommend 60-90 minute long interviews. The interview data in this study more closely resembled survey data than interview data. The principle investigator of this study, along with her committee chair, modified the CQR methods to account for this difference. Other deviations included: conducting research team meetings over the phone instead of in person, limiting the number of meetings between members of the research team, and performing audits between primary researcher and auditor. This decision was made based on the distance between primary researcher and assistants to fit constraints of time and location. Additionally, research team members were volunteers with limited time available to dedicate to the project.

As part of our research we also collected baseline data on stigma and acculturation as mediators to our research questions. Our hypotheses are based on the assumption that biofeedback interventions are seen as a more medical approach to traditional psychotherapy and therefore participants will have lower levels of perceived stigma associated to this intervention. We assume that participants in the biofeedback group will have less perceived stigma towards their intervention approach compared to individuals receiving supportive talk therapy. This assumption will be checked by giving each participants a stigma measure prior to starting the treatment and after selecting their intervention type. Again, the findings of this data is limited to basic descriptive data given the limitation around data collection.

Methods

Approval

All methods for the study were approved by the Institutional Review Board of Brigham Young University (BYU). All data collection procedures were compliant with the Health Insurance Portability and Accountability Act of 2004 and thus protects the rights and privacy of all participants.

Recruitment

Participants were recruited out of Mountainlands Community Health Center in Provo, Utah. Flyers advertising for the study were placed in the clinic waiting room and in each of the examination rooms. A stack of flyers was also made available at the check-in and check-out desks and interested subjects were encouraged to take copies home. Interested participants contacted primary investigator and/or Mountainlands' Mental Health Department by phone or in person. Participants were encouraged to ask questions by phone or in person before signing consent forms. Participants who chose to contact by phone were sent consent and enrollment forms by e-mail using a Qualtrics link during the call. Participants who chose to inquire in person were given the consent and enrollment forms in person via an iPad that contained the Qualtrics links. All communications were presented in both English and Spanish and participants were encouraged to complete forms in the language they were most comfortable with. Once consent was obtained, participants were offered appointment times for their first appointment in the treatment of their choice.

Participants and Setting

This study was designed to collect information around the perspective and preference around psychotherapeutic treatment for Hispanic persons who, as a subgroup, experience

disparities in utilization and effectiveness of such treatments when compared to their white or Anglo-counterparts. Given this, participants were recruited through Mountainlands Community Health Center in Provo, Utah. Mountainlands Community Health Center services a predominately Hispanic/Latinx population in Utah County and offers mental health services to the community. Criteria for participant inclusion were self-identification as a Hispanic of Latinx person and a desire to seek out therapy as a way to reduce general stress and to treat depression and anxiety. Participants were excluded from the study if there was a prior diagnosis of severe psychopathology such as psychotic disorders or personality disorders or if they have prior experience with biofeedback or psychotherapy. Participants who were excluded from the study for these reasons were still allowed to receive services; however, their data was not collected and compiled with the participants. There were 3 potential participants who were interested but were excluded for having already had experience with therapy in the past. Participants were also excluded if they had a history of cardiovascular concerns that would prevent them from safely participating in Heart Rate Variability (HRV) biofeedback. Participants who were excluded from the study for these reasons, were given information around why it would be inappropriate to practice HRV biofeedback and were encouraged to seek out more traditional forms of therapy. There was 1 participant who was excluded for this reason. This participant went on to engage in talk therapy at Mountainlands. Participants consisted of self-identified males and females, aged 18-70. Recruitment began in April of 2019. During this time, 42 participants consented to treatment (Table 1). Participants started therapy in their self-selected treatment groups in May of 2019. All sessions were completed by July of 2019. Participant sample size was determined by modeling similar published studies. Similar studies used to compare the effectiveness of

treatments in subpopulations have recruited an average of 30 participants per group (Chavira et al., 2014). Researchers sought out to recruit 30-40 participants per group.

Table 1

Descriptive Statistics on Participant Characteristics

	Male: Female	Age, m (SD) [range]	Years of Education M (SD) [range]	US born: Born outside of US
HRV biofeedback	10:27	43.6 (15.8) [18-70]	11.6 (2.2) [5-16]	8:29
Supportive Talk Therapy	1:4	36.8 (8.7) [25-44]	12.3 (1.1) [10-16]	2:3

There were two groups in this study; an HRV biofeedback group and a supportive talk therapy group. Sessions for both groups took place within Mountainlands Community Health Center during regular business hours for the clinic. Sessions were conducted in English or Spanish depending on the language preference of the participants. Primary Investigator for this project conducted all sessions for participants in the HRV Biofeedback group. A clinical psychologist at Mountainlands Community Health Center provided services for individuals in the Supportive Talk Therapy group. Providers of services and all individual who interacted with participants for appointment scheduling and exit interview purposes were bilingual.

Design and Procedure

The experimental design of this study is quasi-experimental and multi-modal. Quantitative and qualitative methods were used to analyze data. The study is non-randomized because participants have self-selected into their treatment of preference. There were two phases

to this study. The first looked at recruitment and client preference for intervention type. Data relating to demographic information, treatment progress, perceived stigma, and level of acculturation was collected during Phase 1. Data from this phase of the study was collected and examined descriptively. No formal conclusions can be drawn from the data comparing two groups due to the difference in number of participants in each group and because of the nature of the self-selection bias. Limitations are discussed further in an upcoming section.

The second phase consisted of an exit interview where each participant was asked to elaborate on their preferences. The data collected from the interviews were analyzed qualitatively, using a slightly modified version of CQR. This phase of the study was conducted by two recruited undergraduate student research assistants. Both research assistants were studying psychology and interning at Mountainlands Community Health Center. Research assistants received course credit through their University to be involved with the research project. Research assistants followed a semi-structured interview structure with each participant. Interviews were recorded using a program called Tape-A-Call. Participants received a $10 gift card in the mail for Walmart for completing the exit interview. Interviews began in August 2019 and continued until November 2019. Recorded conversations were transcribed, translated, and later coded by the research team and analyzed qualitatively.

Phase 1: Recruitment and Treatment

To examine treatment preference, four stacks of flyer advertisements for the study were placed at the front desk of Mountainlands Community Health Center to be distributed by staff to each patient who checks in. Two flyers advertised for biofeedback intervention as a way of reducing stress—one of which was in English, while the other in Spanish. The remainder two flyers advertised for traditional psychotherapy to reduce stress—again, one of the flyers were in

English and the other was in Spanish (See Appendix). These same flyers were also hung in the waiting room and in each of the medical examination rooms. The English and Spanish flyers did not differ in any way except language. Similarly, the two flyers advertising for the two different treatment approaches did not differ in any way except that they advertised for different treatment approaches and therefore had different descriptions of the interventions. The flyers were identical in attractiveness and appeal in order to prevent potential participants from being coerced into one treatment modality over the other. This was done by ensuring the same photographs, in the same layout, color, and size were used in each flyer. The only difference between flyers were the descriptions of services. Flyers, and all other written materials related to the study, were translated into Spanish by a team of trained bilingual speakers at Mountainlands Community Health Center whose job is to translate paperwork for their clientele. The back-translation method was used within this team to ensure clarity in the translation. A Google Voice phone number was placed on each of the advertisements so that potential participants can reach the primary investigator directly by phone. Many potential participants contacted Mountainlands Community Health Center directly or visited the clinic in person to receive more information. During their call participants expressed their treatment preference between HRV biofeedback interventions and traditional talk therapy. Data was collected on treatment preference between HRV biofeedback versus Supportive Talk Therapy (Table 1.) Participants did not know who would be providing therapy services and were only told that their provider would be Spanish speaking.

Participants who were interested in taking part in the study completed a consent form via email or, if in person, via a link presented to them on an iPad. They were also asked to fill out a demographics form where we collected data on race, ethnicity, age, previous diagnoses, and

history of psychotherapy intervention. Participants were encouraged to ask any questions prior to signing consent form and sharing demographic data. Participants were also reminded that they may, at any time, withdraw from the study and their data will not be used. Once consent was obtained, and demographic data was collected, a first appointment was offered. Available appointment slots for both treatment groups were spread out throughout the week to allow for variety in availability. Appointments were offered in 60-minute time slots on Monday mornings from 8:00 am to 12:00pm, Wednesday Afternoons from 12:00 pm to 6:00 pm, on Fridays from 8:00 am to 6:00pm and on Saturday mornings from 9:00 am to 1:00pm. Participants selected an available appointment time in the treatment group consistent with their preference. One therapist provided all the services for participants in the Biofeedback group and another therapist provided all the services for individuals in the supportive talk therapy group. The biofeedback therapist and writer of this study is a female identified, 4th year graduate student. The therapist who conducted the supportive talk therapy sessions was a male identified, licensed clinical psychologist. Both therapists spoke Spanish. Participants were made aware that their therapist would be Spanish speaking. No other identifying information was shared with participants about their therapist.

At first appointment, participants in both groups were given access to a Qualtrics link on an iPad and were asked to complete measures on perceived stigma towards mental health and mental health services (Self-Stigma of Seeking Help (SSOSH)), level of acculturation in American Culture (The Acculturation Rating Scale for Mexican Americans- II (ARMSA-II)), and a baseline measure of stress and anxiety (The Depression Anxiety Stress Scales (DASS-21)). Participants in both treatment groups filled out the DASS-21 at the start of every session to monitor progress. The measure took about 5 minutes to complete. Participants were encouraged

to arrive to their appointments 5 minutes early in order to complete the survey. Description and rational for measures can be found below:

Measures. *Acculturation Rating Scale for Mexican Americans-II (ARSMA-II).* The Acculturation Rating Scale for Mexican Americans- II (ARMSA-II) (Cuellar et al., 1980) is administered prior to the start of treatment in order to assess the extent to which participants identify with Hispanic culture. This scale is a 30-item measure that uses a 5-point Likert scale. Questions on the scale assess for cultural (Hispanic vs Anglo) preferences. Questions targeted elements of cultural identity that include language, food, media, and friends. A higher score is indicative of a stronger preference for one of the two cultural identities. The Mexican and Anglo sub scale scores obtained from the measure have both been shown in the literature to have good internal consistency (Cronbach's α = .88 and .86, respectively). The scale has also been shown to have good validity. The scale was created to measure acculturation within a Mexican sample specifically; however, it has been effectively used in several other studies with other Hispanic populations such as Puerto Rican and Dominican populations (Dennis et al., 2016). Items on this measure are written in both available in both English and Spanish and is normed in both languages (Dennis et al., 2016).

Self-Stigma of Seeking Help (SSOSH). Prior to the start of treatment, participants were asked to complete the Self-Stigma of Seeking Help (SSOSH) (Vogel et al., 2006). This scale is a 10-item, self-report questionnaire which can be completed in 5 minutes. The SSOSH measures a participant's level of comfort or concern with regard to seeking psychological help from a therapist. The scoring algorithm leadings to one of three acuity ranges: low, medium or high. The items are scored on a Likert scale of 1-5 (1 = strongly disagree; 2 = disagree; 3 = agree and disagree equally; 4 = agree; 5 = strongly agree). The SSOSH has been demonstrated in the

literature to have adequate validity and reliability. The SSOSH has a test–retest reliability (kappa coefficient of 0.5) and has been widely used in research studies that look at the role of stigma on treatment for psychiatric illness in both research and clinical settings. The measure has been shown to uniquely predict attitude towards and intent to seek out psychological health (Vogel et al., 2013) The SSOSH measure were originally designed in the English Language and has been translated into various other languages, including Spanish and is normed in Spanish (Vogel et al., 2006).

The Depression Anxiety Stress Scales—45 (DASS-21). The Depression Anxiety Stress Scales (DASS-21) (Lovibond & Lovibond, 1995) is a 21- item self-report measure of depression, anxiety, and stress. Items are rated on a 4-point Likert scale ranging from 0 ("Did not apply to me at all") to 4 ("Applied to me at some degree"). Respondent's scores can fall in either the normal, mild, moderate, severe, and extremely severe range for depression, anxiety, and/or stress subscales. The DASS-21 is reported to be a reliable and valid instrument with the total score coefficient alpha of .91 and high subscale coefficient alphas as well. (Antony et al., 1998; Clara et al., 2001; Henry & Crawford, 2005).

This measure has been translated in Spanish and used in both clinical and research settings as such (Daza et al., 2002). The Spanish translation of the DASS-21 has been also been demonstrated to have adequate validity and reliability estimates (Daza et al., 2002). The total score coefficient alpha of the Spanish translation of the DASS-21 is .96. Subscale measures of the coefficient alpha were also high (depression = .93; anxiety = .86; stress = .91) (Daza et al., 2002).

After measures were completed, participants in the biofeedback group followed a 5-session protocol of Heart Rate Variability Biofeedback (Lehrer et al., 2003) by a Spanish-

speaking therapist. The 5-session format included an intake session where baselines measures are completed, a rationale for biofeedback intervention is provided, and resonant frequency is determined. Participants are then sent home to practice breathing at their resonant frequency for 20 minutes a day. The second session involves practicing breathing at participant's resonant frequency and training client in diaphragmatic breathing through pursed lips. Session 3 focuses on discontinued use of breathing pacer. Participant is encouraged to continue practicing without a pacer at home. Sessions 4 and 5 focus on practicing controlling heart rate through breathing using biofeedback. In these sessions therapist and participant discuss the application of biofeedback techniques to manage symptoms in their daily lives. Here, the instructions will depend on the client's individual problems and personality.

The supportive talk therapy was also conducted in a 5-session format by another Spanish speaking therapist. The 5-session format for the supportive talk therapy group included an intake session where baselines measures were completed and presenting concerns and treatment goals were discussed between participant and therapist. The therapist conducting supportive talk therapy incorporated the use of Cognitive Behavioral Therapy interventions and humanistic approaches throughout the course of the remaining 4 sessions. In both treatment groups, sessions were once a week and lasted a clinical hour of approximately 50 minutes.

Data was collected on treatment attrition (Table 2). Participants were encouraged to call to cancel or reschedule their appointments 24 hours in advance, whenever possible. If a participant did not attend their appointment without notice, they were contacted by phone by the Mountainlands' Mental Health Department secretary who offered participants another appointment time. At the time of that call, participants were asked about their willingness to continue treatment and their willingness to continue being part of the study. If participants did

not want to schedule another appointment and were still willing to be involved in the study, they were reminded that a representative will be calling them to complete an exit interview.

Table 2

Number of participants in each group who completed each session.

Number of sessions attended	1 session	2 sessions	3 sessions	4 sessions	5 sessions
HRV biofeedback	37	29	22	14	8
supportive talk therapy	5	3	3	0	0

Phase 2: Exit Interview and CQR

Upon completion of treatment—either by termination or attrition— participants were contacted by telephone to complete an exit interview. Exit interviews were performed by one of two research assistants who were undergraduate students and interns at Montainlands Community Health Center.

