TEACHING HEARING CLIENTS SIGN LANGUAGE IN THERAPY: THE SIGN YOUR FEELINGS INTERVENTION'S EFFECTS ON THE THERAPEUTIC ALLIANCE AND CLIENT OUTCOMES

by

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This dissertation was prepared under the direction of the candidate's dissertation advisor, Dr. Carman Gill, Department of Counselor Education, and has been approved by all members of the supervisory committee. It was submitted to the faculty of the College of Education and was accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

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ABSTRACT

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The aim of the study was to validate the researcher's new therapeutic intervention, Sign your Feelings, through a four-week randomized control trial (RCT). This intervention involves hearing therapists working with hearing clients. It incorporates (a) discussions about the therapeutic alliance, (b) therapists teaching their clients 36 signs in American Sign Language (ASL) and (c) frequent emotional disclosure as clients learn and practice the signs. This RCT measured the therapeutic alliance and client outcomes, using the Sessions Rating Scale (SRS) and CORE-10 instrument. Eighty adults from 10 U.S. States participated in the study. Sixteen therapists underwent training before administering the intervention, and sessions took place virtually and in-person.

Results did not render statistically significant differences for SRS total scores between the two groups (p =.194). CORE-10 total scores between the two groups were

not statistically significant either ($p = 0.736$). However, results did show a statistically significant negative correlation of $r = -.229$ ($p = .041$) between SRS and CORE-10 post-test scores.

In order to explore potential signals of the intervention's effectiveness and areas for future research, and although individual items of the CORE-10 are not designed to be isolated, the researcher nonetheless investigated potential differences between the groups for each item. Item 9 of this scale, in which clients ranked the prompt 'I have felt unhappy' on a Likert-type scale, yielded a *p*-value of .038. This item's percentage improvement (PI) scores provided a 35.82 PI for the intervention group against a 9.33 PI for the TAU control group, thereby resulting in a 3.84-fold amelioration. The researcher suggests future research probe the intervention's potential effects on decreasing unhappiness.

The researcher, who is hearing, plans on using this study as a springboard for future projects to benefit the Deaf community, improve awareness of Deaf culture and raise the visibility of ASL. Future iterations of the training will include more Deaf-centric material, include modules on Deaf culture, and serve to fund projects relating to language deprivation and other urgent issues in Deaf mental health.

DEDICATION

To my dad,

Albert Harald Marian Lopez-Escobar, Ph.D.

and to my mom,

Marta Susana Otermin Lopez-Escobar

How fortunate am I,

that the most challenging task of my entire Ph.D. dissertation

was finding the words to illustrate

how grateful I am to have had you as parents?

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CHAPTER 1. INTRODUCTION

There is extensive research demonstrating the link between a healthy therapeutic alliance and positive client outcomes and the need for effective communication between therapists and their clients. Alliance ruptures and premature dropout has remained a lingering issue in the field of psychotherapy (Chen et al., 2017). In addition, premature dropout rates decrease through strengthened therapeutic alliances (Chen et al., 2017). For these reasons, the counseling profession must continue to find ways to improve therapeutic alliances and maximize client outcomes.

Although the notion that sharing one's feelings would serve to decrease their impact is not a new theory for those working in the counseling profession, it was not until recently that scientific proof of the importance of emotional processing existed. Kircanski et al. (2012) note that "Of particular relevance to fear and anxiety, near-imaging research results have demonstrated that self-reflective cognitive processing, such as affect labeling, can reduce limbic responses to negative emotional stimulation via a neurocognitive feedback mechanism" (p. 1086).

Emotional differentiation is a way for clients to make a mental representation of their emotions, i.e., the symbolization, labeling, and "consequent expansion of the physiological reaction experienced" (da Silva et al., 2016, p. 1197). They add that in therapy, emotional awareness comes first, followed by emotional differentiation or labeling, and lastly, emotional regulation. The last step, emotional regulation, helps clients understand and accept their emotional experiences, engage in healthy mental

health strategies, manage uncomfortable emotions when required, and engage in adaptive and appropriate behavior when under stress (da Silva et al., 2016).

Colombetti (2009) explains that putting one's feelings into words not only clarifies them but changes them through the very act of clarification. Thus, it is not a question solely of reporting the feeling that one carries inside. Colombetti argues that putting one's feelings into words encourages a shift from pre-reflective to reflective modes. Colombetti considers the verbalization of the feeling an actual constitutive part of the emotion itself. Furthermore, Hook and Andrews (2005) studied the possible link between shame-proneness, depression, and non-disclosure in therapy. They concluded that encouraging and facilitating "the disclosure of shameful symptoms and related behaviors has positive implications for the effectiveness of treatment (p. 425)."

Dachovsky and Sandler (2009) make a case for sign language use during rupture repair discussions by pointing to the element of visual intonation during sign language. For example, when someone is apologizing solely verbally, they are not required to look at the person they are apologizing to, and the other person is not required to look at their face to receive their message properly. However, individuals who sign the word for "sorry" must make the added effort to express their emotions facially and physically while they sign, thereby increasing the effort and emotion required to apologize.

The added physical element of emotional expression may help clients embody their emotions. A vast body of evidence supports an embodied account of language, meaning that instead of language being a separate entity from our body's experience of its surroundings, "language comprehension takes advantage of many of the same systems engaged in bodily experience" (Vinson, 2017, p. 1377). Neurological studies found that

systems in our bodies are intricately involved in our comprehension of language and that sentences involving the use of specific body parts will activate the motor cortex region related to that same body part (Pulvermüller, 2013). This data supports the hypothesis that (a) making a sign representing an emotion while; (b) recounting an example of when one felt the feeling; and (c) doing so while one facially expresses the emotion -- would together work to help the client discuss the feeling more so than simply expressing their feelings in verbal form.

Additionally, Pyers et al. (2010) conducted research demonstrating a positive correlation between non-linguistic modes of communication and improvement of viseo-spatial processing. Giacco et al. (2020) point out that clear communication comprises various elements, all working in tandem to convey information and create mutual regulation between a therapist and their client. As these components interplay, communication improves and serves as the foundation for building the therapeutic alliance, predicting both psychotherapeutic outcome and change.

Given the importance of emotional processing in therapy and the importance of the therapeutic alliance and its relation to client outcomes, the researcher wished to create and test an intervention that would encourage clients to increase their levels of emotional disclosure and improve the therapeutic alliance. At its core, psychotherapy requires communication between client and therapist and is frequently referred to as "talk therapy" (Fenger-Grøn et al., 2018). The researcher posited that emotional disclosure in therapy would heighten if one were to add elements that are not based on talking but instead are based on sign language.

The modality the author created and seeked to validate in this study is named the Sign your Feelings intervention. It requires therapists to teach clients American Sign Language (ASL) signs relating to the therapeutic alliance and specific emotions, all while continuing doing therapeutic work with their clients. This means that during the intervention, therapists who employ, for example, an Adlerian theoretical orientation during therapy, should continue to do so, alongside the teaching of the sign language vocabulary. Additionally, this intervention requires therapists and clients to discuss the importance of the therapeutic alliance, to plan how to communicate effectively if a rupture should occur, and to discuss ahead of time how to address and repair it, should one arise. Therapists learned the signs from the Sign your Feelings online training and completed quizzes to ensure that they have learned the signs sufficiently well to administer the intervention.

The randomized control trial (RCT) comprised two groups of clients undergoing four weekly sessions of psychotherapy. The researcher randomly placed participants in either in the Sign your Feelings intervention group or the treatment-as-usual (TAU) group, for the purpose of determining potential differences in therapeutic alliance or client outcomes between the two groups.

Overview

Need and Purpose for the Study

Ardito and Rabellino (2011) studied the relationship between the therapeutic alliance and outcomes in psychotherapy and found that relationship quality between the client and the therapist is a reliable predictor of positive clinical outcomes. Furthermore, Ardito and Rabellino point out that this relationship is "independent of psychotherapy

approaches and outcome measures" (p. 1). The purpose of this study was to test the Sign your Feelings intervention to discover whether or not the intervention affects the therapeutic alliance. Additionally, the researcher wishes to discover whether the intervention affects client outcomes like subjective well-being, anxiety levels, depression levels, general functioning, and social relationship functioning. Counselors, counselor educators, and clients may benefit from this study's potential outcomes because the findings might point towards new ways of helping clients improve therapeutic alliances and client outcomes in therapy. Additionally, this study might provide insight into whether asking clients to increase affect labeling and emotional disclosure is beneficial in therapeutic settings.

Statement of the Research Problem

The first research problem is that to the researcher's knowledge, no therapeutic interventions include a protocol whereby therapists directly address the importance of the therapeutic alliance, notice therapeutic ruptures, and create therapeutic repairs with their clients. The Sign your Feelings intervention study addresses these issues in all four sessions. Richards (2011) outlines several causes for alliance ruptures; (1) there is disagreement on aims and therapy tasks; (2) the therapist is more concerned about the technical aspects of therapy and less so about the relational component; (3) problems exist stemming from the therapist's and client's attachment styles; (4) the client is reticent to self-disclose or share pertinent information; (5) the client is reluctant to participate in therapy due to having been obliged to be there; (6) a third party negatively influences the client; (7) the client is disappointed at not having their expectations met; (8) lack of clarity exists about the therapeutic process from the onset; (9) the client believes that their

therapist does not understand them; (10) the client brings their interpersonal dynamics into their relationship with the therapist; (11) the therapist creates defense mechanisms against the client; and (12) the therapist not relating to the client as a person (Richards, 2011).

The most drastic of ruptures consists of the client dropping out of therapy prematurely. According to Shick Tryon (1999) "it is not uncommon for 50% of clients to leave counseling without prior knowledge and agreement of their counselors (p. 285)." Although not all dropout cases are caused by ruptures in the therapeutic relationship, finding ways to prevent and repair ruptures within the therapeutic alliance would benefit the client, their entourage, counselors, and the counseling profession.

The second research problem involves the lack of interventions that address the facilitation of emotional disclosure. Currently, there are no therapeutic interventions that aim at teaching clients sign language signs on emotions with the goal of systematic affect labeling and emotional disclosure. This study addresses this gap in the knowledge by having therapists and clients partake in the intervention over a period of four sessions and by having a control group follow TAU.

Statement of Hypotheses / Research Questions

The researcher conducted the study as an RCT, with participants randomly assigned into either group 1 or 2. Group 1 therapists administered the Sign your Feelings intervention to their clients over the course of four sessions. Therapists assigned to group 2 will provide TAU instead. Participants from both groups will provide pre-and post-scores on the Sessions Rating Scale (SRS) and the CORE-10.

Research Question 1

Will the gains from pre- to post SRS scores measuring the therapeutic alliance of clients and therapists be statistically different between clients receiving the Sign your Feelings intervention and clients receiving TAU?

Null Hypothesis 1 (H_{o1})

The gains from pre- to post SRS scores measuring the therapeutic alliance of clients and therapists will not be statistically different between clients receiving the Sign your Feelings intervention and clients receiving TAU.

Research Question 2

Will the gains from pre- to post CORE-10 scores measuring client outcomes be statistically different between clients receiving the Sign your Feelings intervention and clients receiving TAU?

Null Hypothesis 2 (H_{o2})

The gains from pre- to post CORE-10 scores measuring client outcomes will not be statistically different between clients receiving the Sign your Feelings intervention and clients receiving TAU.

Research Question 3

Is there a significant negative correlation between the post-SRS scores measuring the therapeutic alliance between therapists and clients, and the post-CORE-10 scores measuring client outcomes of all clients participating in the study?

Null Hypothesis 3 (H_{o3})

No significant negative correlation exists between the post-SRS scores measuring the therapeutic alliance between therapists and clients, and the post-CORE-10 scores measuring client outcomes of all clients participating in the study.

Limitations

This study had several limitations. This section lists those the researcher envisioned prior to running the RCT. Chapter 5 includes additional limitations the researcher found after the conclusion of the 4-week study. Firstly, the author considered the issue of methods and instrumentation. The instruments selected for this study, namely the SRS and the CORE-10, might not be appropriate or demonstrate sufficient reliability or validity. Additionally, the researcher's online training might not be sufficiently effective in training the therapists. Finally, the researcher supposed that therapists and clients participating in the study would behave in the same manner as they would in real-life therapeutic encounters, which might not be the case. The author also considered the issue of generalizability, both in terms of participating therapists and clients. It is possible that the therapists accepting to participate in the study would not be sufficiently representative of therapists in general. Lastly, therapists might select clients because they believe these clients might be especially amenable to participate in a study or might have superior linguistic, communication, or intellectual skills.

Assumptions

The Utility of Sign Language

The researcher's first assumption was that introducing body movements into therapy would improve clients' ability to disclose their emotions and, therefore, would

improve client outcomes. Cavicchio et al. (2018) note that researchers have traditionally focused on the importance of facial expression, all while under-investigating body movements. Russell (1991, as cited in Cavicchio et al., 2018) found that study participants who were asked to rate faces were only able to correctly assess the arousal level of a feeling or whether the feeling was positive or negative. However, participants in Russell's research could not correctly interpret specific emotions. For participants to make correct assessments, they require a visual of the specific emotion and contextual information. Additionally, Russell claims that the human face does not transmit more information about emotions than the rest of the body does (through body posture, words, and intonation). Instead, it appears that facial expression serves primarily to signal a person's global feelings. This finding is essential to keep in mind, given the current constraints of in-person therapy during the COVID-19 Pandemic and the ubiquitous ways in which teletherapy has had to replace in-person therapy.

Metaphors and Visual Communication in Therapy

The researcher assumed that because metaphors and their visual references correlate with higher emotional responses, increasing visual input during therapy would create higher emotional activation. Fainsilber and Ortony (1987, as cited in Citron et al., 2016) explain that when they asked individuals in their study to recall autobiographical events, participants used a higher number of metaphorical expressions when explaining how they felt during a particular event, as opposed to when they described what happened during that event. In sum, the more emotionally intense the event, the more frequently they used metaphors. Considering that positive counseling outcomes depend on the ability to discern and communicate one's feelings, therapists should consider

metaphors a valuable tool for expression, regardless of whether one is speaking verbally or employing sign language.

Definitions

Affect labeling

Affect labeling is the action of describing feelings with words (Fan et al., 2019).

American Sign Language (ASL)

ASL is a complete and natural language considered to possess the same linguistic properties as spoken languages. Its grammar, syntax and rules differ from English. Individuals communicating with ASL do so by moving their upper body, hands, arms, and face. It includes signs which represent vocabulary words, and fingerspelling, with each sign representing a letter of the alphabet. It is the primary language of North Americans who are deaf and hard of hearing (National Institute on Deafness and Other Communication Disorders, 2021).

Client Outcomes

In the context of psychotherapy, this term refers to the result which a client experiences upon termination. Positive client outcomes denote that client well-being post-treatment was higher than pre-treatment. Conversely, negative client outcomes mean that post-treatment well-being was higher prior to treatment than once treatment concluded (Erford et al., 2016). The researcher chose client outcomes, as measured by the CORE-10 measurement, as one of the two dependent variables.

deaf (lowercase "D")

In general, individuals who are audiologically deaf (expressed with a lowercase "d") generally use their residual hearing with amplification, speechreading, hearing aids,

or with cochlear implants, as well as with other types of hearing assistive technology. Persons who are deaf might learn sign language but are oral and do not sign as a primary mode of communication. They do not consider themselves culturally Deaf. One should always use the term D/deaf alongside a people descriptor, e.g., people who are D/deaf; people who are D/deaf; D/deaf people. The phrase "*the* deaf" is considered incorrect (Hearing Loss Association of America, 2021).