Research assistants were trained in semi-structured interviews by the primary investigator using principles in Clara Hill's Consensual Qualitative Research manual (Hill, 2012). Trainings emphasized the importance of open-ended questioning and reflections. Research assistants practiced asking interview questions in this way over the phone with the primary researcher prior to conducting interviews.

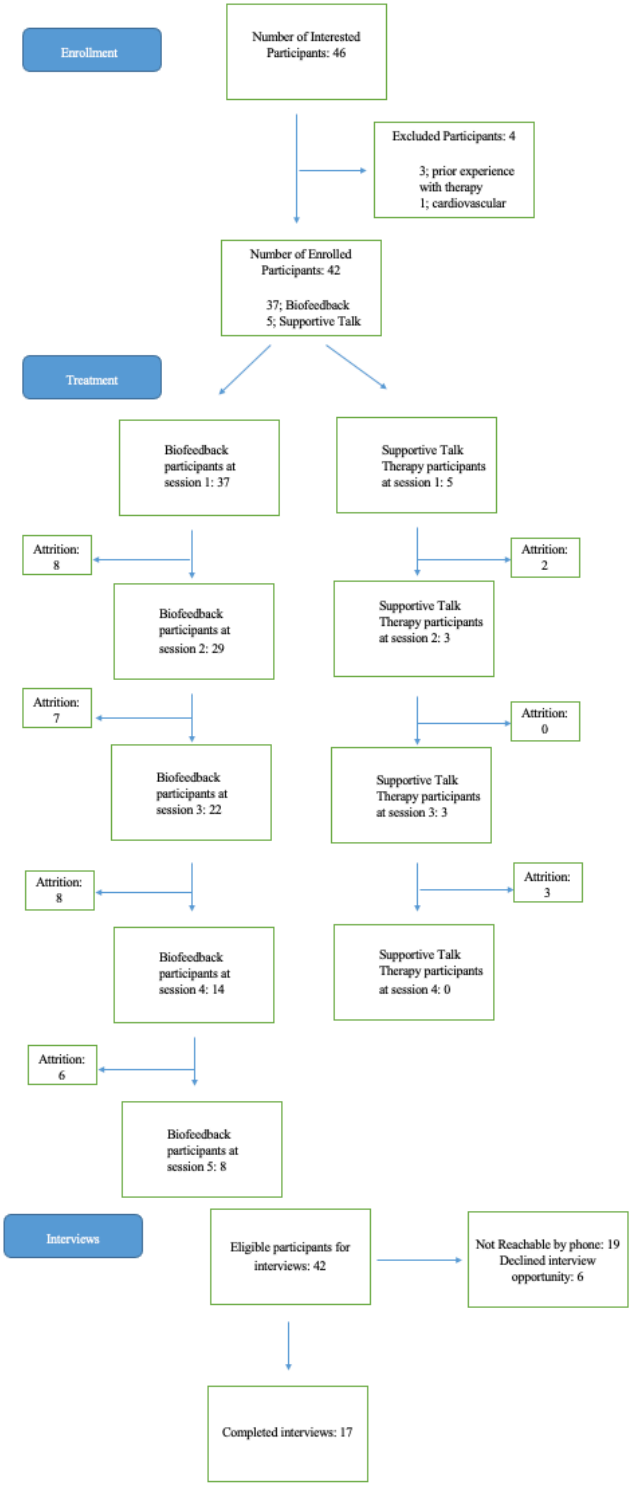
Phone interviews were recorded for later transcription using the phone application "Tape-A-Call" as is standard procedure for qualitative studies where phone interviews are conducted. Details of this protocol were highlighted in the consent form signed by each participant. The

research assistant reminded participants of this protocol prior to starting the recording. This also ensured that no identifying demographic information was recorded.

Participants were asked to provide additional verbal consent or dissent to the interview. Of the 42 participants who consented to treatment, 17 agreed to be interviewed over the phone—2 of these were of the supportive talk therapy group while the remainder 15 were of the HRV biofeedback group. Nineteen participants were not reachable by phone, despite leaving several voicemails. Attempts to reach participants by phone were recorded. In some cases, phone numbers were inaccurate or disconnected and in other cases multiple attempts were made and no response was ever received. This study's research assistant reached out to each participant up to 3 times and left voicemails with each attempt. Six participants reported that they were not interested in completing the phone interview; however, they were agreeable to including already collected data in the study. Figure 1 is the Transparent Reporting of Evaluations with Nonrandomized Design (TREND) flow chart that demonstrates this process.

Figure 1

TREND Flow Diagram



During the exit interview, participants were asked to elaborate on why they chose the intervention type they did over the other option. Similarly, they were asked to talk about their perception of therapy and what they enjoyed about their experience. A template for the semi-structured interview questions can be found in the appendix. Examples of open-ended interview questions are: What are your opinions about therapy? What do you like about therapy? What don't you like about therapy? Can you tell me more about why you chose _____ over _____ treatment modality? Interview questions as well as the order in which they were presented were carefully considered.

Recorded interviews were stored under deidentified file names consistent with participant identification numbers and were stored on password protected devices. The team of 2 undergraduate students transcribed and translated the interviews for later analysis. Research assistants transcribed the narratives in Spanish initially. Researchers were trained to transcribe the narratives exactly and to leave blank spaces in their transcriptions if they could not clearly identify what was being said in the audio recording. In instances where the audio was difficult to interpret, primary researcher listened to the audio recording to determine if the narrative could be made out. If what was being said was not clear, researchers left the space blank on the transcription. This happened on one narrative where background noise made it difficult to understand a small part of the participant's narrative. The transcriptions were later translated into English by the research assistants. Primary researcher back translated all narratives back to Spanish to ensure that the English translation was the same as the initial Spanish version. All transcriptions were also password protected and all identifiable names spoken by participants were replaced by pseudonyms.

Data Analysis

Collected data was analyzed in two phases—consistent with the two phases of the research study. As mentioned, data collected in Phase 1 was limited to basic descriptive statistics in order to quantitatively depict the sample. The second phase of the study consisted of analyzing the qualitative data extracted from the exit interviews. To do so, a trained research team worked to transcribe the recorded interview sessions.

Once interviews were transcribed and translated, the research team met regularly over the phone to code the transcribed interview. Coding was done in two parts: (1) Creating a Domain List and (2) The Cross Analysis. An audit between primary researcher and auditor was performed after the coding process. This differed from the Clara Hill's CQR method where auditor feedback is taken back to the research team for further consideration and consensus.

Creating a Domain List

This part of the coding process involved analyzing the transcribed interviews to compile a list of meaningful topic areas. Researchers took an inductive approach to analyzing the narratives. To do so, members of the research team independently read the transcriptions to determine what potential topic areas arose naturally from the narratives. The team then met together over the phone to discuss the potential domains and reach a consensus on which domains most appropriately fit the narratives. Over the course of the meetings, the list of domains changed and developed to fit the data. Consensus was reached between all 3 members of the coding team.

The next step in creating the domain list consisted of compiling all the text within an assigned domain and organizing the sections of texts into "blocks." Each block captured the idea conveyed by the participant. For each block, researchers wrote out a short summary of the idea.

These short summaries were called, “core ideas.” These core ideas were discussed and agreed upon within the team of coders. They were later sent to the auditor for feedback. Primary researcher and auditor discussed the proposed changes and reached a consensus before making any changes.

Cross Analysis

The second part of the coding process involved completing a cross analysis. The purpose of this step is to categorize the data within each domain. Similar core ideas were grouped together to form a subgroup or category within the domain. Each category was given a name agreed upon by the coders. The cross analysis was sent to the auditor who reviewed it and provided feedback. Feedback provided by the auditor was discussed between primary researcher and auditor and changes were made accordingly.

Audits

Audits were performed after both steps of the coding process. The primary researcher and auditor met regularly to discuss the domain lists and cross analysis determined by the coding team.

Research Team Members

The research team consisted of two interviewers who were also members of the coding team, the primary researcher, and an auditor. As is custom with qualitative methods, the following paragraphs will provide information about the members of the research team. The members of the team are important in qualitative analyses because they are a responsible for coding and interpreting data and are a potential source of bias. Information about each member’s possible connection with the studied topics is described below.

As mentioned, the two interviewers were undergraduate students studying psychology. They were also part of the coding team. Both members also worked at Mountainlands Community Health Center in an intern capacity. They received credit from their university for participating in this study. Neither interviewer had experience with biofeedback nor psychotherapy prior to the start of the study. Both members identified as Latinx and were bilingual.

The final member of the coding team was the primary researcher and the author of this dissertation. The primary researcher has 4 years experiences with biofeedback in research and clinical settings. She identifies as Latina and is bilingual.

The auditor for this study was a licensed clinical psychologist. His academic interests involve biofeedback and psychophysiology research. He does not have experience with qualitative research methods.

The coding process began by discussing bias and addressing power structures within the research team. Members of the research team were all Hispanic and/or Latinx-Identifying and each expressed bias around their respective culture's general thoughts around seeking out mental health services. Research Assistant #1 shared that she grew up thinking therapy was for "crazy people" and was discouraged by family members to seek out this form of treatment. Likewise, Research Assistant #2 spoke about how he has noticed a change in opinion between generations within his family unit. He noted specifically that younger generations had a more positive outlook on mental health interventions. Primary investigator shared her bias around the effectiveness of biofeedback and her felt sense that this treatment approach can be seen as a less stigmatized approach to mental health treatment. Auditor disclosed that he is aware of the research literature on Hispanic identified individuals and their stigmatized perception of therapy.

Researcher biases were revisited and discussed throughout the entirety of the research project as it was appropriate. Researchers were encouraged to share their perspectives and thoughts even if they were different from the rest of the group. To address power differentials, primary researcher allowed researchers to share their thoughts first before sharing her own.

Results

Phase 1: Quantitative: Recruitment and Treatment

As mentioned above, a total of 42 participants consented to participate in this study. The majority of participants reported female as their gender, with 11 participants indicating male as their gender. Every participant self-identified as Hispanic and/or Latinx. All 42 participants were seeking out mental health services for the first time and self-selected into their treatment of choice. Participants expressed a desire to get help managing stress or their symptoms of anxiety and/or depression. Each participant in the study chose to complete all study measures, conduct therapy sessions and complete exit interviews in Spanish.

As hypothesized, most subjects were interested in biofeedback. In total, 37 of the 42 interested participants (88.1%) self-selected into the biofeedback group and five of the 42 participants (11.9%) selected into the supportive talk therapy group. A one sample chi-square test of independence was conducted to compare the observed results with expected results. If there was not a preference for biofeedback over supportive talk therapy, 50% of participants would be interested in biofeedback and 50% would be interested in supportive talk therapy. The one sample chi-square test of independence showed a significant difference between the number of subjects who chose biofeedback over the number of subjects who chose traditional psychotherapy, x^2 (1, N = 42) = 24.38, $p < .001$.

Data was collected on level of acculturation using the ARSMA-II (Table 3). Between group comparisons cannot be made given the nature of the study design and its limitations; however, it is notable that all but 1 individual in the supportive talk therapy group scored higher in the Anglo Orientation Scale (AOS) subscore than their Hispanic Orientation Scale (MOS) subscore indicating that all but 1 of the participants in this group view themselves as more acculturated to Anglo culture as compared to their Hispanic Culture. Similarly, MOS scores were higher than AOS scores in individuals who self-selected into the biofeedback group. There was more variability in the Biofeedback group with some members considering themselves to be culturally assimilated and others not. This measure also collected data on country of origin. Findings indicated that 32 of the 42 total participants were born outside of the US (76.1%). Of the 10 participants who were born in the US, 2 chose the supportive talk therapy group and 8 chose the Biofeedback group. Overall, 78.3% of the Biofeedback group were born outside of the US and 60% of the supportive talk therapy group were born outside of the US (Table 1). Twenty-five of the 32 participants who indicated they were born outside of the United States reported they were from Mexico (78.1%). Additionally, 4 participants were from Venezuela (12.5%), 2 participants were from Chile (6%), and 1 participant was from Peru (3%).

Table 3

Level of Acculturation by group, as determined by the ARSMA-II

	AOS, m (SD) [range]	MOS, m (SD) [range]
HRV biofeedback	1.2 (.63) [0.0-3.00]	2.87 (0.71) [1.31-4.00]
supportive talk therapy	2.18 (0.82) [0.10-4.00]	1.9 (0.66) [1.63-4.00]

In addition to demographic data, participants were asked to complete a measure that captured their level of perceived stigma towards mental health services. Higher Self-Stigma of Seeking Help (SSOSH) scores are indicative of higher perceived "loss in self-esteem a person would feel if they decided to seek help from a psychologist or other mental health professional" (Vogel et al., 2006.) Descriptive statistics for this data can be found in Table 4. Participants in the Biofeedback group reported an average SSOSH score of 26.6. Participants in the supportive talk therapy group reported an average SSOSH score of 22.4. These averages are comparable to United States averages of 27.1 as reported by Vogel and colleagues (2013). The differences in scores between the sample of biofeedback participants and the sample presented by Vogel and colleagues (2013) was not statistically significant ($F(1, 690) = .509$, $p = .476$).

Table 4

Level of Perceived Self-Stigma when seeking out mental health services, as determined by SSOSH

	SSOSH Score m (SD)
HRV biofeedback	26.3 (6.51)
supportive talk therapy	22.4 (5.73)

Finally, A baseline measure of symptoms was collected for each participant using DASS-21 at first visit. A summary of descriptive statistics for this baseline measure can be found in Table 5. At baseline, all participants indicated some level of depression, anxiety, and stress as reported by average scores above 2 in each of the three subscores. Participants in both the supportive talk therapy group and the biofeedback group indicated Stress as their highest subscore. The Depression subscore was next highest in both groups. The anxiety subscore was the lowest for both groups. This measure was completed at the start of each session in order to monitor treatment progress. It should be noted that only 8 participants in the biofeedback group completed all 5 sessions of the protocol (21.6%) (Table 2). All of the supportive talk therapy participants had discontinued treatment by Session 3. Table 5 includes descriptive statistics for this measure over the course of treatment. Overall, the Depression, Anxiety, and Stress subscores decreased for most participants overtime. Average scores also decreased for most variables; however, the average Depression score for the Biofeedback group stayed about the same. These findings were comparable to normed samples in non-clinical settings (Henry & Crawford, 2005)

Table 5

Change is DASS-21 Over 5 sessions

		Session 1 m (SD)	Session 2 m (SD)	Session 3 m (SD)	Session 4 m (SD)	Session 5 m (SD)
HRV Biofeedback	Depression	2.7 (1.6)	2.7 (1.3)	3.1 (1.03)	2.3 (1.2)	2.7 (1.5)
	Anxiety	2.2 (1.0)	1.9 (1.3)	2.4 (1.0)	2.6 (1.3)	2.0 (.92)
	Stress	3.3 (1.1)	3.4 (1.6)	3.3 (1.5)	2.9 (1.3)	3.1 (2.5)
supportive talk therapy	Depression	3.2 (2.2)	3.0 (1.7)	2.0 (1.0)	-	-
	Anxiety	2.6 (1.3)	2.7 (3.8)	1.3 (.58)	-	-
	Stress	3.6 (1.3)	3.0 (2.6)	3.0 (1.7)	-	-

Phase 2: Qualitative: Exit Interviews and CQR

Seventeen participants completed exit interviews. Of the 17 completed interviews, 2 were participants in the supportive talk therapy and 15 were in the Biofeedback group. Demographic Details of all participants who completed exit interviews can be found in Table 6. 13 of the 17 participants who completed the exit interviewed self-identified as female. The 4 remaining participants self-identified as male.