Deaf (uppercase "D")

The Hearing Loss Association of America (2021) explains that people should use the term "Deaf" with an uppercase "D" to describe individuals who have no useful residual hearing and who, for the most part, utilize sign language as their primary mode of communicating with others. This group of people is considered culturally Deaf, and they use the uppercase "D" when writing the term. In other words, the capital *D* is used in this word only when referring specifically to the Deaf community or Deaf culture (Young, 2018).

D/deaf

This term implies inclusivity while marking a distinction between those whose identity as a person who is Deaf as a cultural construct and those who would not recognize this of themselves, and who therefore consider themselves deaf (Young, 2018).

Gesticulation, gestures

Gesticulation is the act of using a physical gesture to communicate, as opposed to communicating through a verbal or sign language vocabulary word. People typically make gestures with their finger, hand, arm, or head (Madeo et al., 2017).

Hard of Hearing

Hard of hearing is a descriptive term people use when referring to individuals with hearing loss. For example, one might speak of people who are D/deaf and hard of hearing. People often refer to this term to describe their own ability to hear, regardless of the actual audiological level of hearing loss. Individuals who use either residual hearing, amplification, or hearing assistive technology and who do not employ sign language as their primary mode of communicating tend to consider themselves hard of hearing rather than deaf. As a general rule, people who identify as hard of hearing, regardless of hearing loss levels, remain committed to participating fully in the hearing world. The term hard of hearing should always exist alongside the people descriptor, as in "people who are hard of hearing" or "hard of hearing people." (Hearing Loss Association of America, 2021).

Hearing-impaired

This term is no longer considered acceptable by most in the Deaf community. This said, it was at one time a preferred term, in large part because it was considered somewhat bold, rude, or impolite to openly and directly declare oneself or another person as D/deaf or blind. It was considered better to use the word "impaired" along with "visually," "hearing," "mobility," and so on as a kind of euphemism. "Hearing-impaired" was a well-meaning term that is not currently accepted or used by many D/deaf and hard of hearing persons (National Association for the Deaf, 2021).

Hearing Loss

This term refers to someone with a hearing loss which ranges from mild to profound. It can encompass both those who are D/deaf and those who are hard of hearing. The Hearing Loss Association of America uses this term to refer to people with hearing

loss in the context of descriptive writing and avoids the term "hearing impaired," as that is an audiological term (Hearing Loss Association of America, 2021).

The Sign your Feelings Intervention

The Sign your Feelings Intervention was the sole independent variable in this study. This intervention requires hearing therapists to teach hearing clients words in ASL that either (a) assist in discussions about therapeutic alliances, ruptures and repairs or (b) represent emotions.

Therapeutic Alliance

The term *therapeutic alliance* refers to the relationship between the therapist and their client (Knox, 2019). Knox cites robust psychotherapy research findings that point towards therapeutic alliance being the best predictor of client outcomes in psychotherapy. Flückiger et al. (2020) note that early alliance predicted posttreatment outcomes. The researcher chose the therapeutic alliance, as measured by the Session Rating Scale (SRS) measurement, as one of the two dependent variables.

Summary

In this chapter, the researcher gave an overview of the study and explained its needs and purpose. The author outlined the two primary needs for the research, to find ways to improve therapeutic alliances further and to help improve client outcomes. The researcher then explained the research problems. Despite the importance of the therapeutic alliance, at present, there are no interventions in which therapists and clients purposefully and openly discuss their therapeutic alliance. Secondly, despite the research on the importance of client self-disclosure, there are currently no interventions that have as principal aim to improve clients' emotional self-disclosure by systematically taking

them through a list of the most common emotions and discussing them one by one, as they pertain to the therapeutic work currently being carried out in therapy. The author then shared the research questions and hypotheses, the study's limitations, and the assumptions the author might have made. In the following chapter, the author will be presenting a literature review. Chapter 3 will then provide specific details on methods.

CHAPTER 2. LITERATURE REVIEW

This literature review lays the groundwork for the researcher's study and encompasses three main subjects. Firstly, the researcher reviews the existing literature on sign language signs as a means of communication. The author then delves into existing studies on the importance of the therapeutic alliance. Lastly, the researcher discusses the literature on potentially improved client outcomes resulting from the Sign your Feelings intervention.

Sign Language

Sign language, or the method of communicating with others by using one's hands and other parts of one's body through a pre-determined set of vocabulary words, grammar and syntax, should not be confused with body language. Sign languages are the principal way many D/deaf people communicate instead of using spoken language. There are approximately 70 million D/deaf persons in the world who use over 200 Sign Languages to communicate (World Federation of the Deaf, 2021). American Sign Language (ASL) is one of these languages.

Padden and Humphries (1988) explain that Deaf culture refers to the culture enjoyed by Deaf people who share the experience of using sign language to communicate. In North America, the members of this culture use ASL as their primary means of communication among themselves and retain beliefs about themselves as a group and their connection to society. This contrasts with those who find themselves losing their hearing either because of illness, age, or trauma. Although sharing the

condition of not being able to hear, they do not have access to the knowledge, beliefs, and practices that comprise Deaf culture. Padden and Humphries point out that Deaf culture is not merely a camaraderie with others who have similar physical conditions. Instead, it is like other cultures in the proper and traditional sense of the term, a culture created and actively transmitted across generations. Explaining that sign language affords them the possibilities of invention, insight, and irony, Padden and Humphries add that the relationship they enjoy with their culture is strong and cannot be easily severed nor replaced.

ASL is separate and distinct from English. Contrary to popular belief, it is not merely a translation of English words into physical form. ASL boasts all a language's fundamental features, meaning that it has its own rules for word formation, pronunciation, and word order. For example, an English speaker might raise the pitch of their voices and adjust word order to signal that they are asking a question. Someone using ASL to communicate will raise the eyebrows, widen their eyes, and tilt their bodies forward when asking a question (National Institute on Deafness and Other Communication Disorders, 2021).

An Anthropological Perspective

From a Darwinian perspective, humans have been able to survive, thrive, and evolve through "the development and, if compared to all other species, hypertrophy of language" (Ruben, 2005, p. 464). However, linguistic communication need not be verbal. Paleolithic evidence exists that visual-based language existed before the advent of auditory language (Stokoe, 2001). From an evolutionary perspective, studies demonstrate that linguistic communication was commonplace before the voice and speech track

evolved into a physical form that would allow for articulated communication in auditory form (Laitman & Heimbuch, 1982).

Pagel (2017) contends that language has played "a more important role in our species' recent evolution over approximately the last 200,000 years, than have our genes" (p. 2). Without language and our ability to express ourselves both verbally and nonverbally, humans would not have been able to thrive on Earth and explore other planets as an extension. On a macro level, without language, therapists would not be able to study and carry out their professions, and clients would not be able to receive the mental health assistance they require. In Chapter 5 the author discusses the issue of the absence of language, or language deprivation. This occurs when parents or caretakers do not give D/deaf babies and children access to sign language as a form of communication.

Corballis (2012) notes that there is a growing body of evidence that suggests that manual gestures, as opposed to vocal calls, were at the origin of human language. According to Corballis, "a gradual switch from manual to facial and vocal expression may have occurred late in hominem evolution, with speech reaching its present level of autonomy only in our species, Homo sapiens." It would follow that a hearing person using signs to communicate with others would constitute the use of a primary, well-rooted part of our evolution (Corballis, 2012, p. 200).

Killin (2017) posits that after surveying the leading hypotheses on the origins of language, protolanguage's primarily gestural conception appears to be the most logical. Killin explains that the gestural argument has difficulty explaining how language shifted from primarily gestural to a mostly vocal method. Killin's account rests on the theory that an independently evolved musicality was present in ancient hominins, preparing them

both morphologically and cognitively for the ability to articulate vocal production intentionally. According to Killin's theory, this was the necessary step that enabled the evolution of speech. Music would have therefore filled the gap so far as it would have existed alongside gestures and acted as a link in the evolutionary move towards vocal communication. As Killin explains, music would have been present in birdsong and therefore present both as a form of sound and as a communication model for early hominins. Those who support the hypotheses that music and language share one common ancestor, in the form of a vocal music protolanguage, follow language's holistic viewpoint. It is considered holistic instead of direct because protolanguage in the ancestral hominin lineage is discontinuous with nonhominin great ape intentional communication (Killin, 2017).

Given that great apes do not sing, this means that it would present an example of convergence with whale song, bird song, and gibbon song (Killin, 2017). Killin's work includes discussions on Jane Goodall's work with apes and sign language, perhaps the most commonly known attempts by humans to teach nonhumans how to communicate. Killin's viewpoint is that the brain science available supports the gestural view, which is one of the arguments central to the researcher's study.

Proust's (2016) research calls into question the traditional view that primate communication's goal is signal decoding. To Proust, the evidence suggests that primates are, in fact, no less able than humans to create or understand impulsive or habitual communication intentionally. This is thus a display of structured and evaluative (nonconceptual) content. According to Proust, the main difference is that humans have cognitive access to a strategic form of communication best adapted to teaching and

persuasion. Nonhuman primates solely possess the capacity to communicate in impulsive or habitual ways. In addition, in contrast to primates, humans can monitor fluency, information content, and relevance of the messages or signals. One of the present study's arguments is that communicating through signs has been hard-wired into humans throughout our evolutionary history and therefore not an overly challenging skill for a hearing, non-ASL-fluent client to learn.

Baby Sign Language

The concept of teaching sign language to babies who have hard-of-hearing family members is not new. Johnston et al. (2005) found one such study conducted in 1910 by Edward Gallaudet, the founder of Gallaudet University, the only university in the world designed specifically for Deaf and hard of hearing students. However, it was not until recently that the concept of hearing parents teaching their hearing babies sign language gained popularity (Fitzpatrick et al., 2014).

From a developmental perspective, infants communicate nonverbally before being able to communicate with their caretakers through the use of voice. Human babies do not speak before the age of 12-14 months because they lack the vocal mechanisms to do so. In contrast, babies who learn sign language can begin to communicate with their caretakers at around 8 months (Dewar, 2018). This has led to sign language use to help hearing parents communicate with their hearing babies. Reminding hearing clients that their first language was nonverbal could help them grasp the potential benefits of bringing sign language into therapy. All human babies cry and coo to communicate with their caregivers. However, parental figures can feel frustrated at the lack of additional contextual cues to further understand the children's emotional states.

The author notes that baby sign language is not a language in and of itself, but instead the practice of teaching babies, who are primarily hearing, how to communicate with their hearing parents through the use of vocabulary words in a specific sign language such as ASL. What can be problematic about baby sign language is when the benefits for signing for hearing children are highlighted, all while disregarding the fact that deaf children are being deprived of ASL even though they are the ones who need it the most (Kolb, 2018).

When baby sign language became more common, opponents were concerned with the idea that sign language might delay the onset of spoken language (Thompson et al., 2007). However, Goodwyn et al. (2000) suggest that sign training might facilitate it rather than hinder verbal language development. The researcher contends that hearing babies' ability to incorporate signs into their ability to communicate successfully is akin to hearing therapists using sign language with their hearing clients alongside verbal communication.

Konishi et al. (2018) researched toddlers' use of both words and signs in naturally occurring distressing situations in childcare settings, such as during diaper changes and separation from parents. Researchers observed 17 toddlers aged between 11 and 28 months old over 3.5 months in a childcare setting where infant signs, or baby language, were used as part of daily routines. Findings demonstrated that toddlers would communicate more frequently using signs than speech and used a more comprehensive range of self-regulatory strategies through signs than they did through speech. Furthermore, older, more verbal toddlers continued to use signs during heightened distress when they could not find their words. These findings suggest that toddlers

employ signs to implement complex and diverse emotion regulation strategies when faced with distressing daily routines. Lastly, Konishi et al. conclude that signs could provide children with the means to employ a broader range of emotional regulation strategies than speech alone can. The emotional regulation aspect of signing supports the researcher's premise that teaching clients how to sign their emotions could improve client outcomes.

Nonverbal (Visual) Communication

Historians credit Charles Darwin as creating the first deeply rooted discussion on nonverbal, or visual, communication, most notably in his 1872 book "The Expression of the Emotions in Man and Animals" (Friedman, 2019). Darwin's works launched the scientific study of (a) the biological roots of motivation and emotion, (b) variations in abilities and personality, (c) variations and deviations in social and cultural influences (Friedman, 2019). However, with the advent of psychology's focus on how individuals think and learn, Darwin's focus on the function of ability and behavior was cast aside. This focus remained absent from social psychology during the post-war era that boomed in the 1950s, with textbooks on social perception that included little information on the importance of "faces, vocal cues, posture, gesture, touch, or even emotion" (Friedman, 2019, p. 107).

The field of gesture research is divided. On the one hand, some see gesticulation to enhance communication by providing the listener with additional information. On the other hand, other researchers see gesticulation as facilitating the speaker's internal word-finding process or decrease their cognitive load (de Ruiter, 2006). De Ruiter notes the existence of the Mutually Adaptive Modalities hypothesis. This hypothesis stipulates that

people who need to speak in environments with higher levels of ambient noise tend to gesticulate more. The researcher argues that clients bring into therapy a certain amount of "mental ambient noise" and that purposefully bringing signs into the therapeutic environment could help clients and therapists focus on specific notions. Hall et al. (2019) point out that nonverbal, visual communication "is the common denominator in social life; there is hardly any domain of social experience that is not connected to it" (p. 272). Friedman (2019) explains that researchers began to study nonverbal communication as a scientific discipline over 100 years ago, before re-emerged as a modern interdisciplinary science about 50 years ago.

As for ASL being an actual language with its own grammar, Lillo-Martin and Gajewski's (2014) discuss the subject of grammar, and whether or not signed languages possess their very own. Lillo-Martin and Gajewski explain that linguists now believe that universal language characteristics exist in both spoken and signed modalities. Lillo-Martin and Gajewski discuss the differences between various language types based on space, iconicity, and the possibility for simultaneous linguistic expression. Lillo-Martin and Gajewski's conclusion is that all languages contain a grammar of their own, including ASL and other sign languages. This position underscores the value of sign language as an authentic communication modality.

The Therapeutic Alliance

The term *therapeutic alliance* refers to the alliance between the therapist and their client (Knox, 2019). Holmes (1998, as cited in Knox, 2019) posits that a strong and healthy therapeutic alliance enables clients to undergo normal developmental processes,

including processes involving self-exploration and self-awareness. For this reason, the researcher has made the therapeutic alliance a central theme of the intervention.

A Historical Perspective

Horvath (2018) contends that since ancient times the relationship between the healer and the patient has held great importance. However, it was not until Freud's in-depth and formal study of the interactions between therapists and their patients that researchers fully understood this relationship (Horvath, 2018). Starting in the 1950s, a more instrumentalist view of therapy evolved (Wolpe, 1958). At the time, behaviorists took the stance that it was up to the therapist to select and provide the appropriate strategies to improve therapy. From this view, the therapist and the client's relationship generally had little importance (Horvath, 2018). Historically speaking, then came the cognitive behaviorists, who saw the therapeutic alliance as a kind of positive breeding ground for purposeful and active engagement on the part of the client. The next perspective to gain traction was an existential philosophical position. This position held that the encounter between the therapist and the client is therapeutic in and of itself (Horvath, 2018).