Table 6

Demographic Details for Exit Interview Participants

	Treatment Group	Age	Gender
1	Biofeedback	20	Female
2	Biofeedback	31	Female
3	Biofeedback	46	Female
4	Biofeedback	58	Male
5	Biofeedback	36	Female
6	Biofeedback	29	Female
7	Biofeedback	21	Female
8	Biofeedback	47	Female
9	Biofeedback	39	Female
10	Biofeedback	30	Male
11	Biofeedback	24	Female
12	Biofeedback	21	Female
13	Biofeedback	39	Female
14	Biofeedback	49	Female
15	Biofeedback	61	Female
16	supportive talk therapy	32	Female
17	supportive talk therapy	21	Male

To limit research bias during the interview process, the primary researcher did not conduct interviews. This determination was made because the primary researcher was responsible for providing services to the individuals in the biofeedback group. Emphasis was made on asking open ended questions in a semi-structured manner. Interviews ranged from 7 minutes to 12 minutes long.

For the purpose of the following qualitative analysis, the interview data collected from the 15 biofeedback participants were analyzed. The data collected from the 2 supportive talk therapy participants are discussed separately.

Using the modified and abbreviated version of CQR method described above, the research team extracted 6 domains from the data: (1) Experience with Treatment, (2) Reason for Treatment Preference, (3) Evaluation of Therapist, (4) Perception Towards Mental Health, (5) Willingness to Recommend Biofeedback, and (6) Barriers to Treatment (Table 7). This section will introduce the 6 domains and their specific results according to order and structure presented in Table 7. In presenting the domain categories, qualifiers such as *General, typical, variant,* and *rare* are used to describe the frequency to which each category was present in the data. *General* categories were present in 14 to 15 narratives. *Typical* categories were present in 7 to 15 narratives. *Variant* categories were present in 3 to 6 narratives. *Rare* categories were present in 1 to 2 narratives.

Table 7

List of Domains

Number	Name
	Experience with Treatment
1.1	Perception of experience
1.2	Perception of outcomes
	Reason for Treatment Preference
2.1	General Views
2.2	Views of Biofeedback
2.3	Views of Psychotherapy
	Evaluation of Therapist
3.1	Perception of Therapist
3.2	Desired Qualities in Therapist
	Perception Towards Mental Health
4.1	Cultural Views
4.2	Personal Views
5	*Willingness to Recommend Biofeedback*
6	*Barriers to Treatment*

Domain 1: Experience with Treatment

The majority of the findings in this domain were extracted from participants' responses to the following interview question: *What was your experience like with Biofeedback?* Two types of categories emerged in the cross-analysis: (1) Perception of Experience and (2) Perception of Outcomes (Table 8).

Perception of Experience. Two categories pertaining to participants' perception of experience emerged in the cross analysis: (A) Positive Experience and (B) Mixed Experience. (A) Positive Experience was a *typical* category while (B) Mixed Experience was a *variant* category.

Table 8

Findings for Domain 1: Experience with Treatment

Category	Frequency	Illustrative Core Ideas/Excerpts
Perception of Experience		
A. Positive Experience	T (12)	It was good; I learned a lot; It was relaxing
B. Mixed Experience	V (3)	Felt uncomfortable at times; some sessions were better than others
Perception of Outcomes		
C. Positive Perception of Outcomes	T (11)	I can manage my symptoms better; I don't feel as anxious anymore
D. Difficulty understanding concepts	V (4)	I had a hard time understanding the concepts; complicated; difficulty following along
E. Negative Perception of Outcomes	R (1)	It did not help much

Note. N=15. G=General (14-15 participants), T=Typical (7-13 participants), V=Variant (3-6 participants), R=Rare (1-2 participants).

Within (A) Positive Experience, 12 participants discussed various aspects of the treatment that they enjoyed. They described biofeedback as "positive," "good," "relaxing" and shared that they "enjoyed going to treatment." Others shared that they "felt comfortable" in the setting. Specifically, one research participant discussed how they felt in treatment:

I said that biofeedback was good. I felt really relaxed when I left my appointments. Sometimes I felt so relaxed that I almost fell asleep. (laughing) Now, when I practice the breathing at home I do it with the lights off and I fall right asleep… I'm glad that I went.

Another participant shared in this sentiment stating: "…it was good. It was different. I never heard about biofeedback before, but it was good. I felt really calm. One time I felt like I could fall asleep (laughs)."

Within (B) Mixed Experience, 3 participants spoke to having an "okay" experience; however, they also pointed out aspects of the treatment that made the experience less than positive. It is important to note that none of the participants endorsed having true negative experiences with treatment. One participant described his experience by stating:

> …it was okay. What happened was that sometimes I felt relaxed at the appointments. The first and second time I felt very relaxed and calm, but the last time I went I feel like the breathing made me feel worse. I could not get calm and my blood pressure was rising. I did not feel comfortable. After that, I didn't want to go anymore.

In the case of this participant, the interviewer responded to the participant by reflecting back the following: "sounds like you had a negative experience." The participant quickly corrected this reflection stating: "No, not negative. I think maybe my anxiety is too strong..."

Perception of Outcomes. Three categories pertaining to participants perception of outcomes emerged in the cross analysis: (C) Positive Perception of Outcomes, (D) Difficulties Understanding Concepts, and (E) Negative Perception of Outcomes. (C) Positive Perception of Outcomes was a *typical* category, (D) Difficulties Understanding Concepts was a *variant* category and (E) Negative Perception of Outcomes was a *rare* category.

Within (C) Positive Perception of Outcomes participants discussed the ways in which treatment helped them learn how to better manage their symptoms. They spoke to feeling less anxious and depressed and to learning that they can manage their symptoms. One participant shared, "now I understand my stress better and how it effects my body." Additionally, another participant added, "Now, because of the treatment, I have exercises that I can do with my respiration to help myself feel a little less stressed." Another participant expressed this sentiment by stating:

> I learned a lot. I learn how to manage the symptoms in my body. For example, when I feel very stressed, I feel like my heart is beating really fast, but I can breathe slowly, and I won't feel that anymore. It's good.

Similarly, another participant stated:

> When I practice the breathing, I feel more relaxed and when I am more relaxed, I can make better decisions and can be more positive in my life. I need to practice more, but when I learned to practice, that was good.

Within (D) Difficulty understanding Concepts, participants spoke to the complexity of biofeedback and how they struggled to understand the concepts. For example, this one participant stated the following: "I don't know if I was doing it the right way. The therapist

always reminded me to breath from my stomach and I didn't understand that too much..." Similarly, another shared, "It was a bit complicated. I did not understand all of the parts."

There was overlap between the (D) Difficulty Understanding Concepts and (E) Negative Perception of Outcomes. For one participant, their difficulty understanding the concepts of biofeedback made it so they perceived the intervention to be unhelpful. The participant provided the following response:

> It did not help me much because the problem was that I am older and I didn't understand everything she was saying. She showed me the things on the computer, but I didn't understand. I think maybe it would be better if I went with my granddaughter so she can learn and try to help me, but she had school so I had to go myself.

It is important to note that despite having difficulties understanding the concepts and therefore perceiving that outcomes were negative; this participant did not describe the biofeedback experience as negative. The same participant quoted above referred to the experience as "positive" sharing that the therapist was friendly and that he felt comfortable in the setting.

Domain 2: Reason for Treatment Preference

The majority of the findings in this domain were extracted from participants' responses to the following interview question: *Why did you choose Biofeedback over regular therapy?* Two types of categories emerged in the cross-analysis: (1) Views of Biofeedback and (2) Views of Psychotherapy (Table 9).

Table 9

Findings for Domain 2: Reason for Treatment Preference

Category	Frequency	Illustrative Core Ideas/Excerpts
Views of Biofeedback		
A. A Desire to Treat Physical Symptoms	T (7)	Prefer treatment that focuses on physical symptoms
B. Curious about Biofeedback	V (3)	I never heard of it before; I wanted to try it because it was new
Views of Psychotherapy		
C. Not Comfortable Opening Up	V (4)	I don't like talking to strangers about my problems
D. "La Lucha"	V (3)	My problems are normal; I don't need therapy for everyday problems we all face

Note. N=15. G=General (14-15 participants), T=Typical (7-13 participants), V=Variant (3-6 participants), R=Rare (1-2 participants).

Views of Biofeedback.

Two categories pertaining to Views of Biofeedback were derived from the data during cross-analysis: (A) A Desire to Treat Physical Symptoms and (B) Curiosity about Biofeedback. (A) A Desire to Treat Physical Symptoms was a *typical* category and (B) Curiosity about Biofeedback was a *variant* category.

Within (A) A Desire to Treat Physical Symptoms, participants spoke about their interest in treating physical manifestations of their mental health concerns "instead of treating their minds" in the traditional form of therapy. Responses in this category made a distinction between the type of interventions that treat the mind versus those that treat the body. For example, one

participant stated, “I understood that biofeedback is a different kind of therapy that focuses on managing stress in the body. It is for everyone, not only for people who are sick in their minds.” Similarly, another participant shared the following explanation for her preference:

> I wanted to try something that would help me change the way in my body that I feel when I’m stressed. Sometimes when I’m stressed, I feel like a panic… sometimes I can’t breathe and my chest hurts. I needed help with that.

Another participant described choosing biofeedback over traditional therapy because of the emphasis biofeedback places on the mind-body connection:

> I like to know how everything if effecting my body physically. Because everything is connected. Everyone knows that your mental health effects your body physically too and I wanted to learn more about that.

Within (B) Curious about Biofeedback, participants attributed their preference for biofeedback to the novelty of biofeedback and their desire to “try something new.” For example, one participant stated, “before Mountainlands I never heard of it. I was curious about it when I saw the sign in the doctor’s office...” Another participant shared that it is characteristic for her to want to try new things: “I never heard of biofeedback before. I like to try new things. My kids think I’m crazy because always I’m trying something new.”

Views of Psychotherapy. In describing the reason for choosing biofeedback, many participants spoke to their views about psychotherapy. Two categories were extracted from the data in this domain during the cross analysis: (C) Not Comfortable Opening Up and (D) "La Lucha." (C) Not Comfortable Opening Up was a *variant* category and (D) "La Lucha" was also a *variant* category.

Within (C) Not Comfortable Opening Up, participants shared that their reasoning for not choosing psychotherapy was because they understood psychotherapy to be a place where you talk about personal matters. They expressed their disinterest in opening up to a "stranger" about their lives. For example, one participant shared the following:

> I just know that I couldn't be comfortable in regular therapy because it is not easy for me to share my problems with other people. I only talk about my problems with my mom, but not everything because I don't want to worry her.

Similarly, another participant stated, "I'm not comfortable with it because it's not normal… it's not common. I don't know anyone who tried therapy before. I think it is for people with bigger problems. I don't know but it's not for me."

Within (D) "La Lucha" (translated to mean "The Everyday Struggle") participants spoke about their problems in such a way that implied that their problems are part of everyday life and do not warrant the need of psychotherapy. For example, one participant was asked if they would consider psychotherapy now that they have completed biofeedback treatment. The participant responded saying, "I don't think I need it. I think my problems are normal." Similarly, another participant shared in that sentiment by stating the following:

> I just never thought I needed therapy. When I think of therapy, I think about people who are very sick or people who experience trauma. Fortunately, I never experience trauma.

Well, nothing too bad. Everyone experiences some bad things. That's life. It's the everyday struggle. But I don't need to talk about that with a therapist.

Domain 3: Evaluation of Therapist

The majority of the findings in this domain were extracted from participants' responses to the following interview question: *What was your experience like with Biofeedback?* Additionally, some participants offered their evaluation of their therapist when asked if there was anything else they wanted to say before the end of the interview. Two types of categories emerged in the cross-analysis: (1) Perception of Therapist and (2) Desired Qualities in Therapist (Table 10).

Table 10

Findings for Domain 3: Evaluation of Therapist

Category	Frequency	Illustrative Core Ideas/Excerpts
Perception of Therapist		
A. Positive Perception	V (5)	Therapist was nice/friendly; therapist was smart
B. Uncomfortable around therapist	R (1)	It took me a while to open up to therapist
Desired Qualities in Therapist		
C. Desire to have a Spanish Speaking Therapist	T (7)	She didn't need a translator which was nice; I liked that she spoke Spanish.
D. Desire to be Culturally Matched with Therapist	V (6)	I was comfortable with my therapist because she was Latina; I wish my therapist was Latino.

Note. N=15. G=General (14-15 participants), T=Typical (7-13 participants), V=Variant (3-6 participants), R=Rare (1-2 participants).

Perception of Therapist. Two categories emerged within this category during cross analysis (A) Positive Perception of Therapist and (B) Uncomfortable around Therapist. (A) Positive Perception of Therapist was a *variant* category and (B) Uncomfortable around therapist was a *rare* category— only showing up in one participant's response.

Within (A) Positive Perception of Therapists, participants spoke about their therapist being "friendly" and "kind." Participants pointed out that their therapist made them feel comfortable. They perceived their therapist as competent and "intelligent." For example, one respondent, referred to her therapist stating, "…she knew a lot and was very very kind. I felt comfortable with her." Similarly, another participant stated, "… I felt comfortable with [biofeedback clinician]. I think she understood me and wanted to help me. She was nice."

The one response within (B) Neutral Perception of Therapist was extracted from a participant's response that stated the following: "I took some time for me to be comfortable with the therapist."

Desired Qualities in Therapist. Two categories emerged within this domain during cross analysis: (C) A Desire to Have a Spanish Speaking Therapist and (D) A Desire to be Culturally Matched with Therapist. (C) A Desire to have a Spanish Speaking Therapist was a *typical* category and (D) A Desire to be Culturally Matched with Therapist was a *variant category.*

Within (C) A Desire to Have a Spanish Speaking Therapist, participants spoke highly of the fact that their therapist did not need to use a translator to provide treatment. When asked why it is so important that the therapist speak Spanish, a participant responded with the following: "… especially for therapy because it is private and I don't want a translator in the room too."

Within (D) Desire to be Culturally Matched with Therapist, participants spoke about the importance of being "understood" by therapist. Participants referred to a desire to be culturally matched on a couple identity variables—namely, country of origin and religion. For example, one respondent expressed that she felt it is important that therapists understand the culture of her native country. When asked to elaborate further she said the following: shared her thoughts in the following:

> Yes, very important for everyone, I think. If they don't understand you, they can't help. [Biofeedback clinician] was Dominican, I think. It's different from my country, but it's kind of the same. I think she understood me and my culture. I have a friend who used to see a therapist here in the United States. Her therapist spoke Spanish but wasn't Latina. My friend didn't feel comfortable. Her advice would be better for an American person.

Similarly, another responded stated, "[it is hard to] find someone who can have therapy in Spanish or someone Latino who understands the culture and the religion and everything." Another participant expressed his desire to meet with a therapist who identified as religious. He stated the following: "Yes, I always thought that therapy was not good because many therapists aren't people of faith, but I felt guided to give it a try. My therapist was religious this time."

It is notable that there is considerable overlap between categories within this domain. Participants who expressed a desire to be culturally matched with their therapist also shared a preference for a Spanish Speaking therapist.

Domain 4: Perception Towards Mental Health

The majority of the findings in this domain were extracted from participants' responses to the following interview questions: *What are your views on seeking out mental health services?*

and *Why did you choose biofeedback over psychotherapy?* Two types of categories emerged in the cross-analysis: (1) Cultural Views and (2) Personal Views (Table 11).

Table 11

Findings for Domain 4: Perception Towards Mental Health

Category	Frequency	Illustrative Core Ideas/Excerpts
Cultural Views		
A. Acknowledges and Rejects cultural viewpoint	T (11)	People judge you for going to therapy, which we should stop doing; we should talk about mental health more
B. Acknowledges and Accepts cultural viewpoint	V (5)	Therapy is for crazy people; I don't want others to think I'm crazy if they know I go to therapy
Personal Views		
C. Perceived Usefulness of Therapy	V (3)	We should all go to therapy; Therapy should be more widespread; everyone has problems and should get help
D. Sense of pride for seeking out services	R (1)	I have no shame; a lot more people should also go to therapy

Note. N=15. G=General (14-15 participants), T=Typical (7-13 participants), V=Variant (3-6 participants), R=Rare (1-2 participants).

Cultural Views. Two categories were extracted from the data in this domain during cross analysis: (A) Acknowledges and Rejects Cultural Viewpoint and (B) Acknowledges and Accepts Cultural Viewpoint. (A) Acknowledges and Rejects Cultural Viewpoint was a *typical* category and (B) Acknowledges and Accepts Cultural Viewpoint was a *variant* category. All participants responses acknowledge a cultural that stigmatized seeking out mental health services. The categories differed by whether or not the participant accepted these cultural views to be true.

Within (A) Acknowledges and Rejects Cultural Viewpoint, participants spoke to their Latinx culture's stigmatized view of therapy and mental health; however, they emphasized their belief that these perceptions should change. Specifically, one participant stated the following:

> They don't have to be crazy to go to therapy. Everyone needs someone to talk to and sometimes the problems you have can't be resolved only with the family or with the church. Sometimes we need professional help and there is nothing bad with that.

Similarly, another participant stated the following:

> Latino people will think you're crazy if you go to therapy. I used to think so too because that's what I learned from older people in my life, but that needs to change because it's not easy. I tell everyone about my problems with mental health and I know some people are judging me but maybe some people will start to change their beliefs if we talk more about it.

Within (B) Acknowledges and Accepts Cultural Viewpoint, participant responses demonstrated that they had adopted cultural views about seeking out mental health services. One respondent explained that she would only admit to seeking out mental health services to her family. She shared that in her culture, people only share personal information with family

members. When asked what she thinks others would think if they knew she sought out treatment, she elaborated by stating the following: “they will think I’m strange and crazy for talking about my personal problems with them.” Similarly, another participant stated the following:

> Latinos don’t talk about our problems outside of the house and also never talk about mental health. For us, we make like it doesn’t exist. People think bad of other people if they need to go to therapy so instead, I thought, it would be better if I try the [biofeedback] instead.

Another participant shared in this sentiment stating, “I never wanted to go to therapy because I am not crazy, but I finally went because I saw the form about biofeedback.” In these responses, participants make a distinction between psychotherapy and biofeedback. They share that they sought out biofeedback because it is not therapy. They believe therapy is for “crazy people” or people who are significantly unwell.

Personal Views. Two categories emerged from the data within this domain during cross analysis: (C) Perceived Usefulness of Therapy (D) Sense of Pride for Seeking out Services. Responses in this domain capture how participants perceived themselves for seeking out mental health services. Participants also shared their thoughts about how others should perceive mental health and its treatment. (C) Perceived Usefulness was a *variant* category and (D) Sense of Pride for Seeking Out Services was a *rare* category—only showing up in one participant’s response.

Within (C) Perceived Usefulness of Therapy participants described their views about the usefulness of therapy citing their own experiencing and arguing for more widespread utilization of the service. Specifically, one participant shared the following:

> Therapy is good for everything. It helped me a lot and it helped my niece too. She used to

> make bad choices, but not anymore. I think everyone should go to therapy especially Latinos here in the United States. We have many problems, but we have to go forward with our lives and people don't understand that therapy can help with all of that. It doesn't have to be that hard for us, but we against it because we don't understand it.

Other participants spoke to how helpful therapy can be "if you only try." One participant shared the following sentiment, "I know many people whose doctors tell them to go to therapy, but no one wants to go. I tell them, just go one time and see. It will help."

Within (D) Sense of Pride for Seeking Out Services we had one participant share the following, "I have no shame. I know that I need it and I want to get better. I tell all my friends about it."

Domain 5: Willingness to Recommend Biofeedback

The majority of the findings in this domain were extracted from participants' responses to the following interview questions: *Would you recommend Biofeedback to a friend?* Two types of categories emerged in the cross-analysis: (A) Would Recommend and (B) Would Hesitate to Recommend (Table 12). (A) Would Recommend was a *typical* Category and (B) Would Hesitate to Recommend was a *variant* category.

Table 12

Findings for Domain 5: Willingness to Recommend Biofeedback

Category	Frequency	Illustrative Core Ideas/Excerpts
A. Would Recommend	T (9)	I already tell everyone to go
B. Would Hesitate to Recommend	V (5)	It's not my place to tell others what to do; if they asked me, maybe I would tell them.

Note. N=15. G=General (14-15 participants), T=Typical (7-13 participants), V=Variant (3-6 participants), R=Rare (1-2 participants).

Within (A) Would Recommend, participants shared their willing to recommend biofeedback with other people in their lives. Some participants talked about the people to which they already have recommended treatment. Participants shared that they have recommended services to coworkers, employers, family, their children, and friends at church. For example, one participant stated:

> I talked about it already to my coworkers and my boss. He has a lot of stress… Lots of Stress. I told him about it too. I don't know if he will take my advice, but I told him to try it.

Another participant shared the following:

> Yes, I told my daughter about it and I think she's going to start coming. She keeps saying she will call. If she can manage her stress better, it would be really good for her and for our family because she can be a better mom and take better responsibility.

Within (B) Would Hesitate to Recommend, participants expressed a willingness to recommend; however, they described some pause around the types of people they would

recommend. Participants also expressed a desire to stay out of other's personal lives but stated that they would recommend services if asked directly. For example, when asked if they would be willing to recommend services, one participant replied, "Maybe." When asked to elaborate they continued, "If I knew they needed it, but I never know what problems other people have. It is better people make that decision for themselves." Similarly, another participant stated the following:

> Well, every person has to make the decision. I am not a professional… I cannot tell people what they need, but I can tell them that I liked my appointment. Yes, I will tell them I liked the treatment if they ask. It helped me a lot. But people won't ask me because this is private. Only my family will ask.

It is notable that none of the participants out right denied willingness to recommend services. Instead, participants offered criteria for which recommending would be appropriate by emphasizing the people to whom they would recommend services to, those who they would not recommend services to, and the reasons why they would or would not.

Domain 6: Barriers to Treatment

The majority of the findings in this domain were extracted from participants' responses to the following interview questions: *What are your views on people who seek out mental health services?* and *What didn't you like about the intervention?* Four types of categories emerged in the cross-analysis: (A) Time, (B) Cost, (C) Transportation, and (D) Limited Access to Latinx Therapist (Table 13). (A) Time and (B) Cost were *variant* categories. (C) Transportation and (D) Limited Access to Latinx Therapists were *rare* categories. The data in this domain capture incidences where participants directly spoke to circumstances or logistical issues that keep them from going to therapy despite having a desire to do so.

Table 13

Findings for Domain 6: Barriers to Treatment

Category	Frequency	Illustrative Core Ideas/Excerpts
A. Time	V (6)	I had to stop going because I don't have time; the available times do not fit my work schedule
B. Cost	V (3)	Therapy is only for rich people
C. Transportation	R (1)	I didn't have a ride, so I had to stop going
D. Limited Access to Latinx Therapist	R (1)	I never thought I could go to therapy because I didn't know there were Latinx therapists

Note. N=15. G=General (14-15 participants), T=Typical (7-13 participants), V=Variant (3-6 participants), R=Rare (1-2 participants).

Within (A) Time, Participants spoke broadly about there being "little time in the day" to fit in therapy. For example, one participant shared the following statement:

> No, the problem is only that I don't have time and I have to make more time for me. If I make more time for me, I will be healthier, and I can take care of my family better. I know this already. I only have to try to do it more.

Other participants spoke about having to miss, reschedule or discontinue treatment because of their work schedules and other responsibilities that limit the amount of time they could dedicate to therapy. For example, one participant shared the following: "…I liked the biofeedback. I didn't go to all the appointments because simply I don't have time. I'm a mom again to my grandchildren so I don't have time for myself." Additionally, participants talked about not having the time outside of session to practice the skills taught in treatment. Referring to the diaphragmatic breathing taught to biofeedback patients, one participant stated, "I don't

have too much time to practice it. I have a lot to do. I take care of my mom and I have my kids, so I had to cancel my next appointments."

Data captured within this category also uncovered moments where participants complained about the available timeslots for appointments and how they would prefer evening hours or more frequent weekend hours. To this point, one participant stated the following:

> Sometimes I had to reschedule my appointments because I had something else, I had to do. I liked the Saturday appointments the best because I work, and I don't have a lot of time during the week.

Similarly, another participant shared the following: "I wish the appointments were offered in the night so that I didn't have to take off work to go. That's my only problem with Mountainlands and a lot of doctors."

Within (B) Cost, participants spoke about how the cost of treatment prevents them from seeking out mental health services. One participant stated, "I think therapy is only for rich people." Another participant added:

> The problem is that sometimes it is too expensive. Not at Mountainlands but in other places, yes. And without insurance it's terrible. I have a friend at work who has to pay for her son's therapy, and they don't have insurance. It's very sad.

Within (C) Transportation, one participant talked about not having a ride to therapy which prevented her from attending her last scheduled appointment. She states:

> …I only didn't have a ride to the clinic anymore. I don't drive. My son takes me to my appointments, but he has his family and he works. I don't want to bother him. He has his life and his responsibilities.

Within (D) Limited Access to Latinx Therapists, one participant explained that he had never considered going to therapy in the past because he did not think there were Latinx-identified therapists in his area. He specifically states, “I would have started a long time ago if I knew there were Latino therapists there.”

Supportive Talk Therapy Narratives

Another point of discussion relates to the 2 supportive talk therapy participants who completed the exit interview. Researchers determined not to include their narratives in the analysis. The content of their narratives differed from the 15 who self-selected into biofeedback because of the nature of their different experiences. The 2 supportive talk therapy interviewees spoke about their experience with traditional therapy while all other participants spoke to a shared experience with biofeedback. When coding the data for domains, coders found that topics discussed were different between the groups. Additionally, there were too few of them to analyze separately in another analysis. The content of these narratives, however, is discussed here.

There were some similarities between the narratives of participants who self-selected into supportive talk therapy and those who self-selected into biofeedback. Namely, they both talked about the importance of seeking out mental health providers who spoke their language or, better yet, who were of the same of similar cultural backgrounds. Additionally, supportive talk therapy participants and Biofeedback participants talked about their willingness to recommend services to others in similar ways. Neither of the two supportive talk therapy participants expressed any hesitance towards recommending services, however.

When asked why they chose traditional psychotherapy over biofeedback one of the 2 supportive talk therapy participants stated the following:

> I like to talk. I have a lot of my chest. I wanted a therapist that could listen to me. Maybe another time I can try biofeedback, but for now I just wanted someone to listen. I am divorced and my kids are too young to hear everything I need to talk about. My mom is still alive, but I don't want to worry her. I wish I could go to my family with these things, but sometimes it's better to get professional help.

This type of response is unique to this participant. All the biofeedback participants expressed a hesitance towards opening up and cited their cultural value of keeping personal matters private and within the family. The other supportive talk therapy participant talked about choosing psychotherapy over biofeedback because they had never heard about biofeedback and did not want to try something new. This response implies a familiarity and acceptance towards therapy that was unique to this response.

Another difference between responses from supportive talk therapy participants and biofeedback participants was apparent in the way participants experienced their therapists. In this study, the clinicians who provided the services in the Biofeedback group and the supportive talk therapy group both spoke fluent Spanish and had experience providing services in Spanish. However, the biofeedback clinician identified as Latina while the supportive talk therapy therapist did not. Many biofeedback participants spoke about feeling understood by their therapist and pointed specifically to her Latinx identity as a contributor to this feeling. Contrarily, one of the two supportive talk therapy participants stated the following: "I would prefer a Latino therapist, but I know that there aren't a lot and [therapist] spoke good Spanish."

Discussion

The present study explored Latinx-identified clients' preference for mental health treatment, examining whether there is a preference for HRV biofeedback over traditional talk

therapy and to explore potential reasons for this preference. Additionally, we hoped to capture information regarding the Latinx experience with treatment and perceptions around seeking out treatment. HRV Biofeedback was offered as an alternative to talk therapy because it uses psychophysiological concepts to help individuals manage stress. Many researchers including Cooper and colleagues (2003) have demonstrated that Latinx-identified individuals have a preference for medical approaches to treatment. The information collected from this study may be helpful to Mountainlands Community Health Center and similar clinics that service primarily Latinx-identified individuals.