Alliance, Empathy, and Genuineness

Nienhuis et al. (2018) conducted a meta-analysis of 53 studies on alliance, empathy, genuineness, and their relation to the therapeutic relationship. Forty of the studies concluded alliance/empathy relationships, eight pointed to alliance/genuineness relationships, and five reported both. Nienhuis et al. carried out random effects meta-analyses which demonstrated that the therapeutic alliance had a significant relationship to perceptions of therapist empathy, with a mean $r = 0.50$. As for the therapeutic alliance, it

was also significantly related to perceptions of the therapist's genuineness, with a mean *r* = 0.59 (Nienhuis et al., 2018). When looking more closely at the two components of empathy and genuineness, Nienhuis et al. explain that therapists might find it challenging to be empathetic but not genuine. However, a therapist's genuine response might not always be empathetic. Besides, cultural aspects might unintentionally impede a therapist from helping the therapeutic alliance grow, specifically because therapists' and clients' race, gender, and religion might influence therapists' empathy and genuineness (Nienhuis et al., 2018). Overall, Nienhuis et al. concluded that "alliance, empathy, and genuineness are integral parts of the therapeutic relationship" (Nienhuis et al., 2018, p. 593).

The Client Perspective

Simpson and Bedi (2012) researched clients' perspectives on the therapeutic alliance by using written descriptions of factors which clients believed would be helpful in developing strong alliances with their therapists. Fifty participants took part in the study and sorted through previously collected statements on the therapeutic alliance into thematically similar piles. Participants then gave each set of statements a title. Using multivariate concept mapping statistical methods, Simpson and Bedi obtained the most representative sort across all participants. The 14 resulting categories were: "Emotional Support, Ability to Relate, Sharing the Counsellor's Personal Experience, Good Boundaries, Interpersonal Demeanor, Body Language, Provided Resources and Homework, Availability, Planning and approach, Directed Process Appropriately, Attentiveness, Approachable, Nonjudgmental and Effective Listening" (Simpson & Bedi, 2012, p. 344). These findings serve as guideposts to therapists who wish to create strong therapeutic alliances with their clients.

Privileging the Client's Voice, Client Self-Disclosure

Researchers advise that instead of focusing on finding the techniques that would be best suited for their clients, therapists would do well to support the client's voice. Doing so positively relates to being able to establish a solid therapeutic alliance and treatment outcomes. Bohart and Tallman (2010) consider the client's voice the missing common factor in psychotherapy research. The Sign your Feelings intervention does this by providing clients with an additional manner of expressing themselves.

According to Sloan and Kahn (2005), who conducted a study on 22 clients, client tendencies to self-disclose personal information served to predict how relevant their in-session disclosures were to their therapy goals. In addition, disclosure tendencies predicted a decrease in symptoms as well as social-role concerns, after only three to four sessions. It would follow that interventions which increase a client's propensity to self-disclose would benefit the therapeutic alliance and client outcomes.

Therapeutic Ruptures and Repairs

Muran et al. (2009) researched the relationship between early alliance ruptures and their resolutions and process. Their study analyzed a sample of 128 therapeutic patients who were randomly assigned one of three time-limited therapies for personality disorders. Patient and therapists were asked to report rupture intensity and resolutions, or repairs, after each one of the first six sessions. Muran et al. found that lower rupture intensity and higher rupture repairs were associated with higher ratings of the alliance and session quality. Furthermore, lower rupture intensity predicted good outcomes on measures of interpersonal functioning, and higher rupture repairs served as a predictor of better retention.

Therapeutic Alliance and Client Outcomes

Flückiger et al. (2020) conducted a meta-analysis on data sets of 17 primary studies from 9 countries. These data sets comprised 5,350 participants. Firstly, Flückiger et al. calculated standardized session-by-session within-patient coefficients. They then meta-analyzed the coefficients by using random-effects models, so as to calculate omnibus effects across the 17 studies.

Flückiger et al. found that in line with previous meta-analyses on this subject, early alliance predicted posttreatment outcomes. Flückiger et al. also identified significant reciprocal within-patient effects between the alliance and symptoms within the first seven sessions. Their cross-level interactions pointed towards higher alliances and lower symptoms had a positive impact on the relationship between alliance and symptoms in the subsequent session.

Client Outcomes

In the context of psychotherapy, this term refers to the result which a client experiences upon termination. Positive client outcomes denote that client well-being post-treatment was higher than pre-treatment. Conversely, negative client outcomes mean that post-treatment well-being was higher prior to treatment than once treatment concluded (Erford et al., 2016). Flückiger et al.'s (2020) meta-analysis on data sets of 17 primary studies from 9 countries points to early alliance as a predictor of posttreatment outcomes. The Sign your Feeling intervention's major areas of focus are subjective well-being, close relationships (functioning) and social relationships (functioning).

Client Outcomes: Major Areas of Focus

Subjective Well-being

The concept of wellness is of such great importance that it is makes part of the definition of the profession of counseling: "Counseling is a professional relationship that empowers diverse individuals, families, and groups to accomplish mental health, wellness, education, and career goals" (Kaplan et al., 2014, p. 368). Toussaint and Friedman (2009) share that they conceptualize the notion of well-being very closely with that of subjective well-being, a term frequently discussed in psychology. Toussaint and Friedman explain that there are numerous ways of defining subjective well-being.

To Bradburn (1969, as cited in Toussaint & Friedman, 2009) and to Fordyce (1988, as cited in Toussaint & Friedman, 2009) well-being was the ultimate goal in life. Bradburn is frequently credited for being the first to demonstrate the relative independence of positive and negative affect within a general population sample (Toussaint & Friedman, 2009). Bradburn contributed to the literature by showing the important component of well-being lies in the critical balance between positive and negative affect (Toussaint & Friedman, 2009). Toussaint and Friedman add that combining cognitive evaluations with data on positive and negative affect can help create an effective tripartite model of well-being.

Shiah et al. (2016) invite researchers to approach the subject of subjective well-being from a multi-cultural stance. Shiah et al. explain that clinicians should conceptualize well-being as cultural, but that many therapists do not do so. Shiah et al. highlight that theirs was the first research conducted on the subject, and that few prior studies compare how various religious groups evaluate subjective well-being at any given

time. Shiah et al.'s study compared 451 Chinese adults, who were asked to complete the Chinese version of the Socially Oriented Cultural Conception of Social Well-being Scale. The breakdown of religious belief among participants was as follows: "10% Christian, 20% Buddhist, 25% Taoist, and 43% Atheists" (Shiah et al. 2016, p. 1263). As Shiah et al. predicted, study participants subscribed to a socially oriented cultural conception of subjective well-being in different manners, depending on their respective religious beliefs. The study demonstrated that Buddhists, followed by Taoists, Atheists, and, lastly, Christians, viewed and therefore achieved subjective well-being in different ways (Shiah et al., 2016).

The author's intervention reflects the importance of subjective well-being by asking the client to report how they are feeling on psychometric measurements during their first and last session. The researcher concludes that multi-cultural considerations and a client's religious stance will affect their self-reported subjective well-being measures, which are in turn a key element of client outcomes. The researcher therefore suggests that future iterations of this study require clients to disclose if they identify with any religious groups, in order to analyze any potential correlations.

Close relationships (Functioning) and Social Relationships (Functioning)

Social relationships, and particularly romantic relationships, are frequently seen as potential sources of subjective well-being (Gustavson et al., 2016). Equally, subjective well-being can affect the quality of social relationships (Ruvolo, 1998, as cited in Gustavson et al., 2016). Therefore, the concepts of subjective well-being and close romantic relationships appear to relate to each other in an interconnected manner. Researchers have linked the quality of a person's relationships to both the affective

component of subjective well-being and to life satisfaction (Gustavson et al., 2016). Diener and Diener McGavran (2008, as cited in Gustavson et al., 2016) explain that intimate relationships are closely linked to life satisfaction. One example is that married people report higher levels of life satisfaction than do unmarried and divorced persons (Gustavson et al., 2016).

Neyer and Lehnart (2006, as cited in Gustavson et al., 2016) describe the importance of close, intimate relationships, noting that they may be among the most important aspects of one's life. As a consequence, these close relationships substantially affect life satisfaction. Gustavson et al. clarify that life satisfaction can affect a person's evaluation, and the subjective quality of relationships.

Dozois (2021) explains that social relationship functioning is imperative for optimal mental and physical well-being. Dozois argues that this is because interpersonal connectedness, and how it is that we think about ourselves as social beings, make considerable contributions to our mental and physical well-being. The researcher's study gives great weight to the therapeutic alliance and as a result, the author posits that the Sign your Feelings intervention will positively affect social relationship functioning, a key element of improved client outcomes.

Other Domains Measured by the CORE-10 Instrument

The other domains measured by the CORE-10 instrument, such as anxiety, depression, physical, trauma, risk to self, general functioning, and risk to others, may change through indirect or holistic means. Craske and Stein (2016) point out that developmentally normative, or stress-induced transient anxiety, is marked by a persistent and out of proportion reaction to a threat which impairs daily functioning. Craske and

Stein's note that anxiety often co-occurs with major depression, substance-use and alcohol-use disorders, and personality disorders. If left untreated, anxiety can tend to recur chronically (Craske & Stein, 2016). Dean (2016) cites statistics by the Royal College of Psychiatrists in the UK and their review of 48 international studies on anxiety. Dean explains that anxiety disorders, including social anxiety disorder, panic disorder and post-traumatic stress disorder affect approximately one in ten individuals in the population, with women being nearly twice as likely to experience anxiety as men.

Malhi and Mann (2018) note that depression is a common illness and that major depression can severely limit psychosocial functioning and dimish a client's quality of life. Malhi and Mann (2018, p. 2299) caution that in 2008 the World Health Organization "ranked major depression as the third cause of burden of disease worldwide and projected that the disease will rank first by 2030." According to Malhi and Mann, the detection, diagnosis and management of depression often poses a challenge to therapists, due to its unpredictable course and prognosis, its various presentations, and the various ways in which it can respond to treatment. The researcher analyzed the data from each one of the CORE-10 items in order to investigate whether the intervention has a statistically significant effect on any specific element of a client's well-being. These results are discussed in Chapter 4.

Mental Health America (MHA) is the leading community-based nonprofit organization dedicated to addressing the needs of individuals living with mental illness, and promoting overall improved mental health for all (MHA, 2021). In their 2021 report, they discuss prevalence rates of mental illness in the United States. MHA reported that in 2021, 19% of adults were experiencing a mental illness, which is equivalent to over 47

million Americans. Risk of harm rates reported by the MHA caution that in large part due to the global pandemic, the percentage of adults who report serious thoughts of suicide was at 4.34%, meaning that the estimated number of adults with serious suicidal thoughts surpassed 10.7 million. This represented an increase of over 460,000 from the previous year's data set (MHA, 2021).

Potential Secondary Outcomes of the Intervention

The researcher's literature review on client outcomes above clarified their importance, specifically related to clients' subjective well-being, close relationship functioning, and social relationship functioning. In addition to these outcomes, the researcher posits that the intervention could lead to potential secondary outcomes such as: improved emotional expression, enhanced ability to overcome shame, facilitated embodiment of emotion, engagement of the enactment effect, heightened ability to interpret facial expression, ameliorated clarity of communication, enhanced brain plasticity, and increased empathy levels, as explained below. This said, the researcher did not include any of these elements as outcomes in the study, and therefore has no way of knowing of measuring potential improvements.

Improved Emotional Expression and Emotional Disclosure

Suslow et al. (2000) explain the importance of emotional expression by describing the challenges of clients affected by alexithymia, who experience a diminished ability to put their emotions into words. Dodge and Garber (1991, as cited in da Silva et al., 2016) stipulate three interrelated systems involved in emotional regulation and expression: neurological, motor-expressive, and cognitive-experiential. They posit that alexithymia is possibly associated with low levels of emotional response and low physiological response

levels. Therapists who are not knowledgeable about alexithymia might incorrectly surmise that their clients keep their emotions from them when clients keep the emotions from themselves to self-protect. Despite research on this subject, there is still controversy about the etiology and evolution of alexithymia (de Tychey et al., 2010). Green (1983) noted that a client's early negative interpersonal experiences could negatively affect thoughts and emotions, resulting in feelings of emptiness.

Sowden et al. (2016) state that recent research points towards alexithymia resulting from a generalized impairment in a person's ability to perceive all body signals. This is named "interoception." Researchers have linked interoceptive ability and accuracy to a host of deficits in social cognition. It also correlates with an improved ability to inhibit the natural and automatic tendency to imitate others' actions. Sowden et al. explain that a healthy awareness of interoceptive cues is considered crucial for the awareness of one's body and the representation of oneself as a separate entity from others.

One might conclude that the act of not connecting with one's emotions requires an inhibition of one's ability to imitate or mimic others. If that were the case, it would follow that an intervention destined to override this inhibition (by "forcing" the client to pay attention to the therapist's hand movements, facial expressions, body language, and words, thereby connecting more with the therapist) might improve the client's ability to get in touch with their feelings, and as a result, increase subjective well-being and general functioning. The researcher posits that clients with alexithymia and others who have trouble disclosing their emotions might see improved client outcomes through improving their ability to override their inhibitions through a bypass of the more commonly used verbal pathways.

Enhanced Ability to Overcome Shame

The researcher Brené Brown, well known for her work on the subject of shame, points out that Helen Block Lewis, who analyzed hundreds of psychotherapy sessions for her book Shame and Guilt in Neurosis, "identified shame as the dominant emotion experienced by clients, exceeding anger, fear, grief, and anxiety" (Brown, 2006, p. 43). Brown explains that "although shame is one of the most primitive and universal of human emotions, it is often considered taboo among researchers, practitioners, and clients" (p. 43). Van Vliet (2008) explains that shame is a genetically prewired feeling that enhances our species' survival from a psycho-evolutionary viewpoint. When a person perceives a loss of social attractiveness, they feel shame. Shame alerts people to threats to their status and, therefore, to a potential decrease in their power in society. Although Van Vliet clarifies out that shame serves an adaptive function, it can also lead to low self-disclosure and therefore decreased emotional processing in therapy. Van Vliet notes that feelings can create specific, toxic, psychobiological changes due to the body's belief that it needs to self-preserve. Feelings of shame can also increase the body's cortisol level, mobilizing the person for action to escape from a threat. Additionally, shame also triggers higher pro-inflammatory cytokine activity, promoting withdrawal from social situations and reduced engagement behaviors (Dickerson & Kemeney, 2004). It would therefore follow that an intervention which promotes decreasing feelings of shame through increased self disclosure would positively impact social relationship functioning.

Ketelaar et al. (2015) explain that shame, guilt, and pride are considered moral emotions and result from a person's evaluation of their behavior as either right or wrong. Ketelaar et al. make a distinction between shame and guilt, noting that shame is

associated with escape-related behavior, and guilt is associated more frequently with reparative behavior. Ketelaar et al. note that the feeling of pride felt when an individual accomplishes something notable is evolutionary use because it makes the person strive to repeat or sustain the behavior that led up to the emotion.

Ketelaar et al. state that this capacity to experience moral emotions is not only necessary but a significant driving force behind what is considered socially appropriate behavior. In other words, these particular feelings have evolutionary merit. Ketelaar et al. set out to study the expression of moral emotions and social behavior in young children. Participants consisted of 184 normal-hearing children and 60 children with cochlear implants.

Ketelaar et al.'s research concluded that improved emotional vocabulary in both groups of children in their study was related to improved social functioning. This further supports the argument in favor of improving a client's emotional vocabulary. The researcher posits that the Sign your Feelings intervention could help clients overcome feelings of shame which might make them hesitate to disclose feelings, and as a result, improve client outcomes. This would occur thanks to the therapist openly addressing and normalizing the issue of shame in the first session. Additionally, this intervention affords clients a pre-agreed upon way of signaling to the therapist that they feel shame, without having to verbalize it.

Facilitated Embodiment of Emotion

Cavicchio et al.'s (2018) research into emotions examines whether or not complex arrays of face and body actions are discrete constellations reflecting categories of emotions or whether they are compositional, meaning comprised of small components.