Overview of findings

We hypothesized that Latinx identified patients would demonstrate a preference for biofeedback treatment over traditional psychotherapy. Additionally, we were interested in capturing the quality of this preference through a qualitative analysis of interviews with each participant. Phase 1 of this study set out to quantitatively explore preferences on psychotherapy treatment within a Latinx-identified group. The study was designed to give participants the choice between a traditional psychotherapy approach to treatment and a treatment approach that could be interpreted as more "medical." We found that the overwhelming majority of interested participants self-selected into the biofeedback group. We were not able to statistically compare the attrition between groups; however, generally speaking, we saw more participants complete all 5 sessions of treatment in the biofeedback. Specifically, twenty-one percent of participants in the biofeedback group completed the 5-session course of treatment, whereas none of the 5 participants in the supportive talk therapy group continued to the last session.

In Phase 1 of the study we also examined perceived self-stigma towards seeking out mental health services and level of acculturation. While statistical comparisons between group

cannot be made given the limitations of this study (described below), individuals in the biofeedback group had a higher average score on perceived self-stigma towards seeking out mental health services than individuals who self-selected into the supportive talk therapy group. It notable that the average scores of our sample in both groups (26.3 in the biofeedback group and 22.4 in supportive talk therapy) was comparable to US sample average of 27.1 (Vogel et al., 2013). This sample norm was based on a sample of 655 respondents of varying demographic background in the United States who never sought out treatment in their pasts. Level of acculturation to American culture was also assessed to examine whether it impacted treatment preference. Again, statistical comparisons of this data were not compiled due to limitations in research design; however, individuals who identified more closely with Latinx culture tended to self- select into biofeedback than supportive talk therapy.

Phase 2 of the data collection qualitatively examined perspectives on treatment seeking and experience in treatment. This part of the study involved using a modified and abbreviated version of Clara Hill's Consensual Qualitative Research Methods (CQR) to interview participants and extract meaning from the context of the narratives. The findings of this analysis fit in with the existing literature and offered additional support for many of the findings discussed in the introduction of this paper. The analysis also points to areas of further study. The following sections describe and discuss the findings of the qualitative analysis.

Treatment Preference

We asked participants why they chose biofeedback over psychotherapy and received a variety of responses. Typically, participants spoke to the desire to treat their physical symptoms instead of treating their minds (categories with a "typical" frequency were present 7-13 times in the data). This response was expected given the literature on Latinx perceived stigma towards

mental health treatment (Rastogi et al., 2012) and the Latinx persons' preference for medical interventions over traditional therapy as shown by Cooper and colleagues (2003).

A variant number of respondents, classified as 3-6 responses, also spoke to a curiosity about biofeedback due to its novelty. This response makes sense given that biofeedback is not typically offered at Mountainlands Community Health Center. For many at Mountainlands, this would have been their first time learning of biofeedback. This is not the case for traditional talk therapy, as many had already heard about talk therapy in the past and/or had been recommended talk therapy by a provider.

Perception Towards Mental Health

Participants were asked to talk about their perceptions of individuals who seek out mental health. Most commonly, the responses discussed a stigmatized cultural view of mental health services within Latinx populations. Participants either distanced themselves from the commonly held cultural views or demonstrated some internalized acceptance towards the views. More than half of participants rejected cultural views. Participants accepted cultural views with a variant frequency. Findings from the analysis also supported current literature on the perceived stigma towards mental health and mental health treatment within Latinx cultures (Spagnolo et al., 2008; Thornicroft et al., 2008). All participants spoke to cultural influences on their perspective towards mental health. Participants acknowledged the less than favorable stance many individuals in their cultures have towards others who seek out mental health.

Typically, participants discussed that while they have heard many people express judgmental opinions about others who seek out intervention, they felt as though the services are necessary and should be more widespread. However, others admitted that they chose biofeedback because they believe therapy is for crazy people. For these respondents, biofeedback

was not considered a therapy and the word “therapy” was not used to describe the intervention. This finding suggests that there is some acceptance of the cultural stigma towards mental health intervention that prevents Latinx individuals from seeking out therapy. This has important implications given that had these individuals not been offered biofeedback as an intervention, they would not have sought out treatment.

Participant Evaluation of Treatment Experience

Participants were also asked to talk about their experience with biofeedback. Typically, responses were positive. Participants shared comments regarding how much they learned while in treatment and how relaxed the experience made them feel. A variant number of responses demonstrated “mixed” feelings about their experience. In these three cases, participants spoke to feeling uncomfortable with the breathing and inconsistently feeling good at some sessions and not so good in other sessions. Feelings of discomfort while practicing biofeedback is common when beginning practice for the first time (Vaschillo et al., 2006), and makes sense given the nature of HRV biofeedback practice. Participants are reminded to be mindful of any dizziness and to report any discomfort that may occur with periods of diaphragmatic breathing throughout the session. A consideration to understanding this data is the published finding that individuals who receive their preferred treatment methods often report high levels of treatment satisfaction (Lindhiem et al., 2014).

Participants spoke to their experience with treatment outcomes as well. Again, the typical response was to point out positive outcomes. Participants shared they feel more in control of their body’s physiological response to stress. This finding is consistent with participant’s expressed desire to seek out biofeedback because of its ability to treat physical symptoms. It

makes sense that participants experienced positive outcomes with biofeedback because they were seeking out help with physical symptoms.

A variant number of respondents shared that the concepts were too difficult to understand. The 4 participants who experienced difficulty spoke about the "high tech" nature of biofeedback that made grasping the concepts difficult for them. This has important implications for future delivery of biofeedback services. Specifically, this relates to how services are offered to individuals with little experience with advanced technology due to age or limited access to resources. More research can be done on how HRV biofeedback can be simplified to include less technical language and equipment.

Evaluation of Therapist

We did not ask participants directly about their experience with their therapist; however, in some cases, participants volunteered information around their perception of their biofeedback therapist. All but 1 participant who spoke about their therapist spoke positively of her. In one case, a participant talked about having difficulties opening up to their therapist. This finding is consistent with the literature on Latinx experiences in therapy (Guarnaccia et al., 2005). Guarnaccia and colleagues (2005) discuss that Latinx identified clients struggle in therapy because of the need to open up to strangers about personal matters that should stay between members of family and close loved ones. This finding is consistent with the preference for biofeedback therapy over traditional talk therapy because of the nature of biofeedback and the fact that little personal disclosure is necessary to complete treatment. This finding is also consistent with the literature on culturally adapted interventions that highlight the importance of family in the intervention process as it can make individuals feels more comfortable in session (Guarnaccia et al., 2005).

Similarly, participants offered additional insight into their desired qualities for therapists. Clients expressed a desire to work with a Spanish speaking therapist. Others spoke to the desire to be culturally matched with a therapist in order to feel understood for their cultural differences. Specifically, the participants in this study spoke to wanting to meet with Latinx therapist or a therapist with a similar religious background.

The literature on culturally matched therapist and client dyads varies. Some suggest that it can be help produce better treatment outcomes (Flicker et al., 2008). Another study (Ibaraki & Hall, 2014) discussed the positive impact cultural matching has on recruitment and attrition rates despite the limited effect cultural matching has on treatment outcomes. Other researchers (Karlsson, 2005) point to the inconclusiveness of these studies by pointing out the poor conceptualization of key concepts such as "culture match" and the lack of true clinical trials. Nonetheless, this finding is important because of its implications on individuals who are seeking out therapy for the first time. For one respondent, not knowing that there were Latinx identified therapists at the clinic prevented him from seeking out services. This finding suggests that while individuals may not receive better outcomes from seeking out services with a therapist from a similar cultural background (Ibaraki & Hall, 2014), they may seek out services more if a culturally matched therapist is an option. Additionally, this finding supports the large research literature on cultural competence in psychotherapy (López, 2002; Sue, 1998; Whaley & Davis, 2007).

Willingness to Recommend Services

Participants were asked to share whether or not they would feel comfortable recommending services to another. This question was asked to further explore client's perception of their experience in treatment as well as to better understand their perceptions towards mental

health in general. Typically, individuals shared that they would recommend services to others and, for some, they already had started recommending services. In a variant number of responses, individuals expressed some level of hesitance towards making a recommendation. In these 5 responses, participants spoke about the private and personal nature of therapy and shared that they would not want to get involved in anyone's life enough that they would be in a position to recommend services. For one respondent, they would only feel comfortable recommending services to a family member. These findings are consistent with the literature on Latinx culture and the importance of privacy within the family. Similarly, this points to the important role of family in treatment within this population.

Barriers to Treatment

Lastly, participants discussed their barriers to treatment. Many spoke about having limited time to spend in treatment. They also spoke about the cost of services as a barrier and, similarly, limited access to reliable transportation. This is consistent with literature that points to the socioeconomic status as a barrier to treatment (Harris, 2001; Uebelacker et al., 2012) and is an important issue. These findings point to the importance of making services more available to individuals with more demanding work schedules and limited financial resources.

In addition to the data supporting current findings in the literature, new themes emerged from the narratives. For example, some respondents spoke about their experiences with stress and mental health challenges as part of the everyday struggle or "La Lucha." Participants described the need to endure these difficulties in order to "make it in life." Many responses about "La Lucha" talked about not needing to seek out professional help relating to these difficulties because they are normal parts of life and therefore required suffering. One participant spoke about "La Lucha" as "what [she] signed up for" when immigrating to the United States.

Understanding these ideas as presented by individuals who experienced therapy is crucial in developing models for culturally competent treatment interventions.

Limitations

The present study has several weaknesses and strengths. First, the findings of this study apply to a small subpopulation of Hispanic and Latinx-identifying Utahns living in Utah County. Given this, the findings of this study are not representative of the experiences of all Latinx identified clients in the United Stated. Second, the study design limited the ways in which we could analyze the findings. The individuals who participated in this study self-selected into treatment. While this was done intentionally to capture patient preference, it did limit researchers on how data from Phase 1 of this study could be analyzed. Given the self-selection of treatment by our participants, it is reasonable to note that there is still much to be known about the experiences, preferences, and perspectives of individuals who would have not self-selected into treatment.

As expected, the overwhelming majority of interested participants sought out Biofeedback over supportive talk therapy. This made for large differences in treatment group sizes and therefore prevented researchers from drawing any between group conclusions. It also worth noting that perhaps a mediating variable is the novel quality of Biofeedback and the appeal to something new. This was expressed by respondents who endorsed a curiosity about biofeedback as part of their reason for self-selecting into biofeedback. While Mountainlands has offered biofeedback services in the past, it has been several years since the treatment approach had been offered. In the collection of participant interviews, one interviewee responded to the Interviewers question “Why did you choose Biofeedback over traditional therapy?” by stating, “I had never heard of it before and was curious about it.”

Third, the treatment groups were conducted by different therapists. This choice was made intentionally to avoid allegiance effects when comparing treatment experiences of participants in both groups; however, in doing so it became impossible to standardize the experience. Similarly, the level of experience between the two providers giving Biofeedback and supportive talk therapy was different. Primary researcher and therapist who conducted the biofeedback sessions was a 4th year graduate student at the time of data collection. The clinician responsible for conducting the supportive talk therapy sessions has been seeing patients for therapy for over 40 years. Additionally, the biofeedback therapist identifies as Hispanic while the therapist conducting the supportive talk therapy sessions identified as white. While clients were not made aware of this different in identity between therapists, it is possible that individuals shared this information amongst each other, and participants may have chosen the biofeedback group in order to be matched with a Hispanic identified therapist. Differences in experience in treatment may be due to therapist differences.

Another possible limitation is the fact that only 17 of the 42 interested participants agreed to exit interview following termination. All participants were contacted up to 3 times in order to attempt to complete the interview. Six participants stated they were not available to participate, and researchers were not able to make contact with 19 participants. While many factors may be at play, it is also possible that the individuals who chose to complete the exit interview may have been the ones most satisfied with the treatment and therefore were willing to conduct the interview. This may explain the overwhelmingly positive responses made from participants and the lack of negative feedback.

To further discuss limitations and strengths of this research study, we use Maxwell's (1992) approach to analyzing the validity of qualitative research. This method is a

comprehensive examination of validity used in qualitative research studies. Maxwell (1992) outlines the 5 areas of possible threat to validity and encourages researchers to consider the possible ways to address potential threats to validity.

Interpretative Validity

Maxwell (1992) stresses the importance of interpretative validity in qualitative research. He describes interpretative validity as the level to which one can be sure that the conclusions drawn from the data are not driven by researcher bias and instead captures the true intended meaning of the narrative. This was addressed by emphasizing consensus in the development of codes and the cross analysis. However, more could have been done to ensure better consensus in the data. As mentioned, the primary researcher and auditor met individually to discuss feedback to code in an abbreviated form of the CQR methods. Typically, in CQR, this process involves all members of the coding team and ensures better consensus.

Notably, power differentials were present throughout the coding of domains and the cross analysis. The primary researcher was a graduate student and research assistants were undergraduate students. To address power differentials during coding phases, primary researcher allowed research assistants the opportunity to share their codes and thoughts around domain development first before sharing her own. Similarly, the auditor throughout the course of the study was the professor and research advisor to primary researcher which presented another area for power differentials.

Generalizability

Maxwell (1992) stresses the importance of generalizable findings within qualitative research. The qualitative portion of this study looked at a relatively large sample size (N = 15) of participants, which is the upper threshold of number of participants Clara Hill (2012)

recommends. This allowed for a diversity of perspectives. As mentioned above, the sample speaks to a specific subpopulation of Latinx-identified Utah Country residents. It is notable that while researchers were able to obtain a relatively large sample size, the length of each interview was brief (7-12 minutes long) limiting the about of data extracted from each narrative.

Theoretical Validity

Maxwell (1992) asserts that theoretical validity addresses the theoretical constructs that researchers bring to or develop during the study. Theoretical validity seeks to evaluate the validity of the researcher's concepts and the relationships between the concepts and the theory. For this study, the consensual aspect of modified CQR helped to ensure theoretical validity by using group consensus to compile data and determine domains. As mentioned before, more could have been done to ensure consensus was reached such as to involve the entire coding team in the audit process.

Descriptive Validity

Maxwell (1992) refers to the way in which the transcribed narratives accurately represent the context of the interviews. To best address descriptive validity, research assistants who completed the interviews were also responsible for transcribing the interviews. Transcriptions were first transcribed in Spanish and later translated to English for data analysis. All transcriptions were reviewed by primary researcher and compared to audio recordings. Any errors in transcriptions were corrected and reviewed by team of researchers. Errors found were determined to not change the quality and/or context of the narratives.

Future Directions for Research

The data presented in these qualitative findings brings up other topics worth exploring in further research. For example, a logical next step would be to conduct a randomized clinical trial

comparing the effectiveness of different treatment models such as biofeedback and traditional therapy to determine quantitatively if these methods produce different outcomes. Additionally, another example of further research would be to explore how the concepts of "La Lucha" effect mental health within immigrant families. The team of researchers took particular interest in the concept of "La Lucha" and discussed the possibility of qualitatively exploring the Hispanic/Latinx experience of "La Lucha" and specifically the efforts made to achieve the American Dream and impacts it has on mental health.

Another area for future research would be to qualitatively explore participant experience with barriers to treatment. Participants in this study were not directly asked about barriers and therefore the data we were able to extract about this domain was limited. It would have been interesting to learn more about barriers to treatment from each participant and to add to the body of quantitative research on barriers to therapy.

Conclusion

This study explored treatment preference in a Hispanic Population both quantitatively and qualitatively. The qualitative analysis used to analyze the data in this study adds individual voice to the experience of those studied. For example, participants in this study reiterated that stigma plays an important role in the way they perceive mental health treatment and ultimately how and if they seek out treatment. Additionally, participants spoke out about their desire to feel understood and accepted for their cultural differences. They shared narratives about the importance of family within their cultures and how incorporating an understanding of this in clinical work can help establish better rapport and buy-in with treatment. This data supports research that emphasizes the importance of cultural competence (López, 2002; Sue, 1998; Whaley & Davis, 2007).

Researchers found that Latinx-identified clients preferred biofeedback over traditional talk therapy. This finding was supplemented by narratives that reiterated client preference for medicalized forms of therapy and culturally sensitive clinicians. Results of this study substantiate already published research on the experiences of Latinx person who seek out mental health treatment in this way (Cooper et al., 2003; López, 2002; Sue, 1998; Whaley & Davis, 2007). The research also points to new themes and points in the direction of future research. The finding that Latinx-identified clients prefer biofeedback over traditional talk therapy provides initial support for themes and ideas worth exploring further such as quantitatively comparing the effectiveness of biofeedback to other treatment approaches in a randomized clinical trial. In summary, we learned that there is a treatment preference in Latinx groups and that decreasing the stigma towards mental health treatment, minimizing barriers to treatment, and diversifying the field of mental health care providers may help lessen the disparities we see in utilization and effectiveness within this population.

References

Aguilera, A., Ramos, Z., Sistiva, D., Wang, Y., & Alegria, M. (2018). Homework completion via telephone and in-person cognitive behavioral therapy among Latinos. *Cognitive Therapy and Research, 42*(3), 340-347.

Alvidrez, J. (1999). Ethnic variations in mental health attitudes and service use among low-income African American, Latina, and European American young women. *Community Mental Health Journal*, *35*(6), 515-530.

Alvidrez, J., Azocar, F., & Miranda, J. (1996). Demystifying the concept of ethnicity for psychotherapy researchers. *Journal of Consulting and Clinical Psychology*, *64*(5), 903.

Antony, M. M., Bieling, P. J., Cox, B. J., Enns, M. W., & Swinson, R. P. (1998). Psychometric properties of the 42-item and 21-item versions of the Depression Anxiety Stress Scales in clinical groups and a community sample. *Psychological Assessment*, *10*(2), 176.

Arnold, L. E., Elliott, M., Sachs, L., Bird, H., Kraemer, H. C., Wells, K. C., Abikoff, H. B., Comarda, A., Conners, C. K., Elliott, G. R., Greenhill, L. L., Hechtman, L., Hinshaw, S. P., Hoza, B., Jensen, P. S., March, J. S., Newcorn, J. H., Pelham, W. E., Severe, J. B., & Wigal, T. (2003). Effects of ethnicity on treatment attendance, stimulant response/dose, and 14-month outcome in ADHD. *Journal of Consulting and Clinical Psychology, 71*(4), 713–727

Benish, S. G., Quintana, S., & Wampold, B. E. (2011). Culturally adapted psychotherapy and the legitimacy of myth: A direct-comparison meta-analysis. *Journal of Counseling Psychology*, *58*(3), 279.

Camarota, S. A. (2011). *A record-setting decade of immigration, 2000 to 2010*. Washington,

DC: Center for Immigration Studies.

Castro, F. G., Barrera Jr, M., & Steiker, L. K. H. (2010). Issues and challenges in the design of culturally adapted evidence-based interventions. *Annual Review of Clinical Psychology*, *6*, 213-239.

Chavira, D. A., Golinelli, D., Sherbourne, C., Stein, M. B., Sullivan, G., Bystritsky, A., Rose, R. D., Lang, A. J., Campbell-Sills, L., Welch, S., Bumgardner, K., Glenn, D., Barrios, V., Roy-Byrne, P., & Craske, M. (2014). Treatment engagement and response to CBT among Latinos with anxiety disorders in primary care. *Journal of Consulting and Clinical Psychology, 82*(3), 392–403.

Clara, I. P., Cox, B. J., & Enns, M. W. (2001). Confirmatory factor analysis of the Depression–Anxiety–Stress Scales in depressed and anxious patients. *Journal of Psychopathology and Behavioral Assessment*, *23*(1), 61-67.

Clement, S., Schauman, O., Graham, T., Maggioni, F., Evans-Lacko, S., Bezborodovs, N., Morgan, C., Rüsch, N., Brown, J., & Thornicroft, G. (2015). What is the impact of mental health-related stigma on help-seeking? A systematic review of quantitative and qualitative studies. *Psychological medicine*, *45*(1), 11-27.

Collado, A., Lim, A. C., & MacPherson, L. (2016). A systematic review of depression psychotherapies among Latinos. *Clinical Psychology Review*, *45*, 193-209.

Comas-Diaz, L. (2006). Cultural variation in the therapeutic relationship. *Evidence-based psychotherapy: Where Practice and Research Meet*, 81-105.

Conner, K. O., Koeske, G., & Brown, C. (2009). Racial differences in attitudes toward professional mental health treatment: The mediating effect of stigma. *Journal of Gerontological Social Work*, *52*(7), 695-712.

Cooper, L. A., Gonzales, J. J., Gallo, J. J., Rost, K. M., Meredith, L. S., Rubenstein, L. V., Wang, N., & Ford, D. E. (2003). The acceptability of treatment for depression among African-American, Hispanic, and white primary care patients. *Medical care*, *41*(4), 479-489.

Corrigan, P. W., Druss, B. G., & Perlick, D. A. (2014). The impact of mental illness stigma on seeking and participating in mental health care. *Psychological Science in the Public Interest*, *15*(2), 37-70.

Corrigan, P. W., Watson, A. C., Warpinski, A. C., & Gracia, G. (2004). Stigmatizing attitudes about mental illness and allocation of resources to mental health services. *Community Mental Health Journal*, *40*(4), 297-307.

Creswell, J. (2013). *Qualitative inquiry and research design: Choosing among five traditions, 3rd Edition.* Thousand Oaks, CA: Sage Publications.

Cuellar, I., Harris, L.C., & Jasso, R. (1980). An acculturation scale for Mexican American normal and clinical populations. *Hispanic Journal of Behavioral Sciences, 2*, 199-217.

Daza, P., Novy, D. M., Stanley, M. A., & Averill, P. (2002). The depression anxiety stress scale-21: Spanish translation and validation with a Hispanic sample. *Journal of Psychopathology and Behavioral Assessment*, *24*(3), 195-205.

Dennis, J. M., Fonseca, A. L., Gutierrez, G., Shen, J., & Salazar, S. (2016). Bicultural competence and the Latino 2.5 generation: The acculturative advantages and challenges of having one foreign-born and one US-born parent. *Hispanic Journal of Behavioral Sciences*, *38*(3), 341-359.

Dignam, J. J. (2000). Differences in breast cancer prognosis among African-American and Caucasian women. *CA: A Cancer Journal for Clinicians*, *50*(1), 50-64.

Duarté-Vélez, Y., Bernal, G., & Bonilla, K. (2010). Culturally adapted cognitive-behavior therapy: Integrating sexual, spiritual, and family identities in an evidence-based treatment of a depressed Latino adolescent. *Journal of Clinical Psychology*, *66*(8), 895-906.

Flicker, S. M., Waldron, H. B., Turner, C. W., Brody, J. L., & Hops, H. (2008). Ethnic matching and treatment outcome with Hispanic and Anglo substance-abusing adolescents in family therapy. *Journal of Family Psychology, 22*(3), 439–447.

Flor, H., & Birbaumer, N. (1993). Comparison of the efficacy of electromyographic biofeedback, cognitive-behavioral therapy, and conservative medical interventions in the treatment of chronic musculoskeletal pain. *Journal of Consulting and Clinical Psychology*, *61*(4), 653.

Gary, F. A. (2005). Stigma: Barrier to mental health care among ethnic minorities. *Issues in Mental Health Nursing*, *26*(10), 979-999.

Gary, F., Baker, M., & Grandbois, D. M. (2005). Perspectives on suicide prevention among American Indian and Alaska Native children and adolescents: A call for help. *Online Journal of Issues in Nursing*, *10*(2).

Goessl, V. C., Curtiss, J. E., & Hofmann, S. G. (2017). The effect of heart rate variability biofeedback training on stress and anxiety: A meta-analysis. *Psychological Medicine*, *47*(15), 2578-2586.

Griner, D., & Smith, T. B. (2006). Culturally adapted mental health intervention: A meta-analytic review. *Psychotherapy: Theory, Research, Practice, Training*, *43*(4), 531.

Guarnaccia, P. J., Martinez, I., & Acosta, H. (2005). Chapter 2. Mental health in the Hispanic immigrant community: An overview. *Journal of Immigrant & Refugee Services*, *3*(1-2), 21-46.

Hall, W. J., Chapman, M. V., Lee, K. M., Merino, Y. M., Thomas, T. W., Payne, B. K., & Coyne-Beasley, T. (2015). Implicit racial/ethnic bias among health care professionals and its influence on health care outcomes: A systematic review. *American Journal of Public Health*, *105*(12), e60-e76.

Harris, M. I. (2001). Racial and ethnic differences in health care access and health outcomes for adults with type 2 diabetes. *Diabetes Care*, *24*(3), 454-459.

Hayes, J. A., McAleavey, A. A., Castonguay, L. G., & Locke, B. D. (2016). Psychotherapists' outcomes with White and racial/ethnic minority clients: First, the good news. *Journal of Counseling Psychology*, *63*(3), 261.

Hayes, J. A., Owen, J., & Bieschke, K. J. (2015). Therapist differences in symptom change with racial/ethnic minority clients. *Psychotherapy*, *52*(3), 308.

He, W., Goodkind, D., & Kowal, P. (2016). *US Census Bureau, international population reports*. P95/16-1, An Aging World: 2015.

Henry, J. D., & Crawford, J. R. (2005). The short-form version of the Depression Anxiety Stress Scales (DASS-21): Construct validity and normative data in a large non-clinical sample. *British Journal of Clinical Psychology*, *44*(2), 227-239.

Hill, C. E. (2012). *Consensual qualitative research: A practical resource for investigating social science phenomena*. American Psychological Association.

Hill, C. E., Thompson, B. J., & Williams, E. N. (1997). A guide to conducting consensual qualitative research. *The Counseling Psychologist, 25*(4), 517-572.

Huey Jr, S. J., Tilley, J. L., Jones, E. O., & Smith, C. A. (2014). The contribution of cultural competence to evidence-based care for ethnically diverse populations. *Annual Review of Clinical Psychology*, *10*, 305-338.

Ibaraki, A. Y., & Hall, G. C. N. (2014). The components of cultural match in psychotherapy. *Journal of Social and Clinical Psychology*, *33*(10), 936-953.

Imel, Z. E., Baldwin, S., Atkins, D. C., Owen, J., Baardseth, T., & Wampold, B. E. (2011). Racial/ethnic disparities in therapist effectiveness: A conceptualization and initial study of cultural competence. *Journal of Counseling Psychology*, *58*(3), 290.

Ishikawa, R. Z., Cardemil, E. V., Alegría, M., Schuman, C. C., Joseph, R. C., & Bauer, A. M. (2014). Uptake of depression treatment recommendations among Latino primary care patients. *Psychological Services, 11*(4), 421–432.

Julian, T. W., McKenry, P. C., & McKelvey, M. W. (1994). Cultural variations in parenting: Perceptions of Caucasian, African-American, Hispanic, and Asian-American parents. *Family Relations*, 30-37.

Karavidas, M. K., Lehrer, P. M., Vaschillo, E., Vaschillo, B., Marin, H., Buyske, S., & Hassett, A. (2007). Preliminary results of an open label study of heart rate variability biofeedback for the treatment of major depression. *Applied Psychophysiology and Biofeedback*, *32*(1), 19-30.

Karlsson, R. (2005). Ethnic matching between therapist and patient in psychotherapy: An overview of findings, together with methodological and conceptual issues. *Cultural Diversity and Ethnic Minority Psychology, 11*(2), 113–129.

Kelley, M. L., & Tseng, H. M. (1992). Cultural differences in child rearing: A comparison of immigrant Chinese and Caucasian American mothers. *Journal of Cross-Cultural Psychology*, *23*(4), 444-455.

Keyes, K. M., Hatzenbuehler, M. L., McLaughlin, K. A., Link, B., Olfson, M., Grant, B. F., & Hasin, D. (2010). Stigma and treatment for alcohol disorders in the United States. *American Journal of Epidemiology*, *172*(12), 1364-1372.

Kouyoumdjian, H., Zamboanga, B. L., & Hansen, D. J. (2003). Barriers to community mental health services for Latinos: Treatment considerations. *Clinical Psychology: Science and Practice*, *10*(4), 394-422.

Lehrer, P. M., Vaschillo, E., Vaschillo, B., Lu, S. E., Eckberg, D. L., Edelberg, R., & Hamer, R. M. (2003). Heart rate variability biofeedback increases baroreflex gain and peak expiratory flow. *Psychosomatic Medicine*, *65*(5), 796-805.

Lester, R. T., Ritvo, P., Mills, E. J., Kariri, A., Karanja, S., Chung, M. H., & Marra, C. A. (2010). Effects of a mobile phone short message service on antiretroviral treatment adherence in Kenya (WelTel Kenya1): A randomised trial. *The Lancet*, *376*(9755), 1838-1845.

Lindhiem, O., Bennett, C. B., Trentacosta, C. J., & McLear, C. (2014). Client preferences affect treatment satisfaction, completion, and clinical outcome: A meta-analysis. *Clinical Psychology Review*, *34*(6), 506-517.

López, S. R. (2002). Mental health care for Latinos: A research agenda to improve the accessibility and quality of mental health care for Latinos. *Psychiatric Services*, *53*(12), 1569-1573.

Lovibond, P. F., & Lovibond, S. H. (1995). The structure of negative emotional states: Comparison of the Depression Anxiety Stress Scales (DASS) with the Beck Depression and Anxiety Inventories. *Behaviour Research and Therapy*, *33*(3), 335-343.

Marshall, C. M. & Rossman, G. B. (2011). *Designing qualitative research, 5th Edition*. Thousand Oaks, CA: Sage Publications.