To this end, Cavicchio et al. conducted a study of participants looking at pictures of athletes who had either just won or lost a competition. Cavicchio et al. matched participants' judgments with specific, minute coding of the athletes' faces and bodies and found evidence for compositionality. The researchers concluded that the physical expression of intense and unfiltered emotion has compositional properties. These properties could potentially point to an ancient scaffolding upon which, some millions of years later, the abstract compositional system of human language was then built (Cavicchio et al., 2018).

Cavicchio et al. further explain that emotional states do not act independently but systemically relate. In this approach, most affect variables occur in three dimensions: valence, arousal, potency, or dominance (Cavicchio et al., 2018). The valence aspect speaks to how positive or negative a feeling is and is set on a scale from extremely unpleasant to extremely pleasant. Secondly, the arousal aspect describes how apathetic or excited the person is, meaning that it ranges from pure boredom to frantic excitement. The potency or dominance aspect refers to the degree of power expressed. Furthermore, advances in highly specific microanalytical studies of audiovisual recordings demonstrate that humans produce speech and the accompanying bodily movement simultaneously. Their simultaneous occurrence means that scientists should consider them two separate parts of a single process (Kendon, 1997).

Traumatic memories are often expressed somatically by clients, and these interventions might also relieve the body's unconscious desire to express trauma through physical means (Zana-Sterenfeld et al., 2019). Languages are ever-evolving organisms and as such give rise to the question of why certain expressions die out, and others

survive. For example, one could describe a not-so-friendly person as unfriendly or as cold. Akpinar and Berger (2015) researched how senses shape language by studying data from 5 million books published over 200 years. They discovered that people employ sensory metaphors (e.g., a cold person or a hot date) are employed in greater frequency than their semantic equivalence (e.g., an unfriendly person or an attractive date). Given that metaphors naturally tend to include physical experiences, therapists can use them to help clients create greater self-awareness of what they feel when they experience certain emotions.

Zana-Sterenfeld et al. (2019) point out that studies tend to focus on clients' verbal expressions while recounting trauma, and less so on their nonverbal responses. Zana-Sterenfeld et al. contend that traumatic memories are "encoded through sensation and live images in a psychobiological nonverbal mechanism" (p. 402). Therefore, clinicians could find it useful to employ a therapeutic intervention which helps clients get in touch with their traumatic feelings through the use of sign language.

Devereaux (2017) explains neuroception, whereby the neural circuits located in and near the temporal cortex have the capacity to detect the intentionality of biological movement, with the goal of interpreting movement as either safe or unsafe. This concept is part of Polyvagal theory and includes body movements, gestures, facial expressions, and vocalizations (Devereaux, 2017). Neuroception points to the importance the brain gives movement and its intentionality. Just as dance and movement therapy focus on the physiology of movement and expression, using signs in the Sign your Feelings intervention requires intentionality and the intention to communicate clearly. The author proposes that expressing themselves with the help of signs will increase clients' ability to

embody their feelings, and, as a result, improve client outcomes, specifically subjective well-being, close relationship (functioning) and social relationship (functioning). As gesticulation is such an integral and universal component of communication between hearing persons, the researcher argues that using one's hands to purposefully create signs while talking, even if one is not hard of hearing, would be a logical step towards enhanced expressiveness.

Engagement of the Enactment Effect

Macedonia and Klimesch (2014) conducted a longitudinal study lasting 14 months which tested the use of signing in a classroom. Macedonia and Klimesch wished to discover whether using sign language signs during foreign language learning could improve memory retention of those words. The researchers found that using signs significantly enhanced vocabulary learning over time (Macedonia & Klimesch, 2014). This longitudinal study involved 29 German-speaking participants. Macedonia and Klimesh's research on foreign language learning and the brain cites not only the interconnectedness of gesture and speech, which exists in all cultures, but the fact that gestures support memory for verbal information in both native and foreign language (Zimmer, 2001, as cited in Macedonia & Klimesh, 2014).

Engelkamp and Krumnacker (1980, as cited in Macedonia & Klimesch, 2014) explain that the effect of gestures on verbal memory is named the enactment effect. Cohen (1981, as cited in Macedonia & Klimesch, 2014) specifies that merely watching someone signing a word does not have that same effect on memory as the person signing the word themselves. Research involving various populations, including university students, children, and elderly persons, has demonstrated the enactment effect's

robustness (Cook, et al., 2010, as cited in Macedonia & Klimesch, 2014). The benefits of combining signs and words are also supported by Cook et al. (2010, as cited in Macedonia & Klimesch, 2014), who explain that recent studies confirm that verbal information emitted simultaneously as physical gestures further facilitates memory retention.

Research by Cook, et al. (2010, as cited in Macedonia & Klimesch, 2014) is in line with the author's Sign Your Feelings intervention, whereby therapists will have their clients make the actual sign while verbalizing the corresponding word. The researcher proposes that having clients remember their use of emotion-laden words during therapy due to the enactment effect will improve client's subjective well-being as they would have a higher propensity to remember the work they did in therapy and therefore have a higher chance of applying it to their everyday lives once the session was over.

Heightened Ability to Interpret Facial Expression

Ihme et al. (2014) point out that understanding another person's emotional expression is thought to necessitate the other person's facial expressions' mimicry. It follows that neural assemblies occur when a person is experiencing and expressing emotion and interprets another person's facial emotions (Ihme et al., 2014). They explain that interpreting facial expressions is a multifaceted endeavor that requires recruiting numerous cortical and subcortical circuits from various regions of the brain. This interpretation calls into play (a) the visual system in order to process visual information of the face, (b) the motor system for the covert physical simulation of the facial movement, and (c) somatosensory areas and limbic or frontal regions for reenacting and feeling the corresponding emotions (Ihme et al., 2014). The Sign Your Feelings

intervention presupposes that the client will be interpreting their therapist's facial expressions while the therapist is making the various signs.

Individuals with alexithymia display deficits in recognizing emotional facial expressions and reducing brain responsivity to emotional stimuli (Rosenberg et al., 2020). The researcher posits that if difficulty in getting in touch with one's emotions creates challenges in reading facial expressions, a therapeutic intervention that addresses these two factors would be useful. The Sign Your Feelings intervention aims to encourage clients to (a) get in touch with what they are feeling emotionally and physiologically, and (b) prime them to look at their therapist's face more instead of relying solely on the therapist's words. The author theorizes that bringing sign language into therapy will require both clients and therapists to pay additional attention to each other's facial expressions and that doing so will improve the therapeutic alliance as well as client outcomes.

Denmark et al. (2019) researched the role of emotional expression in sign language through a study examining facial expressions of typically developing D/deaf children and D/deaf children who presented with an autism spectrum disorder. Facial actions provide sign language prosody, therefore functioning much like intonation does in spoken language. Just as those who communicate verbally have a wide range of ways to create patterns of stress, rhythm, and intonation, those who sign have an extensive range of physical and facial means at their disposal and the signs produced by their hands (Dachovsky & Sandler, 2009).

Stoll et al. (2018) contend that using sign language as a form of communication, whether D/deaf or non-D/deaf, requires specific attention. The researcher believes that

this added amount of attentiveness required by the hearing therapist and the hearing client will translate into added purpose on the therapist's part and added engagement on the client's part. The author posits that this would positively affect the therapeutic relationship, as the client would pay more attention to each other in therapy.

Furthermore, a study by Pyers and Emmorey (2008, p. 678) found that "when speaking English, bimodal bilinguals produce more ASL-appropriate facial expressions (e.g., raised eyebrows to mark conditional clauses) than monolingual English speakers, and they synchronized their facial expressions with the English clause onset." This correlation points to an evident positive influence of ASL on the original English language abilities of the client (Pyers & Emmorey, 2008). The author argues that therapists who learn sign language will see improvements in their expressiveness when speaking their native tongue with other clients, and as a result, see improved client outcomes and therapeutic alliance improvements with them as well.

The Impact of Emotional Expression

Even though researchers have long considered emotions as crucial to the psychotherapeutic process, only recently have they empirically assessed their impact. Peluso and Freund (2018) applied two meta-analyses to explore the association between therapist expression of emotion and psychotherapeutic outcomes, and the association between client expression of emotion and psychotherapeutic outcomes. In total, Peluso and Freund examined 66 studies (13 of them for the therapist meta-analysis and 43 for the client meta-analysis). They found a significant medium effect size between a therapist's emotional expression and outcomes ($d = 0.56$) and a significant medium-to-large effect size between a client's emotional expression and outcomes ($d = 0.85$).

Additionally, Peluso and Freund found that third-party rating of emotional expression acted as a significant moderator of outcomes.

Clarity of Communication

For the most part, research on sign language concentrates on the interpersonal aspect of communication with others. However, a growing number of studies focus on the gestures which humans make while alone. Examples of this include the gesticulations made with one's fingers while counting. These gestures tend to be less grandiose, meaning requiring a small degree of movement. Zurina and Williams (2011) saw these gestures as a kind of attenuation parallel with the necessary reduced sound for inner speech than speaking and gesturing when communicating with others. The study of these private gestures has helped researchers understand how the mind deciphers and decodes mathematics (Zurina & Williams, 2011). As far as their relevance to this study, private gesturing points to the brain's strong desire to use one's hands, even if nobody else is present.

Observers of babies' development have witnessed that they understand signs directed towards them, but they later employ these signs themselves to communicate with others through the modeling process. They will also use these same signs privately, fulfilling a self-regulatory function (Rodriguez & Palacios, 2007). One of the premises of this study is that clients who learn signs with their therapist will use them during their time out of session with the purpose of self-expression and self-regulation.

To varying degrees, everyone gesticulates while they speak. The unconscious gesticulation already serves as an informal, naturally occurring mode of nonverbal communication for hearing persons. Casey et al. (2012) established a link between

learning sign language and increased gesticulation use. The researchers compared gestures before and after an intensive 1-year American Sign Language (ASL) course. The data they collected demonstrated that after the course, individuals who had learned ASL increased hand usage frequency when speaking. Researchers also included students who spent 1 year studying a Romance language such as French, Spanish, Italian, Portuguese, or Romanian. Seventy-five percent of the ASL learners reported that they gestured more after the ASL instruction, whereas only 14% of the Romance language learners concluded that they gestured more than they did before (Casey et al., 2012). The author advances that the Sign Your Feelings intervention might have the added benefit of making clients more expressive in their everyday communication.

Fay et al. (2018) set out to find possible commonalities in human communication, despite the rich diversity found in 6,000–8,000 languages worldwide. Fay et al. used an experimental-semiotic communication game to study 108 English and Japanese speakers, found four universal principles: (a) the usage of signs to kick-start communication, (b) use of preventative measure to address and prevent breakdowns in communication, (c) simplification of communication behavior over continued social interactions, (d) tendency to align communication behavior between parties throughout repeated social interactions. The Sign Your Feelings Intervention aligns with all four universal communication principles cited by Fay et al. above. As a result, the author argues that using sign language in therapy between hearing therapists and hearing clients is a logical step towards the optimization of communication between the two parties, and as a result not only an improved therapeutic alliance but improved client outcomes.

Enhanced Brain Plasticity

As Stokoe (1976) pointed out, languages are systems in and of themselves. As anyone who wishes to learn a new language can attest to, becoming fluent requires the learner to create new language systems– hence the plasticity which scientists speak of when referring to the benefits of language learning on the brain. Banaszkiewicz et al. (2021) researched sign language acquisition in hearing adults who took an 8-month long course and underwent neuroimaging five times over the study. They found that major changes occurred in participants' activity patterns after only 3 months of sign language learning, as indicated by heightened activation in the modality-independent perisylvian language network, along with increased activation of the modality-dependent parieto-occipital, motion-sensitive and visiospatial regions. Additionally, Banaszkiewicz et al. found that participants' gray matter volume increase in their left inferior frontal gyrus, with levels peaking at the end of learning sign language. Banaszkiewicz et al.'s findings demonstrate the complexity of various aspects of brain reorganization and plasticity associated with learning a new language in a different sensory modality.

Additionally, individuals in therapy may reap additional benefits from having the opportunity to learn sign language. Daniels (1997) described a study conducted in British schools whereby hearing children learned British Sign Language. As a result, teachers noticed that these lessons helped hearing children improve their reading skills. This amelioration was particularly true of children who were less able readers (Daniels, 1997). In this same study, it became clear that studying sign language helped hearing children with their ability to listen, look, and concentrate (Daniels, 1997).

Orlansky and Bonvillian (1985, as cited in Daniels, 1997) cites research whereby 13 hearing children of D/deaf parents participated in an 18-month longitudinal study in which they simultaneously learned ASL and English. The infants underwent individual monitoring from birth, with caregivers noting each new word acquired daily. The subjects' language attainment was significantly accelerated compared with the language development of hearing children of hearing parents, who were used as a control and were only taught spoken English. Given that the Sign Your Feelings intervention requires clients to learn sign language and that Banaszkiewicz et al. (2021) found that this leads to brain plasticity, the researcher posits that the intervention could elicit improved client outcomes, such as subjective well-being and general functioning.

Increased Empathy Levels

Gallup and Platek (2002, as cited in Goerlich-Dobre et al., 2015) explain that emotional self-awareness is a fundamental requirement for empathy. To be empathetic, individuals need to access their feelings before they can identify others' feelings. Goerlich-Dobre et al. (2015) explain that alexithymic individuals, due to their difficulty to access their feelings, have a propensity to lack imaginative abilities and tend to employ an externally oriented thinking style, with little introspection or self-awareness.

Goerlich-Dobre et al. (2015) conducted a structural magnetic resonance imaging study to examine the overlap and differences between alexithymia and empathy's cognitive and affective dimensions. Goerlich-Dobre et al. concluded that the left amygdala was determined to act as a substrate to alexithymia and empathy. Eres et al. (2015) conducted an MRI study of 176 participants and found that brain gray matter density differences were associated with distinct components of empathy. Specifically,

higher scores on affective empathy were associated with greater gray matter density in the brain's insula cortex, and higher scores of cognitive empathy were associated with the brain's greater gray matter density.

Goerlich-Dobre et al.'s (2015) research concludes that individuals who have trouble getting in touch with their feelings have lower levels of empathy. Eres et al. (2015) note that increased levels of empathy are associated with higher levels of gray matter density. Additionally, they note that higher levels of empathy logically benefit interpersonal relationships and general well-being. Given this, the researcher posits that the Sign your Feelings intervention has the potential to not only improve client outcomes such as close relationship functioning and social relationship functioning, but the therapeutic alliance as well.

The Sign your Feelings Intervention

The purpose of this study is to validate the researcher's new intervention, entitled Sign your Feelings. The author developed the modality in view of the importance of strong therapeutic alliances, the value of improved client outcomes, the significance of emotional disclosure in therapy, and data illustrating the benefits of communicating with sign language. Cowen and Keltner (2017) conducted research on emotions at the Berkeley Social Interaction Laboratory at the University of California at Berkeley's Department of Psychology. Cowen and Keltner analyzed people's emotional states, by asking participants to self-report their emotional reactions to short videos. Cowen and Keltner recruited study participants through Amazon's Mechanical Turk, a crowdsourcing marketplace used for survey participation and the virtual completion of tasks. Participants

were divided into three groups, each carrying out a different kind of report of emotional experience following a random sampling of 2,185 short videos.