Martin, P. R., Forsyth, M. R., & Reece, J. (2007). Cognitive-behavioral therapy versus temporal pulse amplitude biofeedback training for recurrent headache. *Behavior Therapy*, *38*(4), 350-363.

Matt, G. E., & Navarro, A. M. (1997). What meta-analyses have and have not taught us about psychotherapy effects: A review and future directions. *Clinical Psychology Review*, *17*(1), 1-32.

Maxwell, J.A. (1992). Understanding and validity in qualitative research. *Harvard Educational Review, 62*(3), 279-299.

McAusland, L., & Addington, J. (2016). Biofeedback to treat anxiety in young people at clinical high risk for developing psychosis. *Early Intervention in Psychiatry*, *12*(4), 694-701.

Miranda, J., Bernal, G., Lau, A., Kohn, L., Hwang, W. C., & LaFromboise, T. (2005). State of the science on psychosocial interventions for ethnic minorities. *Annual Review of Clinical Psychology*, *1*, 113.

Miranda, J., Nakamura, R., & Bernal, G. (2003). Including ethnic minorities in mental health intervention research: A practical approach to a long-standing problem. *Culture, Medicine and Psychiatry*, *27*(4), 467-486.

Nadeem, E., Lange, J. M., Edge, D., Fongwa, M., Belin, T., & Miranda, J. (2007). Does stigma keep poor young immigrant and US-born Black and Latina women from seeking mental health care? *Psychiatric Services*, *58*(12), 1547-1554.

Newton-John, T. R., Spence, S. H., & Schotte, D. (1995). Cognitive-behavioural therapy

versus EMG biofeedback in the treatment of chronic low back pain. *Behaviour Research and Therapy*, *33*(6), 691-697.

Ogbu, J. U., & Simons, H. D. (1998). Voluntary and involuntary minorities: A cultural-ecological theory of school performance with some implications for education. *Anthropology & Education Quarterly*, *29*(2), 155-188.

Organista, K. C., Muñoz, R. F., & González, G. (1994). Cognitive-behavioral therapy for depression in low-income and minority medical outpatients: Description of a program and exploratory analyses. *Cognitive Therapy and Research*, *18*(3), 241-259.

Owen, J., Imel, Z., Adelson, J., & Rodolfa, E. (2012). 'No-show': Therapist racial/ethnic disparities in client unilateral termination. *Journal of Counseling Psychology*, *59*(2), 314.

Patton, M. Q. (2002). *Qualitative research & evaluation methods, 3rd Edition.* Thousand Oaks, CA: Sage Publications.

Pickett, K. E., & Wilkinson, R. G. (2015). Income inequality and health: A causal review. *Social Science & Medicine*, *128*, 316-326.

Rastogi, M., Massey-Hastings, N., & Wieling, E. (2012). Barriers to seeking mental health services in the Latino/a community: A qualitative analysis. *Journal of Systemic Therapies, 31*(4), 1-17.

Saha, S., Arbelaez, J. J., & Cooper, L. A. (2003). Patient-physician relationships and racial disparities in the quality of health care. *American Journal of Public Health*, *93*(10), 1713-1719.

Silberholz, E. A., Brodie, N., Spector, N. D., & Pattishall, A. E. (2017). Disparities in access to care in marginalized populations. *Current Opinion in Pediatrics*, *29*(6), 718-727.

Sielski, R., Rief, W., & Glombiewski, J. A. (2017). Efficacy of biofeedback in chronic back

pain: A meta-analysis. *International Journal of Behavioral Medicine*, *24*(1), 25-41.

Spagnolo, A. B., Murphy, A. A., & Librera, L. A. (2008). Reducing stigma by meeting and learning from people with mental illness. *Psychiatric Rehabilitation Journal*, *31*(3), 186.

Sue, S. (1998). In search of cultural competence in psychotherapy and counseling. *American Psychologist*, *53*(4), 440.

Thornicroft, G., Brohan, E., Kassam, A., & Lewis-Holmes, E. (2008). Reducing stigma and discrimination: Candidate interventions. *International Journal of Mental Health Systems*, *2*(1), 3.

Uebelacker, L. A., Marootian, B. A., Pirraglia, P. A., Primack, J., Tigue, P. M., Haggarty, R., & Miller, I. W. (2012). Barriers and facilitators of treatment for depression in a Latino community: A focus group study. *Community Mental Health Journal*, *48*(1), 114-126.

U.S. Census Bureau (2017). *Income and poverty in the United States.* Retrieved from http://census.gov/library/publications/2017/demo/p60-259.html

U.S. Department of Health and Human Services (1999). Mental Health: A Report of the Surgeon General. Rockville, MD: U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, Center for Mental Health Services, National Institutes of Health, National Institute of Mental Health, 1999.

Vaschillo, E.G., Vaschillo, B., & Lehrer, P.M. (2006). Characteristics of resonance in heart rate variability stimulated by biofeedback. *Applied Psychophysiology and Biofeedback, 31*(2), 129-142.

Vogel, D. L., Wade, N. G., & Haake, S. (2006). Measuring the self-stigma associated with seeking psychological help. *Journal of Counseling Psychology*, *53*(3), 325.

Vogel, D. L., Armstrong, P. I., Tsai, P. C., Wade, N. G., Hammer, J. H., Efstathiou, G., & Topkaya, N. (2013). Cross-cultural validity of the Self-Stigma of Seeking Help (SSOSH) scale: Examination across six nations. *Journal of Counseling Psychology*, *60*(2), 303.

Wampold, B. E. (2007). Psychotherapy: The humanistic (and effective) treatment. *American Psychologist*, *62*(8), 857.

Whaley, A. L., & Davis, K. E. (2007). Cultural competence and evidence-based practice in mental health services: A complementary perspective. *American Psychologist*, *62*(6), 563.

Williams, D. R., & Collins, C. (1995). US socioeconomic and racial differences in health: Patterns and explanations. *Annual Review of Sociology*, 349-386.

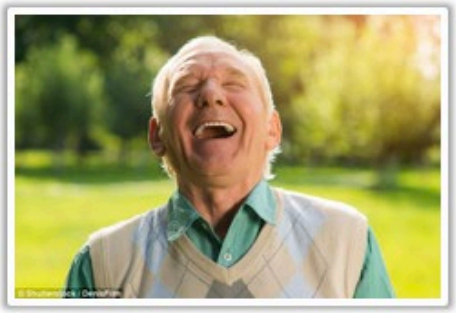
Yucha, C., & Montgomery, D. (2008). *Evidence-based practice in biofeedback and neurofeedback*. Wheat Ridge, CO: AAPB.

Yuen, M., Chan, R., Lau, P., Lam, M. P., & Shek, D. T. (2004). The Counselling Self-Estimate Inventory (COSE): Does it work in Chinese counsellors? *Counselling Psychology Quarterly*, *17*(2), 177-194.

Appendix A: Biofeedback Flyer

Mountainlands is offering BIOFEEDBACK!

Biofeedback has been shown to help with the treatment of **depression, anxiety, chronic stress, high blood pressure, migraines, chronic pain, and more.**



What is Biofeedback?

Biofeedback is a technique you can use to learn to control your body's functions, such as your heart rate. With biofeedback, you're connected to electrical sensors that help you receive information (feedback) about your body (bio). This feedback helps you control your body's physiological state.

For more information or to schedule your first appointment contact (098) 765-4321

As always, Services at Mountainlands are subsidized using the sliding fee pay scale.

Appendix B: Psychotherapy Flyer

Mountainlands is offering PSYCHOTHERAPY!

Problems helped by psychotherapy include **difficulties in coping with daily life; the impact of trauma, medical illness or loss, like the death of a loved one; and specific mental disorders, like depression or anxiety.**

What is Psychotherapy?

Psychotherapy, or talk therapy, is a way to help people with a broad variety of mental illnesses and emotional difficulties. Psychotherapy can help eliminate or control troubling symptoms, so a person can function better and can increase well-being and healing.

For more information or to schedule your first appointment contact (098) 765-4321

As always, Services at Mountainlands are subsidized using the sliding fee pay scale.

Appendix C: ARSMA-II

Acculturation Rating Scale-II (ARSMA-II)

English Version

Name: _____
Male: _____ Female: _____
Age: ___ DOB: ____/____/____
Marital Status: _____
What is your religious preference? _____

(a) Last grade you completed in school: ***(Circle your choice)***

1 Elementary-6
2. 7-8
3. 9-12
4. 1-2 years of college
5. 3-4 years of college
6. College graduate and higher

(b) In what country? _____

[Circle the generation that best applies to you. Circle only one.]

1. 1st generation = You were born in Mexico or other country.
2. 2nd generation = You were born in USA; either parent born in Mexico or other country.
3. 3rd generation = You were born in USA, both parents born in USA and all grandparents born in Mexico or other country.
4. 4th generation = You and your parents born in USA and at least one grandparent born in Mexico or other country with remainder born in the USA.
5. 5th generation = You and your parents born in the USA and all grandparents born in the USA.

Versión en Español

Nombre: _____
Masculino: _____ Femenino: _____
Edad: ___ Día de Nacimiento: _____
Estado Civil: _____
Cual es su religión predilecta? _____

(a) ¿Hasta que grado fué a la escuela? ***(Indique con un círculo la respuesta)***

1. Primaria-6
2. Secundaria 7-8
3. Preparatoria 9-12
4. Universidad o Colegio 1-2 años
5. Universidad o Colegio 3-4 años
6. Graduado, o grado mas alto de Colegio o Universidad

(b) ¿En que país? _____

[Indique con un círculo el numero de la generación que considere adecuada para usted. Dé solamente una repuesta.]

1. 1a. generación = Usted nació en México u otro país [no en los Estados Unidos (USA)].
2. 2a. generación = Usted nació en los Estados Unidos Americanos (USA), sus padres nacieron en México o en otro país.
3. 3a. generación = Usted nació en los Estados Unidos Americanos (USA), sus padres tambien nacieron en los Estados Unidos (USA) y sus abuelos nacieron en México o en otro país.
4. 4a. generación = Usted nació en los Estados Unidos Americanos (USA), sus padres nacieron en los Estados Unidos Americanos (USA) y por lo menos uno de sus abuelos nació en México o algun otro país.
5. 5a. generación = Usted y sus padres y todos sus abuelos nacieron en los Estados Unidos (USA).

SCALE 1

[Circle a number between 1-5 next to each item that best applies.]

[Marque con un círculo el numero entre 1 y 5 a la respuesta que sea más adecuada para usted.]

	1 Not at all	2 Very little or not very often	3 Moderately	4 Much or Very often	5 Extremely often or almost Always		1 Nada	2 Un Poquito o Aveces	3 Moderato	4 Mucho o Muy frecuente	5 Muchisimo o Casi todo el tiempo
1. I speak Spanish	1	2	3	4	5	1. Yo hablo Español	1	2	3	4	5
2. I speak English	1	2	3	4	5	2. Yo hablo Inglés	1	2	3	4	5
3. I enjoy speaking Spanish	1	2	3	4	5	3. Me gustar hablar en Español	1	2	3	4	5
4. I associate with Anglos	1	2	3	4	5	4. Me asocio con Anglos	1	2	3	4	5
5. I associate with Mexicans and/or Mexican Americans	1	2	3	4	5	5. Yo me asocio con Mexicanos o con Norte Americanos	1	2	3	4	5
6. I enjoy listening to Spanish language music	1	2	3	4	5	6. Me gusta la musica Mexicana (musica en idioma Español)	1	2	3	4	5
7. I enjoy listening to English language music	1	2	3	4	5	7. Me gusta la musica de idioma Inglés	1	2	3	4	5
8. I enjoy Spanish language TV	1	2	3	4	5	8. Me gusta ver programas en la televisión que sean en Español	1	2	3	4	5
9. I enjoy English language TV	1	2	3	4	5	9. Me gusta ver programas en la televisión que sean en Inglés	1	2	3	4	5
10. I enjoy English language movies	1	2	3	4	5	10. Me gusta ver películas en Inglés	1	2	3	4	5
11. I enjoy Spanish language movies	1	2	3	4	5	11. Me gusta ver películas en Español	1	2	3	4	5
12. I enjoy reading (e.g., books in Spanish)	1	2	3	4	5	12. Me gusta leer (e.g., libros en Español)	1	2	3	4	5
13. I enjoy reading (e.g., books in English)	1	2	3	4	5	13. Me gusta leer (e.g., libros en Inglés)	1	2	3	4	5
14. I write (e.g, letters in Spanish)	1	2	3	4	5	14. Escribo (e.g., cartas en Español)	1	2	3	4	5
15. I write (e.g., letters in English)	1	2	3	4	5	15. Escribo (e.g., cartas en Inglés)	1	2	3	4	5
16. My thinking is done in the English language	1	2	3	4	5	16. Mis piensamientos ocurren en el idioma Inglés	1	2	3	4	5
17. My thinking is done in the Spanish language	1	2	3	4	5	17. Mis piensamientos ocurren en el idioma Español	1	2	3	4	5
18. My contact with Mexico has been	1	2	3	4	5	18. Mi contacto con Mexico ha sido	1	2	3	4	5

	1	2	3	4	5		1	2	3	4	5
	Not at all	Very little or not very often	Moderately	Much or Very often	Extremely Often or Almost Always		Nada	Un Poquito o Aveces	Moderado	Mucho o Muy frecuente	Muchísimo Casi todo el tiempo
19. My contact with the USA has been	1	2	3	4	5	19. Mi contacto con los Estados Unidos Americanos ha sido	1	2	3	4	5
20. My father identifies or identified himself as 'Mexicano'	1	2	3	4	5	20. Mi padre se identifica (o se identificaba) como Mexicano	1	2	3	4	5
21. My mother identifies or identified herself as 'Mexicana'	1	2	3	4	5	21. Mi madre se identifica (o se identificaba) como Mexicana	1	2	3	4	5
22. My friends, while I was growing up, were of Mexican origin	1	2	3	4	5	22. Mis amigos(as) de mí niñez eran de origen Mexicano	1	2	3	4	5
23. My friends, while I was growing up, were of Anglo origin	1	2	3	4	5	23. Mis amigos(as) de mí niñez eran de origen Anglo Americano	1	2	3	4	5
24. My family cooks Mexican foods	1	2	3	4	5	24. Mi familia cocina comidas mexicanas	1	2	3	4	5
25. My friends now are of Anglo origin	1	2	3	4	5	25. Mis amigos recientes son Anglo Americanos	1	2	3	4	5
26. My friends now are of Mexican origin	1	2	3	4	5	26. Mis amigos recientes son Mexicanos	1	2	3	4	5
27. I like to identify myself as an Anglo American	1	2	3	4	5	27. Me gusta identificarme como Anglo Americano	1	2	3	4	5
28. I like to identify myself as a Mexican American	1	2	3	4	5	28. Me gusta identificarme como Norte Americano* (México-Americano)	1	2	3	4	5
29. I like to identify myself as a Mexican	1	2	3	4	5	29. Me gusta identificarme como Mexicano	1	2	3	4	5
30. I like to identify myself as an American	1	2	3	4	5	30. Me gusta identificarme como un(a) Americano(a)	1	2	3	4	5

end of Scale 1 *Estadounidenses de origen Mexicano

SCALE 2

[Use the scale below to answer questions 1-18 below.]