The first group of participants provided free response interpretations of their emotional responses to 30 videos each. This was to ascertain which categories of emotion would spontaneously arise in people's unconstrained subjective experience (Russell, 1994, as cited in Cowen & Keltner, 2017). The second group of participants rated 30 videos in terms of the degree in which they made them experience 34 emotion categories of interest. This allowed Cowen and Keltner to fine-tune the structure of the reported emotional states which corresponded to the set of categories. The third and final group of participants rated 12 videos in terms of their placement along 14 different measured scales of affected dimensions of emotional experience (Cowen & Keltner, 2017). Cowen and Keltner used 14 scales: approach, arousal, attention, certainty, commitment, control, dominance, effort, fairness, identity, obstruction, safety, upswing, and valence.

In total, Cowen and Keltner yielded a total of 324,066 individual judgments: 27,660 multiple choice categorical judgments by group 1 participants, 19,710 free-response judgments by group 2 participants, and 276,696 nine-point dimensional judgments by group 3 participants. They found that the videos reliably elicited 27 distinct varieties of reported emotional experiences: admiration, adoration, aesthetic appreciation, amusement, anger, anxiety, awe, awkwardness, boredom, calmness, confusion, craving, disgust, empathic pain, entrancement, excitement, fear, horror, interest, joy, nostalgia, relief, romance, sadness, satisfaction, sexual desire, and surprise. These are the 27 emotion signs the researcher included in the Sign your Feelings intervention. For a complete list of signs included in the study, the reader can refer to Appendix A, and for

an explanation of how therapists should teach a client a sign, Appendix B. For the step-by-step intervention protocol the reader can refer to Appendix C, and for a transcript of demonstration videos, Appendix D.

Summary

Despite the knowledge that nonverbal communication is an integral part of how humans relate to each other, "talk therapy" remains primarily focused on the context of verbal communication, since at its core, psychotherapy requires communication between client and therapist which is verbal (Fenger-Grøn et al., 2018). This chapter included literature reviews on four subjects: sign language, the therapeutic alliance, client outcomes, and the Sign your Feelings intervention. Research cited above points to possible correlations between the Sign your Feelings intervention, the therapeutic alliance, and client outcomes. The researcher did not find any pre-existing literature on (a) teaching sign language to improve the therapeutic relationship and client outcomes, nor (b) interventions where clinicians incorporated ASL signs into treatment for use among hearing therapists and hearing clients. This study has the potential to fill a gap in the literature and provide new, creative, and connecting means for hearing people communicate within therapeutic contexts. In the next chapter, the author will delve into the subject of the study's methods.

CHAPTER 3. METHODS

In the first two chapters, the author explained the central tenets of the argument that bringing sign language into therapy would improve the therapeutic alliance and client outcomes. The author cited research on sign language's value to communicate and the importance of self-disclosure in therapeutic contexts. The author's research questions for this study are: (a) will the gains from pre- to post SRS scores measuring the therapeutic alliance of clients and therapists be statistically different between clients receiving the Sign your Feelings intervention and clients receiving TAU? (b) will the gains from pre- to post CORE-10 scores measuring client outcomes be statistically different between clients receiving the Sign your Feelings intervention and clients receiving TAU? (c) is there a significant negative correlation between the post-SRS scores measuring the therapeutic alliance between therapists and clients, and the post-CORE-10 scores measuring client outcomes of all clients participating in the study?

In Chapter 3, the researcher delineates the study's methods. The author stated the research questions in the previous paragraph, and the hypotheses, and the variables are described in this chapter. The researcher will explain the procedures for measure and tabulate results. Finally, this chapter will include the study's design, participants, instruments, procedures, data collection methods, and data analysis.

Procedures

The researcher submitted all the necessary applications for Internal Review Board (IRB) permission (see Appendix E). The researcher secured IRB approval before any

participant recruitment and before data collection commenced. The researcher aimed at overcoming the challenges inherent to participant recruitment and training by (a) creating a bespoke website (see Appendix F), and recruiting participants through professional and academic contacts created over the course of the previous 5 years.

However, once recruitment commenced, it became evident to the researcher that it would be challenging to find therapists to administer the intervention to their clients, given the time and commitment required from each therapist. The author then undertook a number of steps. Firstly, the author applied for and received authorization from the university's IRB to compensate therapists for their time, at the rate of 75 dollars per client. Secondly, the researcher created a Facebook page and used this platform to recruit therapists, as illustrated in Appendix G and Appendix H.

The researcher employed a convenience sample of therapists (i.e., non-random) to provide the intervention. To be eligible for this study, therapists had to (a) have completed a Master's Degree in Mental Health Counseling or Marriage and Family Therapy; (b) either be a registered intern or have completed licensure; (c) be actively seeing clients regularly; (d) be able to enroll at least two clients into the study; (e) either be a native English speaker or can demonstrate sufficient professional fluency in English so that their fluency or accent is not a deterrent to communication with their client; (f) currently be practicing in the United States of America; and (g) provide participating clients either four in-person therapy sessions or four telehealth services over the course of the study. The researcher asked therapists wishing to participate in the study if they have prior knowledge of sign language. If therapists have more than a passing knowledge they

were excluded from the study, as this would have presented a confound. To protect the identities of the clients, the author deidentified them through client survey codes.

The researcher asked participating therapists to enter an even number of clients in the study (e.g. 2, 4, or 6). The author then used a random number generator to randomly place half of the participating clients in the intervention group, and half in the TAU (control) group. For example: therapists entering two clients would see one of their clients randomly allocated to the intervention group and one client allocated to the TAU group. During the study, when therapists worked with their intervention group clients, they incorporate the Sign your Feelings intervention as part of therapeutic treatment. When therapists worked with their TAU clients, they provided the treatment in the manner they had been prior to the commencement of the study.

Asking therapists to provide equal numbers of clients for the intervention and TAU groups has numerous advantages: (a) ensuring that clients in the intervention group receive therapy from the same caliber of therapists as clients in the control group; (b) reducing the number of therapists required for the study, as therapists enter two, for or six clients as opposed to only one; (c) ensuring that there are an equal number of clients receiving the intervention as clients who receive TAU; and (d) being able to ensure that all therapists have a chance to carry out the intervention with at least one client and that none of them will do the training for naught.

Participants

Sample Size

Faul et al. (2007) explain that in order to calculate the number of participants required for this study, the researcher should use the G*Power 3.1 program (Erdfelder et

al., 1996). Firstly, research questions 1 and 2 were considered. Research question 1 is: Will the gains from pre- to post SRS scores measuring the therapeutic alliance of clients and therapists be statistically different between clients receiving the Sign your Feelings intervention and clients receiving TAU? Research question 2 is: Will the gains from pre- to post CORE-10 scores measuring client outcomes be statistically different between clients receiving the Sign your Feelings intervention and clients receiving TAU?

In order to answer research questions 1 and 2, provided the data was normally distributed, the researcher would have to calculate an ANOVA, with fixed effects, omnibus, one-way. To calculate the number of participants required for the ANOVA, the researcher ran an a priori power analysis, computing the required sample size, given α, power and effect size on the G*Power 3.1 program (Erdfelder et al., 1996). The researcher utilized the following input parameters: effect size f: 0.4, α error probability: 0.05, power (1- β error probability): 0.8, number of groups: 2. Given these parameters, the G*Power program (Erdfelder et al., 1996) returned the following output parameters: a noncentrality parameter λ of of 8.3200000, a critical F of 4.323097, a numerator df of 1, a denominator df of 50, a total sample size of 52, and an actual power of 0.8074866.

The third research question is: Is there a significant negative correlation between the post-SRS scores measuring the therapeutic alliance between therapists and clients, and the post-CORE-10 scores measuring client outcomes of all clients participating in the study? To calculate the sample size for this question the researcher used the G*Power 3.1 program (Erdfelder et al., 1996) and selected the linear multiple regression analysis, with a fixed model, r^2 increase option. The researcher calculated an a priori power analysis, meaning a computation of required sample size, given α, power and effect size. The

researcher utilized the following input parameters: effect size f of 0.15, an α error probability of 0.05, a power (1- β error probability) of 0.8, number of tested predictors 2 (the SRS gains and the CORE-10 gains), total number of predictors: 2 (the SRS gains and the CORE-10 gains). Given those parameters, the G*Power 3.1 application (Erdfelder et al., 1996) returned the following output parameters: a noncentrality parameter λ: 10.2000000, a critical F or 3.1381419, a numerator df of 2, a denominator df of 65, a total sample size of 68 and an actual power of 0.8044183. Given that three research questions cited above will require analyses of 52 to answer questions 1 and 2, and 68 participants to answer research question 3, the researcher determined that the minimum sample size required to cover all three research questions would be 68. The researcher asked the IRB for permission to recruit 82 participants, in order to account for a potential 20% attrition rate.

Inclusion and Exclusion Criteria

Inclusion Criteria for Clients

Clients currently in therapy acted as participants in this study. Clients could participate in the study if at the commencement of the study they would have already attended at least three sessions with their therapist, to reduce the number of clients who would have dropped out of therapy for reasons other than the intervention. Clients were required to speak English sufficiently well so that their therapist would not have trouble understanding them. Clients had to commit to attend all four sessions of the study, although the researcher understood that some attrition could occur. Clients had to provide signed consent.

Exclusion Criteria for Clients

Exclusion criteria for clients were (a) if the client was physically unable to carry out the gestures of the intervention due to any physical limitations; (b) if the client had any cognitive limitations (such as memory problems) which might make them either unable to learn and remember the gestures in the intervention; (c) if the client was experiencing severe mental illnesses or severe physical symptoms which would hinder their ability to participate in the study; and (d) if the client was fluent in a sign language, as this would present a confound.

Training

Therapists participating in the study underwent training on the study's website, www.signyourfeelings.com. After they learned the signs, therapists had to take a quiz to prove that they were ready to administer the Sign your Feelings intervention. The researcher allowed therapists to take the training quizzes several times until they successfully passed. The researcher also created cheat sheets and sessions checklists to help therapists administer the intervention according to protocol (see Appendix I).

Intervention Protocol

Therapists participating in the study continue to work with the client on their presenting problems both in the intervention and TAU groups. The author designed the intervention so that it can address whatever problems the client is currently experiencing. Therapists learn a total of 36 signs. The first nine signs help the therapist explain the therapeutic alliance and the importance of catching alliance ruptures and making therapeutic repairs.

The researcher contextualizes an improvement in the therapeutic alliance as a way to reduce client dropout, a common problem in psychotherapy. The second category of signs in the Sign your Feelings intervention represents 27 emotions. The researcher posits that learning and practicing these signs will improve facilitate client emotional disclosure, further cement the therapeutic alliance, and facilitate the communication between the client and counselor.

The therapeutic merit of these interactions lies in the opportunity for the therapist to incorporate subjects which further advance the therapeutic work which they have been working on with the client up until that point. The therapist teaching the client a sign representing an emotion serves as an opportunity (a) for the therapist and client to discuss the emotion as it pertains to the client's past, present and future therapeutic work (b) for the client to embody the feeling as they express a sentence which includes the emotion.

For example, when a therapist teaches their client the sign for "anxious," they will prompt their client to share a sentence which include the word "anxious," by asking them: "So, tell me, when was the last time you felt anxious?" The client might then answer, "I felt anxious when my boss yelled at me." While sharing this information, the client will make the sign for the word "anxious." In this way, the client will not only affect label (determining the name of the emotion which they experienced) but will reenact the emotion by expressing anxiety physically and facially while sharing the information with the therapist. This intervention allows for sufficient flexibility to bring in whatever issues the therapist and client are currently working on. Furthermore, the intervention is designed to work alongside any theoretical orientation, and therapists can incorporate it into therapy at any specific point in the therapeutic process.

Group 1 (Sign your Feelings Intervention Group)

Session 1

At the beginning of session 1, therapists ask their clients to fill in the SRS and CORE-10 measures. The therapist then introduces the study, briefly explains what the therapeutic alliance is, and briefly explains to the client that they would be learning some signs. In this first session the therapist then teaches the client following nine therapeutic alliance signs: therapeutic alliance, therapeutic rupture, therapeutic repair, sorry, resistance, uneasy, frustrated, shame and empathy. As the therapist teaches the client these signs, the therapist incorporates discussions about their therapeutic alliance.

Session 2

The therapist reviews therapeutic alliance signs the client learned in Session 1. The therapist then teaches the client nine new ones: enthusiasm, anxiety, confusion, fear, happiness, calm, anger, disgust, and sadness. The therapist incorporates the learning of the signs with (a) discussions about the client's experiences with these nine emotions and (b) related past issues, current presenting problems, and the client's ongoing treatment.

Session 3

The therapist reviews therapeutic alliance signs the client learned in Session 1. The therapist then teaches the client nine new ones: surprise, admiration, interest, adoration, fascination, appreciation of beauty, craving, amusement, and satisfaction. The therapist will incorporate the learning of the signs with (a) discussions about the client's experiences with these nine emotions and (b) related past issues, current presenting problems, and the client's ongoing therapeutic treatment.

Session 4

The therapist reviews therapeutic alliance signs the client learned in Session 1. The therapist then teaches the client nine new signs: awe, awkwardness, boredom, compassion, horror, nostalgia, relief, romance, and sexual desire. The therapist will incorporate the learning of the signs with (a) discussions about the client's experiences with these nine emotions and (b) related past issues, current presenting problems, and the client's ongoing therapeutic treatment. At the end of Session 4, therapists ask clients to fill in the CORE-10 and SRS measures.

Group 2 (TAU)

Session 1

At the beginning of Session 1, therapists ask their clients to fill in the SRS and CORE-10 measures. The therapist then proceeds to conducting the therapy session as they would normally, meaning in whatever treatment modality or centering around whichever theoretical orientation they subscribe to.

Session 2

The therapist proceeds to conducting the therapy session as they would normally, meaning in whatever treatment modality or centering around whichever theoretical orientation they subscribe to.

Session 3

The therapist proceeds to conducting the therapy session as they would normally, meaning in whatever treatment modality or centering around whichever theoretical orientation they subscribe to.

Session 4

The therapist proceeds to conducting the therapy session as they would normally, meaning in whatever treatment modality or centering around whichever theoretical orientation they subscribe to. At the end of Session 4, therapists ask clients to fill in the CORE-10 and SRS measures.

Data Collection

Teletherapy clients

Measurements take place at the start of Session 1 and the end of Session 4. The therapist will send the client a link to the online SRS instrument page, which the client fills out immediately. The therapist then sends the client another link to the CORE-10 instrument page, which the client fills out immediately.

In-person clients

Measurements take place at the start of Session 1 and the end of Session 4. Client fills in CORE-10 and SRS measure on paper. Up to 24 hours after the session the therapist uploads client's SRS and CORE-10 scores via the Qualtrics link and destroys the paper copy.

Data Treatment

The researcher collected all data online, via the Qualtrics platform. Concerning coding, each therapist will receive a therapist identification number and identification numbers for their clients, for deidentification purposes. Client data was solely linked to the IRB-approved consent form. The researcher did not download the client or therapist consent forms and was therefore never in possession of any participant identifying information.

Research Design

This study is a randomized controlled trial (RCT). Webber and Prouse (2018) note that RCTs are an evaluation technique that draws from experimental design, intending to measure an intervention's impact. Due to the aspect of randomization, e.g., either randomly distributing people or communities to either receive the control or the treatment, advocates posit that it is possible to measure an intervention's impact. Furthermore, RCTs allow for the attribution of a causal relationship between the intervention and its outcome.

RCTs are heralded as the "gold standard" in scientific research because RCTs "can get to the heart of what really works for development interventions" (Webber & Prouse, 2018, p. 166). Unlike other study designs, balancing participant characteristics (both observed and unobserved) between groups allows for attributing any of the differences in outcome to the intervention itself (Hariton & Locascio, 2018). Hariton and Locascio add that the randomization factor "reduces bias and provides a rigorous tool to examine cause-effect relationships between an intervention and outcome" (p. 1716).

Variables

Dependent Variables

The first dependent variable is the client's perception of the therapeutic alliance. To measure clients' perception of the alliance, therapists participating in the study will employ the Session Rating Scale (SRS) measure (Johnson et al., 2000). Client outcomes is the second dependent variable, as measured by CORE-10 scores.

Independent Variables

The Sign your Feelings intervention was the independent variable for the intervention group (Group 1) and TAU was the independent variable for the control group (Group 2).

Instruments

Sessions Rating Scale (SRS)

The Sessions Rating Scale (SRS) is designed to measure client's perceptions of the therapeutic alliance. Bachelor and Horvath (1999) point out that clients' scores of the therapeutic alliance are "far better predictors of outcome than therapist ratings" (p. 4). The SRS is composed of four items and is scored by measuring a client's markings on a scale of 1 to 10 to the nearest centimeter. The highest possible score is 40. Since clients have a propensity to score alliance measures on the upper side, Duncan et al. (2003) suggest that clinicians observing scores below 36 or 9 on a particular line investigate the source of the client's dissatisfaction.

Duncan et al. (2003) compiled and calculated test and re-test internal consistency and reliability data for the SRS, as per Cronbach's coefficient alpha. With an $N = 420$, the SRS measure's coefficient alpha was .88. This compares favorably with the coefficient alpha reported for the HAQ II measure, which was .90. As for concurrent validity, Duncan et al. computed this measure's concurrent validity by studying data from HAQII total scores and SRS scores. Duncan et al. studied a sample of 420 paired administrations of 70 subjects. The correlation between the two measures was .48 ($p < .01$), which provided evidence of the SRS measure's concurrent validity. As a result, the SRS is considered a global therapeutic alliance measure (Duncan et al., 2003).

This measure, along with the Outcome Rating Scale (ORS), was developed to fill the need for ultra-brief tools for gathering client feedback regularly and contains four items rated on a visual analog scale (Shaw & Murray, 2014). This instrument demonstrates strong internal consistency and good concurrent validity when assessing both alliance and outcome (Campbell & Hemsley, 2009, as cited in Shaw & Murray, 2014). Finally, this instrument is appropriate for the study because it is brief and straightforward to administer, requiring only 2 minutes to administer and score (Shaw & Murray, 2014).

The CORE-10

The CORE-10 instrument, a short version of the Clinical Outcomes Routine Evaluation (CORE) OM-34, is a questionnaire used to measure psychological distress (Barkham et al., 2006). The creators of the measurement designed it for use at the beginning of a session and relates to how the client reports feeling over the course of the prior week on a 5-point scale (Brunnbauer et al., 2016). The CORE-10 measures the following areas: "(1) subjective well-being; (2) anxiety; (3) depression; (4) physical; (5) trauma; (6) general functioning; (7) close relationships (functioning); (8) social relationships (functioning); (9) risk to self; and (10) risk to others" (Connell & Barkham, 2007, p. 2).

This questionnaire includes the following ten items: "(1) I have felt tense, anxious, or nervous; (2) I have felt I have someone to turn to for support when needed; (3) I have felt able to cope when things go wrong; (4) talking to people has felt too much for me; (5) I have felt panic or terror; (6) I made plans to end my life; (7) I have had difficulty getting to sleep or staying asleep; (8) I have felt despairing or hopeless; (9) I

have felt unhappy; and (10) unwanted images or memories have been distressing me" (Barkham et al., 2013). Therapists score the CORE-10 on a 5-point scale, ranging from 0 (representing "*not at all*") to 4 (for "*most or all of the time*"). Therapists add up the responses from all ten items to get the clinical score. The maximum number a client can therefore score is 40, and the minimum is 0. The CORE-10 is problem scored, meaning participating clients with higher scores will report and present more elevated levels of distress and discomfort than those with lower CORE-10 scores (Connell & Barkham, 2007). Barkham et al. (2013) point out that the clinical cutoff for general psychological distress is 11.0. This correlates with a reliable change index (90% CI) of 6 points. For depression, the CORE-10's depression cutoff score is 13, yielding a sensitivity value of .92 and a specificity value of .72. Barkham et al. explain that this cutoff might appear low, but it was done purposefully. Creating an instrument requires, among other things, balancing the trade-off between sensitivity (decreasing) and specificity (increasing). As the CORE-10 was created as a screening measure for common psychological distress, a higher sensitivity value was chosen at the expense of specificity. This is especially salient since false positives in the realm of depression would normally cause relatively low additional distress (Barkham et al., 2013).

Validity

The creators of the CORE-10 found a "good correlation between the CORE- 10 and other measures of anxiety, depression, and overall mental health" (Connell & Barkham, 2007, p. 11). Correlations of the CORE-10 and other measures were as follows: "Symptom Checklist-90-R: .81, Brief Symptom Inventory .75, Beck Depression Inventory .77, Beck Depression Inventory-II .75 and .76, Beck Anxiety Inventory .65,

Patient Health Questionnaire-9 .56, Clinical Interview Schedule-R .74" (Connell & Barkham, 2007, p. 11). The researcher notes that the CORE-10's correlation with the Beck Anxiety Inventory was only .65 and will take this into account when analyzing data concerning any potential changes in anxiety within study subjects.

Reliability

This refers to the extent to which an instrument will give a similar score when the same measurement is conducted several times or by several raters. "Internal reliability is measured using Cronbach's coefficient alpha, which is the percentage of the variance in a score that is the covariance between items" (Connell & Barkham, 2007, p. 12). Barkham et al.'s (2013) research concluded that the CORE-10 measure's reliability is .90 and that the score of the CORE-10 correlates with the CORE-OM at .94 in a clinical sample and .92 in a non-clinical sample.

To develop the CORE-10 and to conclude its reliability, Barkham et al. used three CORE-OM datasets: (1) a primary care sample of 6,610 clients; (2) a sample from an MRC platform trial of enhanced collaborative care of depression in primary care comprising of 114 patients; and (3) a general population sample derived from the Office of National Statistics Psychiatric Morbidity Follow-up survey comprising of 553 adults. A fourth dataset was used, and comprised a sample from an occupational health setting of 77 participants (Barkham et al., 2013).

Responsiveness, Sensitivity to Change

Responsiveness refers to a measure's ability to pinpoint changes over time. To demonstrate the CORE-10's sensitivity to change, Connell and Barkham (2007) compared pre-and post-therapy data within a Primary Care Clinical sample. Seven

hundred eighty clients made up the sample, 73% were female, and 27% were male. The average age was 40 years of age, and clients underwent an average of six therapy sessions. In the CORE-10 creators' study, "the pre-therapy score for those clients with both a pre-and post-therapy measure was 19.5 (SD = 7.6) compared with a post-therapy score of 8.6 (SD = 6.7) yielding a change score of 10.9 (SD = 8.0). The difference was statistically significant (T = 38.1, p < .001)" (Connell & Barkham, 2007, p. 12). This statistical significance points to the CORE-10 being an appropriate measure for detecting changes in study participants' pre-and post-intervention scores.

Data Analysis

Provided that the data points are distributed normally, the researcher planned on undertaking analyses of variance (ANOVAs), paired-samples t-tests, and multiple linear regression. The researcher conducted all statistical analysis using IBM SPSS Statistics (Version 28, IBM Corp, 2021) predictive analytics software. The researcher planned on calculating ANOVAs for research question 1: Will the gains from pre- to post SRS scores measuring the therapeutic alliance of clients and therapists be statistically different between clients receiving the Sign Your Feelings intervention and clients receiving TAU? The researcher planned on calculating ANOVAs for research question 2: Will the gains from pre- to post CORE-10 scores measuring client outcomes be statistically different between clients receiving the Sign your Feelings intervention and clients receiving TAU? The researcher planned on using linear multiple regression to calculate research question 3: Is there a significant negative correlation between the post-SRS scores measuring the therapeutic alliance between therapists and clients, and the post-CORE-10 scores measuring client outcomes of all clients participating in the study?

Limitations

The researcher understood that as with all studies, there would be many limitations which could impact the quality of the findings and the author's ability to answer the research questions. Bush et al. (2013) explain that a range of factors can contribute to less-than-ideal levels of study participation when it comes to health research, both in the US Military and in civilian populations. Bush et al. caution that poor recruitment and high study dropout rates, or attrition, have the potential to be both frustrating and costly. Furthermore, attrition has the potential threat to the interpretation, validity and integrity of research findings. As mentioned earlier, in order to account for attrition, the researcher added 20% to their minimum sample size of 68, bringing *N* to 82.

Additionally, the researcher might have selected the incorrect instrumentation. This would affect the study adversely because the intervention might have positive effects on elements which the researcher is not measuring. The researcher might provide training that is insufficient to prepare the therapists for the study, which could lead to therapists being improperly trained to carry out the intervention, and therefore potentially falsify the results of the study.

The researcher might have selected signs that are not optimal for improving the therapeutic alliance and client outcomes. The author hopes to have overcome this limitation by basing the signs on peer-reviewed research on the categorization of human emotion. Participating therapists or clients might have biased views against sign language or D/deafness, which could negatively impact their participation in the study, thereby affecting the study's legitimacy.

The researcher might have biases toward the data and results which only support their hypotheses or arguments, which could lead to incorrect conclusions or data analysis. Another limitation of this study could be the researcher's reliance on clients' commitment to attending a minimum of four therapy sessions. Due to the COVID-19 pandemic, the researcher expected that some client-therapist pairs would be doing therapy online, and some in person, potentially posing confounding issues. Teaching sign language online also could present a limitation, as it might be more difficult for the therapists to teach signs or convey emotion online as opposed to in person, at least in part due to the nature of having to ensure that one's hands remain in view.

Paradis and Sutkin (2017) explain that observational research is increasingly being carried in health professions. However, it is frequently criticized because the research can be prone to observer effects, also known as the Hawthorne Effect. This effect is defined as a research participants' altered behavior which occurs as a response to the act of being observed. Paradis and Sutkin's research points to scant evidence of the Hawthorne Effect, and conclude that a significant alteration of participant behavior is unlikely in many research contexts. Furthermore, they explain that sustained contact with participants over time improves the quality of the data collection (Paradis & Sutkin, 2017). Additionally, all clients must sign an informed consent to engage in the study, clients might find out which group they are in, i.e. the intervention group (Group 1) or the TAU group (Group 2).

Lastly, the therapists and clients participating in the study might not have been representative of the general population. The exclusion of non-English speaking therapists and clients might also contribute to issues of generalizability. Selection bias

might also create a limitation, meaning that therapists who might have a higher propensity to ask to enroll in the study might differ in some small or significant manner from those who would not tend to do so (Webber & Prouse, 2018).

Summary

In this chapter, the researcher provided information on participant recruitment. The author then discussed the intervention protocol and data collection. The paper then explained the research design, explaining the merits of running the study as a randomized control trial. The researcher then included a section discussing the dependent and independent variables—lastly, the chapter detailed instrumentation issues and plans for data analysis.

CHAPTER 4. RESULTS

This chapter outlines the results of the researcher's study and contains four main sections. The first section will discuss reliability, and the second one will comprise an analysis of the SRS and CORE-10 data. The third section will include post-hoc analyses. followed by a chapter summary. The researcher recruited 82 clients and analyzed data for 80, as one client dropped out and another filled in their scores after the close of the study. The final analysis sample therefore included 80 clients, 39 of which the researcher had randomly placed in the intervention group and 41which the author had placed in the TAU group.

All participants were clients currently seeing an individual therapist, and were at least 18 years of age. Clients were required to have already attended a minimum of three sessions with their therapist prior to the commencement of the study. Participants were required to speak English sufficiently well to ensure that their therapist did not have trouble understanding them. None of the clients participating in the study were fluent in sign language. All clients were required to sign a consent form.

The researcher cautioned therapists against working with clients who would be unable to sign due to physical limitations. The author also excluded clients with cognitive or memory limitations, as this might have made them either unable to learn or to remember the signs used in the intervention. Exclusionary criteria also included severe mental illnesses or the display of physical symptoms which would hinder a client's ability to participate. The researcher did not collect any additional demographic data.

A total of 16 therapists administered the intervention. At the time of the study, they practiced in ten U.S. States: California, Florida, Georgia, Illinois, Iowa, New York, North Carolina, Oregon, Pennsylvania, and Texas. Each therapist administered the intervention to either two, four or six clients. Two therapists worked with two clients each, three worked with four clients each, and 11 worked with six clients each. Each therapist provided the intervention to half of their clients and proceeded with TAU with the other half, for four weekly sessions.

Reliability

SRS Scores

The researcher tested the reliability of the SRS Post-test data with a Cronbach's alpha, which rendered a result of $\alpha = .84$, indicating very good reliability for the four items on the SRS pre-test measurement. As seen in Table 1, Items SRS 1, 2, 3, and 4 all positively correlate with each other.

Table 1

SRS Pre-test Inter-Item Correlation Matrix

Item	SRS 1 Relationship (pre)	SRS 2 Goals and Topics (pre)	SRS 3 Approach or Method (pre)	SRS 4 Overall (pre)
SRS 1 Relationship (pre)	-	0.45	0.56	0.49
SRS 2 Goals and Topics (pre)	0.45	-	0.50	0.78
SRS 3 Approach or Method (pre)	0.56	0.50	-	0.58
SRS 4 Overall (pre)	0.49	0.78	0.58	-

Table 2 illustrates what the Cronbach's alpha would be if the researcher were to delete any of the SRS items. As seen, reliability would not improve if the author deleted any of the individual items.

Table 2

SRS Pre-test Items - Total Statistics

SRS Pre-test Item	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Correc-ted Item Total Correl.	Squared Multiple Correl.	Cronbach's Alpha if Deleted
1 Relationship	26.91	9.62	.57	.36	.83
2 Goals and Topics	27.31	7.37	.70	.62	.78
3 Approach or Method	27.20	8.51	.64	.44	.81
4 Overall	27.19	7.51	.77	.67	.74

The author then tested the SRS Post-test data, which rendered a Cronbach's alpha of $\alpha = .89$ for the Post-test score, indicating very good reliability. As seen in Table 3, all items positively correlate with each other.

Table 3

SRS Post-test Inter-Item Correlation Matrix

Item	SRS 1	SRS 2	SRS 3	SRS 4
SRS 1 Relationship	-	.63	.75	.77
SRS 2 Goals and Topics	.63	-	.57	.57
SRS 3 Approach or Method	.75	.57	-	.82
SRS 4 Overall	.77	.57	.82	-

Table 4 demonstrates that reliability would not markedly improve if the researcher were to remove any of the Post-test items.

Table 4

SRS Post-tests Item - Total Statistics

SRS Post-test Item	Scale Mean if Deleted	Scale Variance if Deleted	Corrected Item-Total Corr.	Squared Multiple Corr.	Cronbach's Alpha if Deleted
1 Relationship	28.67	3.68	.82	.68	.85
2 Goals and Topics	28.74	3.46	.63	.42	.90
3 Approach or Method	28.84	2.92	.82	.71	.84
4 Overall	28.72	2.96	.82	.73	.83

CORE-10 Data

CORE-10 Pre-tests rendered a Cronbach's alpha of α = .74, which is considered adequate. Table 5 shows that all items are positively correlated, except for Item 6, which asked clients if they had any thoughts of ending their lives. One TAU client reported a 0 on the pre-test and a 3 on the post-test, resulting in a negative correlation.