[Utilice la escala que sigue para contestar preguntas 1-18.]

	1	2	3	4	5		1	2	3	4	5
	Not at all	Very little or not very often	Moderately	Much or Very often	Extremely often or Almost always		Nada	Un Poquito o Aveces	Moderato	Mucho o Muy frecuente	Muchisimo o Casi todo el tiempo
1. I have difficulty accepting some ideas held by Anglos	1	2	3	4	5	1. Tengo dificultad aceptando ideas de algunos Anglo Americanos.	1	2	3	4	5
2. I have difficulty accepting certain attitudes held by Anglos	1	2	3	4	5	2. Tengo dificultad aceptando ciertas actitudes de los Anglo Americanos.	1	2	3	4	5
3. I have difficulty accepting some behaviors exhibited by Anglos.	1	2	3	4	5	3. Tengo dificultad aceptando algunos comportamientos de los Anglo Americanos.	1	2	3	4	5
4. I have difficulty accepting some values held by some Anglos.	1	2	3	4	5	4. Tengo dificultad aceptando algunos valores que tienen los Anglo Americanos.	1	2	3	4	5
5. I have difficulty accepting certain practices and customs commonly found in some Anglos.	1	2	3	4	5	5. Tengo dificultad aceptando ciertas costumbres entre algunos Anglo Americanos.	1	2	3	4	5
6. I have, or think I would have, difficulty accepting Anglos as close personal friends.	1	2	3	4	5	6. Tengo, o creo que sí tuviera, dificultad aceptando Anglo Americanos como buenos amigos.	1	2	3	4	5
7. I have difficulty accepting ideas held by some Mexicans.	1	2	3	4	5	7. Tengo dificultad aceptando ideas de algunos Mexicanos.	1	2	3	4	5
8. I have difficulty accepting certain attitudes held by Mexicans.	1	2	3	4	5	8. Tengo dificultad aceptando ciertas actitudes de algunos Mexicanos.	1	2	3	4	5
9. I have difficulty accepting some behaviors exhibited by Mexicans.	1	2	3	4	5	9. Tengo dificultad aceptando algunos comportamientos de los Mexicanos.	1	2	3	4	5
10. I have difficulty accepting some values held by some Mexicans.	1	2	3	4	5	10. Tengo dificultad aceptando algunos valores que tienen los Mexicanos.	1	2	3	4	5

	1	2	3	4	5		1	2	3	4	5
	Not at all	Very little or not very often	Moderately	Much or Very often	Extremely Often or Almost Always		Nada	Un Poquito o Aveces	Moderato	Mucho o Muy frecuente	Muchisimo o Casi todo el tiempo
11. I have difficulty accepting certain practices and customs commonly found in some Mexicans.	1	2	3	4	5	11. Tengo dificultad aceptando ciertas costumbres entre algunos Mexicanos.	1	2	3	4	5
12. I have, or think I would have, difficulty accepting Mexicans as close personal friends.	1	2	3	4	5	12. Tengo, o creo que sí tuviera, dificultad aceptando a Mexicanos como buenos amigos.	1	2	3	4	5
13. I have difficulty accepting ideas held by some Mexican Americans.	1	2	3	4	5	13. Tengo dificultad aceptando ideas de algunos Mexico-Americanos*	1	2	3	4	5
14. I have difficulty accepting certain attitudes held by Mexican Americans.	1	2	3	4	5	14. Tengo dificultad aceptando ciertas actitudes de algunos Mexico-Americanos*	1	2	3	4	5
15. I have difficulty accepting some behaviors exhibited by Mexican Americans.	1	2	3	4	5	15. Tengo dificultad aceptando algunos comportamientos de los Mexico-Americanos*.	1	2	3	4	5
16. I have difficulty accepting some values held by Mexican Americans.	1	2	3	4	5	16. Tengo dificultad aceptando algunos valores que tienen Mexico-Americanos*.	1	2	3	4	5
17. I have difficulty accepting certain practices and customs commonly found in some Mexican Americans.	1	2	3	4	5	17. Tengo dificultad aceptando ciertas costumbres entre algunos Mexico-Americanos.*	1	2	3	4	5
18. I have, or think I would have, difficulty accepting Mexican Americans as close personal friends.	1	2	3	4	5	18. Tengo, o creo que sí tuviera, dificultad aceptando Mexico Americanos* como buenos amigos.	1	2	3	4	5

end of Scale 2 *Estadounidenses de origen Mexicano

Appendix D: DASS-21

DASS21 Name: Date:

Please read each statement and circle a number 0, 1, 2 or 3 which indicates how much the statement applied to you **over the past week**. There are no right or wrong answers. Do not spend too much time on any statement.

The rating scale is as follows:

0 Did not apply to me at all
1 Applied to me to some degree, or some of the time
2 Applied to me to a considerable degree or a good part of time
3 Applied to me very much or most of the time

1 (s)	I found it hard to wind down	0	1	2	3
2 (a)	I was aware of dryness of my mouth	0	1	2	3
3 (d)	I couldn't seem to experience any positive feeling at all	0	1	2	3
4 (a)	I experienced breathing difficulty (e.g. excessively rapid breathing, breathlessness in the absence of physical exertion)	0	1	2	3
5 (d)	I found it difficult to work up the initiative to do things	0	1	2	3
6 (s)	I tended to over-react to situations	0	1	2	3
7 (a)	I experienced trembling (e.g. in the hands)	0	1	2	3
8 (s)	I felt that I was using a lot of nervous energy	0	1	2	3
9 (a)	I was worried about situations in which I might panic and make a fool of myself	0	1	2	3
10 (d)	I felt that I had nothing to look forward to	0	1	2	3
11 (s)	I found myself getting agitated	0	1	2	3
12 (s)	I found it difficult to relax	0	1	2	3
13 (d)	I felt down-hearted and blue	0	1	2	3
14 (s)	I was intolerant of anything that kept me from getting on with what I was doing	0	1	2	3
15 (a)	I felt I was close to panic	0	1	2	3
16 (d)	I was unable to become enthusiastic about anything	0	1	2	3
17 (d)	I felt I wasn't worth much as a person	0	1	2	3
18 (s)	I felt that I was rather touchy	0	1	2	3
19 (a)	I was aware of the action of my heart in the absence of physical exertion (e.g. sense of heart rate increase, heart missing a beat)	0	1	2	3
20 (a)	I felt scared without any good reason	0	1	2	3
21 (d)	I felt that life was meaningless	0	1	2	3

DASS-21

Por favor lea las siguientes afirmaciones y coloque un círculo alrededor de un número (0, 1, 2, 3) que indica cuánto esta afirmación le aplicó a usted *durante la semana pasada*. No hay respuestas correctas o incorrectas. No tome demasiado tiempo para contestar.

La escala de calificación es la siguiente:

0 No me aplicó
1 Me aplicó un poco, o durante parte del tiempo
2 Me aplicó bastante, o durante una buena parte del tiempo
3 Me aplicó mucho, o la mayor parte del tiempo

1.	Me costó mucho relajarme	0	1	2	3
2.	Me di cuenta que tenia la boca seca	0	1	2	3
3.	No podia sentir ningún sentimiento positivo	0	1	2	3
4.	Se me hizo dificil respirar	0	1	2	3
5.	Se me hizo dificil tomar la iniciativa para hacer cosas	0	1	2	3
6.	Reaccioné exageradamente en ciertas situaciones	0	1	2	3
7.	Sentí que mis manos temblaban	0	1	2	3
8.	Sentí que tenia muchos nervios	0	1	2	3
9.	Estaba preocupado por situaciones en las cuales podía tener pánico o en las que podría hacer el ridículo	0	1	2	3
10.	Sentí que no tenia nada por que vivir	0	1	2	3
11.	Noté que me agitaba	0	1	2	3
12.	Se me hizo dificil relajarme	0	1	2	3
13.	Me sentí triste y deprimido	0	1	2	3
14.	No toleré nada que no me permitiera continuar con lo que estaba haciendo	0	1	2	3
15.	Sentí que estaba al punto de pánico	0	1	2	3
16.	No me pude entusiasmar por nada	0	1	2	3
17.	Sentí que valía muy poco como persona	0	1	2	3
18.	Sentí que estaba muy irritable	0	1	2	3
19.	Sentí los latidos de mi corazón a pesar de no haber hecho ningún esfuerzo físico	0	1	2	3
20.	Tuve miedo sin razón	0	1	2	3
21.	Sentí que la vida no tenia ningún sentido	0	1	2	3

Appendix E: SSOH in English

STIGMA ASSESSMENT

Instructions: People at times find that they face problems that they consider seeking help for. This can bring up reactions about what seeking help would mean. Please use the 5-point scale to rate the degree to which each item describes how you might react in this situation.

1. I would feel inadequate if I went to a therapist for psychological help.

1	2	3	4	5
Strongly Disagree	Disagree	Agree and Disagree Equally	Agree	Strongly Agree

2. My self-confidence would NOT be threatened if I sought professional help.

1	2	3	4	5
Strongly Disagree	Disagree	Agree and Disagree Equally	Agree	Strongly Agree

3. Seeking psychological help would make me feel less intelligent.

1	2	3	4	5
Strongly Disagree	Disagree	Agree and Disagree Equally	Agree	Strongly Agree

4. My self-esteem would increase if I talked to a therapist.

1	2	3	4	5
Strongly Disagree	Disagree	Agree and Disagree Equally	Agree	Strongly Agree

5. My view of myself would not change just because I made the choice to see a therapist.

1	2	3	4	5
Strongly Disagree	Disagree	Agree and Disagree Equally	Agree	Strongly Agree

6. It would make me feel inferior to ask a therapist for help.

1	2	3	4	5
Strongly Disagree	Disagree	Agree and Disagree Equally	Agree	Strongly Agree

7. I would feel okay about myself if I made the choice to seek professional help.

1	2	3	4	5
Strongly Disagree	Disagree	Agree and Disagree Equally	Agree	Strongly Agree

8. If I went to a therapist, I would be less satisfied with myself.

1	2	3	4	5
Strongly Disagree	Disagree	Agree and Disagree Equally	Agree	Strongly Agree

9. My self-confidence would remain the same if I sought professional help for a problem I could not solve.

1	2	3	4	5
Strongly Disagree	Disagree	Agree and Disagree Equally	Agree	Strongly Agree

10. I would feel worse about myself if I could not solve my own problems.

1	2	3	4	5
Strongly Disagree	Disagree	Agree and Disagree Equally	Agree	Strongly Agree

Appendix F: SSOSH in Spanish

Instrucciones: Las personas a veces encuentran que enfrentan problemas por los que consideran buscar ayuda. Esto puede provocar reacciones sobre lo que significaría buscar ayuda. Utilice la escala de 5 puntos para calificar el grado en que cada artículo describe cómo podría reaccionar en esta situación.

1. Me sentiría inadecuado si fuera a un terapeuta para obtener ayuda psicológica.

    1. Estoy totalmente en desacuerdo
    2. Estoy en deacuerdo
    3. Estoy en acuerdo y en desacuerdo igualmente
    4. Estoy de Acuerdo
    5. Estoy totalmente de acuerdo

2. Mi autoconfianza NO se vería amenazada si buscara ayuda profesional.

    1. Estoy totalmente en desacuerdo
    2. Estoy en deacuerdo
    3. Estoy en acuerdo y en desacuerdo igualmente
    4. Estoy de Acuerdo
    5. Estoy totalmente de acuerdo

3. Buscar ayuda psicológica me haría sentir menos inteligente

    1. Estoy totalmente en desacuerdo
    2. Estoy en deacuerdo
    3. Estoy en acuerdo y en desacuerdo igualmente
    4. Estoy de Acuerdo
    5. Estoy totalmente de acuerdo

4. Mi autoestima aumentaría si hablara con un terapeuta

    1. Estoy totalmente en desacuerdo
    2. Estoy en deacuerdo
    3. Estoy en acuerdo y en desacuerdo igualmente
    4. Estoy de Acuerdo
    5. Estoy totalmente de acuerdo

5. Mi visión de mí mismo no cambiaría solo porque tomé la decisión de ver a un terapeuta.

    1. Estoy totalmente en desacuerdo
    2. Estoy en deacuerdo
    3. Estoy en acuerdo y en desacuerdo igualmente

4. Estoy de Acuerdo
5. Estoy totalmente de acuerdo

6. Me haría sentir inferior para pedir ayuda a un terapeuta.

1. Estoy totalmente en desacuerdo
2. Estoy en deacuerdo
3. Estoy en acuerdo y en desacuerdo igualmente
4. Estoy de Acuerdo
5. Estoy totalmente de acuerdo

7. Me sentiría bien conmigo mismo si tomara la decisión de buscar ayuda profesional.

1. Estoy totalmente en desacuerdo
2. Estoy en deacuerdo
3. Estoy en acuerdo y en desacuerdo igualmente
4. Estoy de Acuerdo
5. Estoy totalmente de acuerdo

8. Si fuera a un terapeuta, estaría menos satisfecho conmigo mismo.

1. Estoy totalmente en desacuerdo
2. Estoy en deacuerdo
3. Estoy en acuerdo y en desacuerdo igualmente
4. Estoy de Acuerdo
5. Estoy totalmente de acuerdo

9. Mi confianza en mí mismo seguiría siendo la misma si buscara ayuda profesional para un problema que no pude resolver.

1. Estoy totalmente en desacuerdo
2. Estoy en deacuerdo
3. Estoy en acuerdo y en desacuerdo igualmente
4. Estoy de Acuerdo
5. Estoy totalmente de acuerdo

10. Me sentiría peor conmigo mismo si no pudiera resolver mis propios problemas.

1. Estoy totalmente en desacuerdo
2. Estoy en deacuerdo
3. Estoy en acuerdo y en desacuerdo igualmente
4. Estoy de Acuerdo
5. Estoy totalmente de acuerdo

Semi Structured Interview questions for exit interview:

Participant ID#:

1. Can you tell us a little about your overall experience with biofeedback or therapy?
2. Why did you choose that intervention over the other?
3. What are your views on seeking out mental health services?
4. Would you recommend this intervention to a friend?
5. Do you think you benefitted from this intervention?
6. What didn't you like about the intervention?

Please take notes on this form and remind participant that this call will be recorded.