Table 5

CORE-10 Pre-tests Inter-Item Correlation Matrix

Pre-test	1	2	3	4	5	6	7	8	9	10
Item 1	-	.21	.19	.08	.49	.07	.28	.40	.45	.23
Item 2	.21	-	.44	-.06	.21	.24	.17	.24	.22	.14
Item 3	.19	.44	-	.10	.17	.20	.07	.35	.33	.11
Item 4	.08	-.06	.10	-	.17	-.06	.12	.35	.29	.10
Item 5	.49	.21	.17	.17	-	-.12	.37	.41	.40	.17
Item 6	.07	.24	.20	-.06	-.12	-	.06	.21	.11	.12
Item 7	.28	.17	.07	.12	.37	.06	-	.28	.37	.18
Item 8	.40	.24	.35	.35	.41	.21	.28	-	.68	.18
Item 9	.45	.22	.33	.29	.40	.11	.37	.68	-	.35
Item 10	.23	.14	.11	.10	.17	.12	.18	.18	.35	-

Table 6 shows that if deleted, only Items 4 and 6 would improve reliability. CORE-10 post-test data reliability indicated a Cronbach's alpha of α = .81, indicating good reliability.

Table 6

CORE-10 Pre-tests Item - Total Statistics

Pre-test	Scale Mean if Item Deleted	Scale Variance if Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Deleted
Item 1	12.04	25.89	.50	.34	.71
Item 2	12.84	26.57	.33	.27	.74
Item 3	12.75	27.35	.37	.29	.73
Item 4	13.08	28.32	.22	.17	.75
Item 5	13.50	25.47	.50	.39	.71
Item 6	14.39	31.10	.16	.18	.75
Item 7	12.51	24.86	.38	.22	.73
Item 8	13.30	24.44	.63	.56	.69
Item 9	12.68	24.17	.68	.57	.68
Item 10	12.98	27.34	.30	.15	.74

Table 7 shows that all items are positively correlated with each other, except for Item 6, which asked clients if they had any thoughts of ending their lives. One TAU client reported a 0 on the pre-test and a 3 on the post-test, resulting in a negative correlation. Table 8 shows that if deleted, only Item 6 would improve reliability.

Table 7

CORE-10 Post-tests Inter-Item Correlation Matrix

Post-test	1	2	3	4	5	6	7	8	9	10
Item 1	-	.14	.37	.46	.48	.06	.27	.44	.58	.41
Item 2	.14	-	.57	.32	.24	.19	.06	.26	.16	.13
Item 3	.37	.57	-	.26	.34	.28	.26	.44	.36	.12
Item 4	.46	.32	.26	-	.48	.09	.27	.37	.37	.40
Item 5	.48	.24	.34	.48	-	-.07	.09	.35	.37	.35
Item 6	.06	.19	.28	.09	-.07	-	.20	.29	.09	.16
Item 7	.27	.06	.26	.27	.09	.20	-	.26	.50	.34
Item 8	.44	.26	.44	.37	.35	.29	.26	-	.62	.35
Item 9	.58	.16	.36	.37	.37	.09	.50	.62	-	.51
Item 10	.41	.13	.12	.40	.35	.16	.34	.35	.51	-

Table 8

CORE-10 Post-tests Item - Total Statistics

Post-test	Scale Mean if Deleted	Scale Variance if Deleted	Corrected Item-Total Correl.	Squared Multiple Correl.	Cronbach's Alpha if Deleted
Item 1	8.35	27.72	.59	.48	.79
Item 2	9.15	30.56	.34	.41	.81
Item 3	9.04	29.51	.53	.53	.79
Item 4	9.00	28.43	.55	.40	.79
Item 5	9.67	31.21	.49	.40	.80
Item 6	10.07	34.05	.23	.23	.82
Item 7	8.89	28.79	.41	.34	.81
Item 8	9.40	28.40	.61	.50	.78
Item 9	8.79	26.65	.69	.64	.77
Item 10	9.21	29.16	.51	.38	.80

Data Analysis

Research Question 1 (SRS)

The author's research question was: "Will the gains from pre- to post SRS scores measuring the therapeutic alliance of clients and therapists be statistically different between clients receiving the Sign your Feelings intervention and clients receiving TAU?" Before the commencement of the trial, all therapists received the same set of instructions for administering the SRS. Duncan et al. (2003) explain that any score lower than a 36 out of a possible 40 should cause therapists concern, due to clients' natural tendency to score alliance measures highly.

Table 9 conveys descriptive statistics of the Pre-test and Post-test SRS scores for $N = 80$. The difference between the means of the SRS total pre- and total post-test scores was 2.11. The standard deviation for the pre-test scores was 3.73, for the post-test scores it was 2.36.

Table 9

SRS Pre- and Post-test Totals

SRS Total	Group	*n*	*M*	*SD*
Pre-test Scores	Sign your Feelings Intervention	39	35.91	3.82
	TAU (Control)	41	36.49	3.66
	Total	80	36.21	3.73
Post-test Scores	Sign your Feelings Intervention	39	38.33	2.43
	TAU (Control)	41	38.31	2.33
	Total	80	38.32	2.36

As shown in Table 9, intervention group clients scored a mean of 35.91 pre-test and 38.33 post-test, and TAU clients went from a mean of 36.49 pre-test to 38.31 post-test. This represents a 2.42 increase in SRS scores for the intervention group clients versus a 1.82 increase for TAU clients. This is illustrated in Figure 1.

Figure 1

Comparison of Average Pre- and Post- SRS Scores

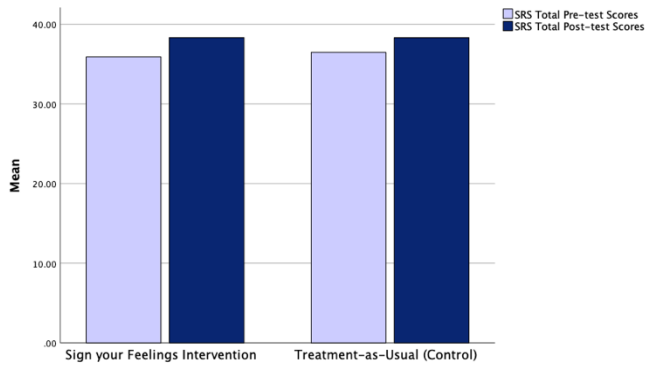


Figure 2 illustrates that 21 out of 80 clients, i.e., 26.25% entered pre-test scores of 40. This corresponded to 9 intervention group clients and 12 TAU clients. This created skewed data and meant that post-test scores for these clients could only either remain the

same or decrease. Figure 3 also demonstrates some skewness, but was less problematic given that this represents post-test data.

Figure 2

SRS Total Pre-test Scores

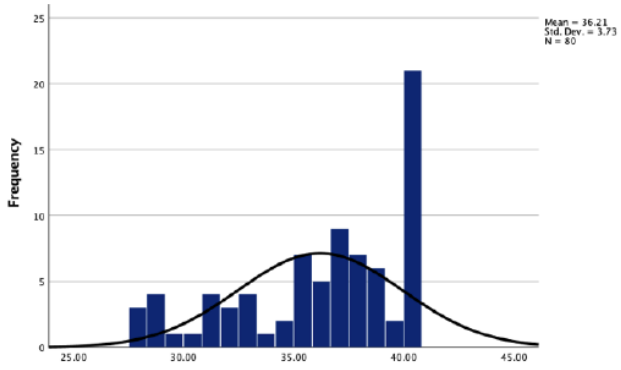
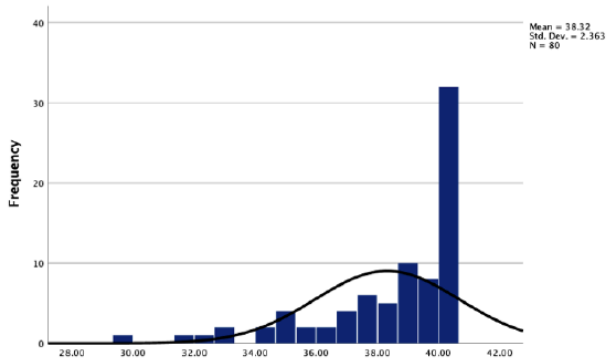


Figure 3

SRS Total Post-test Scores



Tests of Assumption Prior to Running an ANOVA

The researcher's original null hypothesis 1 **(**H_{o1}**)** was that the gains from pre- to post-SRS scores measuring the therapeutic alliance of clients and therapists would not be statistically different between clients receiving the Sign your Feelings intervention and clients receiving TAU. To test this hypothesis, the researcher considered running an

ANOVA analysis, but first needed to ensure that this test was appropriate. To investigate the normality of the data, the researcher ran tests of assumption in the form of the Kolmogorov-Smirnov test.

Table 10

Kolmogorov-Smirnov Test of Normality for SRS Scores

		Kolmogorov-Smirnov (a)			Shapiro-Wilk		
Totals	Group	*Statistic*	*df*	*p*	*Statistic*	*df*	*p*
Pre-test	Sign your Feelings	.15	39	.026	.89	39	.001
	TAU	.17	41	.005	.86	41	<.001
Post-test	Sign your Feelings	.25	39	<.001	.74	39	<.001
	TAU	.24	41	<.001	.75	41	<.001
Diff.	Sign your Feelings	.14	39	.05	.9	39	.002
	TAU	.19	41	<.001	.89	41	<.001

Note: (a) = Lilliefors Significance Correction

As seen in Table 10, five out of the six *p* values on the Kolmogorov-Smirnov test are smaller than .05 (.026, .005, <.001, <.001 and <.001), thereby violating the assumption of normality. The researcher therefore proceeded with a Mann-Whitney U test instead of an ANOVA. This analysis compares the median of the difference scores between the SRS pre-test scores and post-test scores, for each group. The Hypothesis Test Summary in Table 11 suggests that the researcher should retain the null hypothesis, as there is not a significant difference in medians between the two groups.

Table 11

Hypothesis Test Statistics - SRS Data

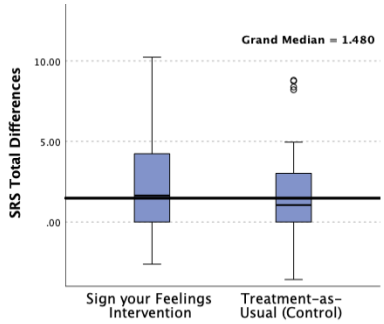
Analysis	SRS Total Differences
Mann-Whitney U	740
Wilcoxon W	1601
Z	-.58
Asymp. Sig (2-tailed)	.565

Note: Grouping Variable: Group Number

Figure 4 indicates that although the intervention group saw a higher median change score, the difference between groups was not statistically significant, since p = .565 as shown in Table 11. Figure 4 also shows four outliers.

Figure 4

SRS Total Differences - Independent-Samples Median Test



The researcher then returned to the dataset and ran analyses without the four outliers in the TAU group. The four outlier client survey codes were: L6, F4, C1 and N2. As shown in Table 12, running the analysis without the four outliers rendered a result of p = .194, however, making the differences between the groups not statistically significant.

Table 12

SRS Mann-Whitney U Test Statistics (N = 76)

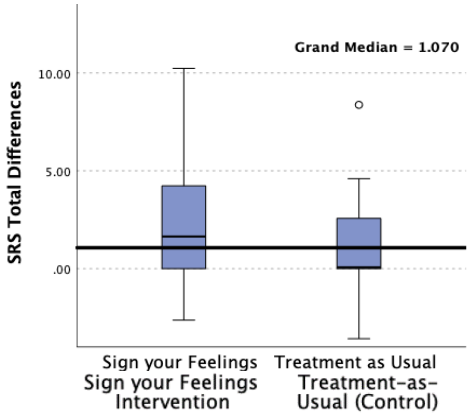
Analysis	SRS Total Differences
Mann-Whitney U	60
Wilcoxon W	1300
Z	-1.3
Asymp. Sig (2-tailed)	.194

Note: Grouping Variable: Group Number

The boxplot in Figure 5 helps the reader visualize that the intervention group participants nonetheless reaped higher benefits in SRS scores than the TAU group.

Figure 5

SRS Independent Samples Median Test (N = 76)



The author's research question 1 was: 'Will the gains from pre- to post SRS scores measuring the therapeutic alliance of clients and therapists be statistically different between clients receiving the Sign your Feelings intervention and clients receiving TAU?" The researcher's null hypothesis (H_{o1}) was that the gains from pre- to post SRS scores measuring the therapeutic alliance of clients and therapists will not be statistically different between clients receiving the Sign your Feelings intervention and clients receiving TAU. Given the data above, the researcher failed to reject the null hypothesis.

Research Question 2 (CORE-10)

In this section, the author will examine data relevant to research question 2: "Will the gains from pre- to post CORE-10 scores measuring client outcomes be statistically different between clients receiving the Sign your Feelings intervention and clients receiving treatment-as usual?" Prior to the commencement of the trial, all therapists received the same set of instructions for administering the CORE-10. Barkham et al. (2013) explain that total scores of less than ten mean that the client's distress is in the

non-clinical range, and 11 to 14 means mild psychological distress. A score of 15 to 19 means moderate psychological distress, 20 to 24 points means moderate-to-severe psychological distress, and 25 and above is considered an indicator of severe psychological distress.

Table 13

Statistics of CORE-10 Totals

CORE-10 Totals	Pre-Test	Post-Test	Differences
N	80	80	80
Mean	14.45	10.18	-4.28
Median	15	10	-4
Std. Deviation	5.65	5.97	4.93
Range	24	26	21
Minimum	2	0	-15
Maximum	26	26	6

Table 13 shows the statistics of the CORE-10 totals for pre-test, post-test, and the differences between the two. The researcher noted that the mean difference between pre- and post-scores was -4.28 and that the standard deviation was 4.93. Figures 6 and Figure 7 illustrates that pre- and post-test CORE-10 scores appear to be normally distributed.

Figure 6

Total CORE-10 Scores (Pre-test)

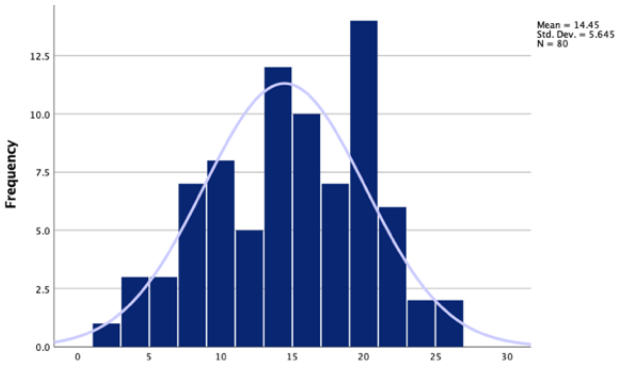
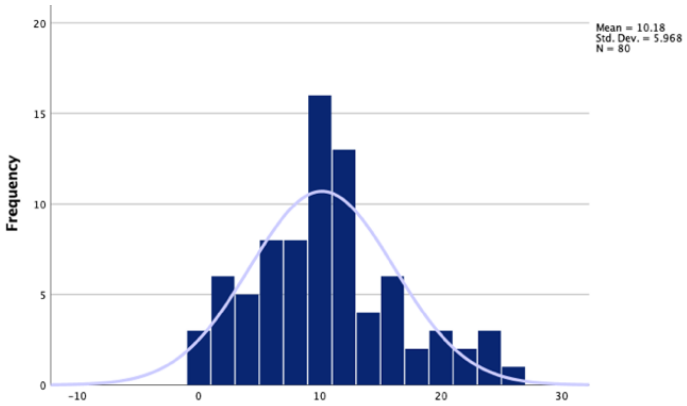


Figure 7

Total CORE-10 Scores (Post-test)



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As shown in Table 14, intervention group clients scored a mean of 14.21 pre-test and 9.85 post-test, and TAU clients went from a mean of 14.68 pre-test to 10.49 post-test. This represents a 4.36-point mean decrease in CORE-10 scores for the intervention group clients and a 4.19-point mean decrease for the TAU clients.

Table 14

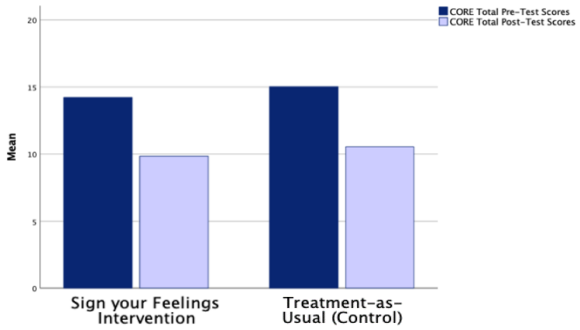
CORE-10 Pre- and Post-test Totals

SRS Total	Group	*n*	*M*	*SD*
Pre-test Scores	Sign your Feelings Intervention	39	14.21	6.06
	TAU (Control)	41	14.68	5.28
	Total	80	14.45	5.65
Post-test Scores	Sign your Feelings Intervention	39	9.85	6.51
	TAU (Control)	41	10.49	5.47
	Total	80	10.18	5.97

Figure 8 provides a visual comparison between mean Pre- and Post- CORE-10 scores, demonstrating that the intervention group clients enjoyed a slight improvement in their CORE-10 scores than the TAU clients. Percentage improvements per CORE-10 item will be discussed in the post-hoc section later in the chapter.

Figure 8

Comparison of Average CORE-10 Pre- and Post-test scores



The researcher's original null hypothesis 2 (H_{o2}) was that the gains from pre- to post CORE-10 scores measuring client outcomes would not be statistically significant between clients receiving the Sign your Feelings intervention and clients receiving TAU. To test this hypothesis, the researcher considered running an ANOVA analysis, but first needed to ensure that this test would be appropriate. To investigate the normality of the data, the researcher ran tests of assumption in the form of the Kolmogorov-Smirnov test, as seen in Table 15.

Table 15

Kolmogorov-Smirnov Test of Normality - CORE-10

		Kolmogorov-Smirnov (a)			Shapiro-Wilk		
Scores	Group	*Statistic*	*df*	*p*	*Statistic*	*df*	*p*
Pre-Test	Sign your Feelings	.11	39	.200*	.96	39	.228
	TAU	.11	41	.200*	.97	41	.303
Post-Test	Sign your Feelings	.17	39	.009	.94	39	.027
	TAU	.12	41	.135	.97	41	.469
Diff.	Sign your Feelings	.10	39	.200*	.97	39	.412
	TAU	.15	41	.028	.97	41	.328

Note: * This is a lower bound of the true significance. (a) = Lilliefors Significance Correction

Two of the *p* values in the Kolmogorov-Smirnov table rendered values smaller than .05, i.e., CORE-10 Total Post-test Scores for the Intervention group resulted in $p = .009$, CORE-10 Total Differences for the TAU group resulted in $p = .028$. The data therefore did not meet the assumption of the equality of variances. The researcher therefore proceeded with a Mann-Whitney U test instead of an ANOVA. The Hypothesis Test Summary in Table 16 suggests that the researcher retain the null hypothesis, indicating that there was not a significant difference in medians between the two groups.

Table 16

CORE-10 Test Statistics from the Mann-Whitney U Analysis

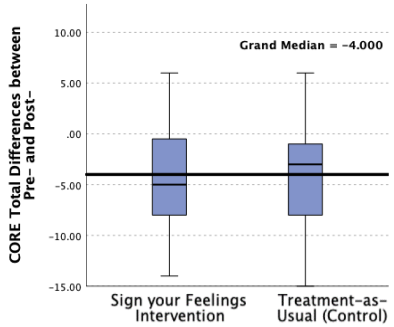
Analysis	CORE-10 Total Differences
Mann-Whitney U	764
Wilcoxon W	1544.5
Z	-.338
Asymp. Sig (2-tailed)	.736

Note: Grouping Variable: Group Number

Table 16 and Figure 9 indicates that although the intervention group saw a larger decrease in CORE-10 scores and therefore greater improvement, the difference between groups was not statistically significant, as .736 is greater than .05.

Figure 9

CORE-10 Independent-Samples Median Test



The author's research question 2 was: "Will the gains from pre- to post CORE-10 scores measuring client outcomes be statistically different between clients receiving the Sign your Feelings intervention and clients receiving TAU?" The researcher's null hypothesis (H_{o2}) was that the gains from pre- to post CORE-10 scores measuring client outcomes will not be statistically different between clients receiving the Sign your Feelings intervention and clients receiving TAU. Given the data above, the researcher failed to reject the null hypothesis. This said, Item 9 on the CORE-10 did show a statistically significant improvement for intervention group clients.

Research Question 3: (SRS and CORE-10)

The researcher then examined the third research question: "Is there a significant negative correlation between the post-SRS scores measuring the therapeutic alliance between therapists and clients and the post-CORE-10 scores measuring client outcomes of all clients participating in the study? The researcher posited that since lower CORE-10 scores equated improved outcomes, a higher negative correlation would point towards a greater influence from the therapeutic alliance. To answer research question 3, the author conducted a hierarchical regression to examine whether SRS final scores predict CORE-10 final scores, over and above the effects of the intervention. Table 17 indicates that there is a statistically significant negative correlation of $r = -.23$ ($p = .041$) between the SRS Post-test scores and the CORE-10 scores. The researcher conducted a set of linear multiple regressions, where treatment predicted Post-test CORE-10 scores. Then, in the second model, the author added SRS Post-test scores to the model, to see if SRS scores predicted CORE-10 scores, over and above treatment.

Table 17

SRS and CORE-10 Correlations

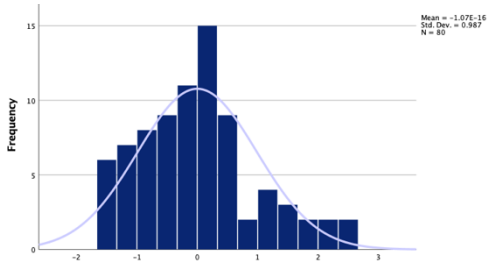
Scores		CORE Total Post	SRS Total Post
CORE Total Post	Pearson Correlation	-	-.23*
	Sig. (2-tailed)		.041
	N	80	80
SRS Total Post	Pearson Correlation	-.23*	-
	Sig. (2-tailed)	.041	
	N	80	80

Note: * Correlation is significant at the .05 level (2-tailed).

Figure 10 represents the histogram of the residuals of the Linear Regression Model, which demonstrate a normal distribution. Data indicates that the assumption of normally distributed residuals was met.

Figure 10

Histogram of the Standardized Residuals (CORE-10)



The aim of Figure 11 is to assess heteroskedasticity. There is no evidence of heteroskedasticity given that the spread of residuals is similar across predicted values.

Figure 11

Standardized Predicted Values Against the Standardized Residuals

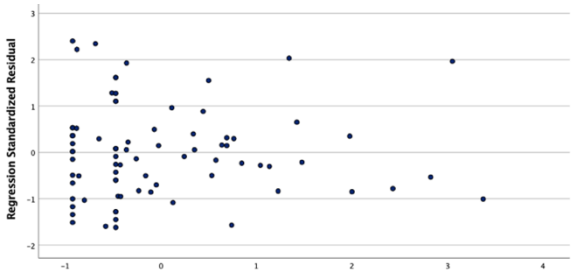


Table 18 provides the descriptive statistics of the SRS Total Post-test scores and the CORE-10 Total Post-test scores.

Table 18

Regression - SRS and CORE-10 Descriptive Statistics

Descriptive Statistics	*n*	*M*	*SD*
CORE Total Post-Test Scores	80	10.18	5.97
Group number	80	1.51	.50
SRS Total Post-test Scores	80	38.32	2.36

In model 1 of Table 19, treatment condition was not significantly predictive of CORE=10 post test scores, (B = .642, SE =1.34, p = .634). In the second model, SRS Total Post-test scores were significantly related to CORE-10 post test scores over and above treatment (B = -.578, SE = .280, p = .042).

Table 19

SRS Regression Summary Table

		Unstandardized Coefficients		Standardized Coefficients		
Model		β	*SE*	β	*t*	*p*
1	(Constant)	9.21	2.14		4.31	<.001
	Group number	.64	1.34	.054	.48	.634
2	(Constant)	31.37	10.93		2.87	.005
	Group number	.63	1.31	.053	0.48	.631
	SRS Total Post-test	-.58	.28	-.229	-2.07	.042

Note: Dependent Variable: CORE Total Post-Test Scores

As seen in Table 20, the r square change for the model adding SRS Post-test scores was .052 (p = .042) which means that the SRS total post score accounted for an additional 5.2% of the variance in post-CORE-10 scores, over and above treatment.

Table 20

Model Summary Table

					Change Statistics				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df 1	df 2	Sig. F Change
1	.054 (a)	.003	-0.01	5.997	.003	.23	1	78	.634
2	.235 (b)	.055	.031	5.875	.052	4.27	1	77	.042

Note: Predictors: (Constant), Group number
(a) Predictors: (Constant), Group number, SRS Total Post-test Scores
(b) Dependent Variable: CORE Total Post-test Scores

As seen in Table 21, the researcher employed a hierarchical regression approach for this analysis. In the first model, CORE-10 post-test scores was a dependent variable, and is predicted by treatment group. In the second model, CORE-10 post-test scores are predicted by both the type of group and the SRS post-test scores. The author's goal was to investigate whether SRS post-test scores would predict CORE-10 scores, over and above treatment modality (intervention or TAU). Based on the significant r-squared value, SRS does predict CORE-10 scores over and above treatment modality.

Table 21

ANOVA Summary Table for the Regression Models

	Model	*Sum of Squares*	*df*	*Mean Square*	*F*	*p.*
1	Regression	8.23	1	8.23	.23	.634 (a)
	Residual	2805.32	78	35.97		
	Total	2813.55	79			
2	Regression	155.53	2	77.77	2.25	.112 (b)
	Residual	2658.02	77	34.52		
	Total	2813.55	79			

Note: Dependent Variable: CORE Total Post-Test Scores
(a) Predictors: (Constant), Group number
(b) Predictors: (Constant), Group number, SRS Total Post-test Scores

The author's research question 3 was "Is there a significant negative correlation between the post-SRS scores measuring the therapeutic alliance between therapists and clients, and the post-CORE-10 scores measuring client outcomes of all clients participating in the study?" The researcher's null hypothesis (H_{o3}) was that no significantly negative correlation exists between the post-SRS scores measuring the therapeutic alliance between therapists and clients, and the post-CORE-10 scores measuring client outcomes of all clients participating in the study. Given the data above, the researcher rejected this null hypothesis and found that there was a statistically significant negative correlation between SRS post-test scores and CORE-10 post-test scores.

Post-Hoc Analysis

The overall goal of this intervention was to improve the therapeutic alliance and decrease reported mental distress. In order to explore potential signals of the intervention's effectiveness and areas for future research, and although individual items of the SRS are not designed to be isolated, the researcher nonetheless investigated potential differences between the groups for each individual item.

Post-Hoc Analysis on Research Question 1

Controlling for Prior Sessions in SRS Data (N = 53)

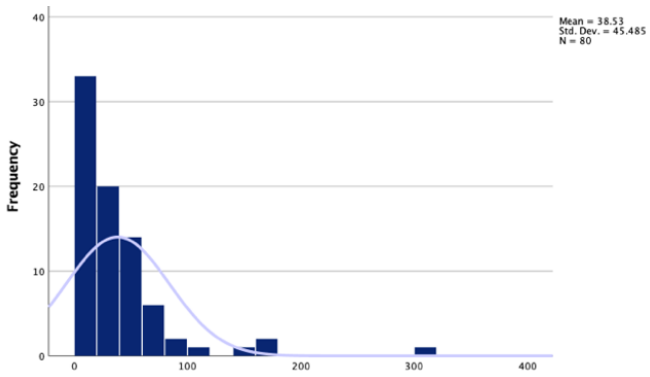
Meier and Feeley (2022) reviewed two previously published meta-analyses covering 92 ceiling effect estimates, based on 37 studies, and including 6,439 participants. Meier and Feeley found that ceiling effects for the SRS had a moderate correlation with the number of sessions a client has with their therapist. Meier and Feeley noted that there was evidence that sizeable initial ceiling effects slightly increased

continuously over the number of sessions. To qualify for the Sign your Feelings study, clients had to have been seeing their therapist for at least three sessions prior to commencement. However, the researcher did not set a maximum number of sessions prior to commencement.

Only 8 of the 80 clients (10%) had been seeing their therapists for seven sessions or less prior to the start of the study. On average, each client had seen their therapist for 38.56 sessions. Intervention group clients averaged 38.85 sessions each, and TAU clients averaged 38.22. The maximum number of sessions prior to the start of the study was 309. Figure 12 represents a histogram of all 80 clients and the number of sessions each client had received prior to their participation in the study.

Figure 12

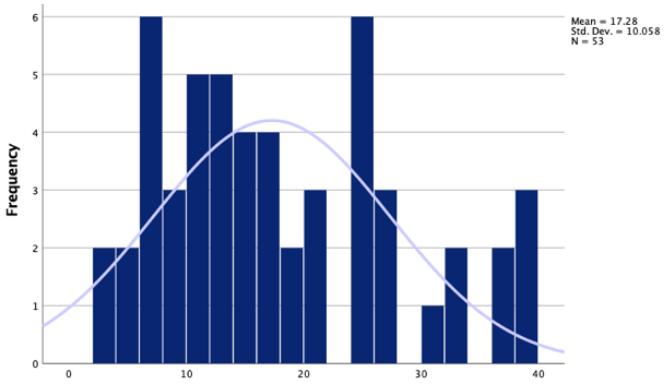
Histogram of All Clients - Number of Prior Sessions



Given that the researcher had data from 80 clients and that the minimum sample size for research question 1 was 52, the author proceeded to run non-parametric analyses on the subset of clients who had 39 or fewer sessions with their therapist prior to the start of the study. This represented 53 clients, or 66.25% of the 80 participants, as shown in Figure 13. When compared to Figure 12, Figure 13 shows less skewness.

Figure 13

Histogram of Clients with Fewer than 39 Prior Sessions (N= 53)



Due to the abnormal distribution of the SRS data as previously discussed, the researcher deemed it more appropriate to run Mann-Whitney U tests on this subset, instead of an ANOVA. Table 22 suggests that the researcher should retain the null hypothesis, as there is not a significant difference in medians between the two groups, given that $p = .721$ and therefore not statistically significant.

Table 22

Hypothesis Test Statistics - SRS Data (N = 53)

Analysis	SRS Total Differences
Mann-Whitney U	331
Wilcoxon W	682
Z	-.357
Asymp. Sig (2-tailed)	.721

Note: Grouping Variable: Group Number

Controlling for Ceiling Effects in SRS Data (N = 59)

Given the high percentage of clients who entered the maximum score of 40 on the SRS Pre-test, the researcher investigated ceiling effects. Paap et al. (2020) point out that ceiling effects can be defined as instances when 15% or more of clients who have

completed a measure obtain the highest possible score. In this study, 21 out of 80 (26.25%) of clients scored the highest possible score.

The researcher decided to investigate whether statistical significance would improve if they removed data from the 21 clients who scored a 40 on the SRS Pre-test. Before doing so, the author analyzed the data to check the Kolmogorov-Smirnov assumption of normality, as shown in Table 23. This rendered a result of .171 and .174 for SRS Total differences, meaning that the assumption of normality held.

Table 23

SRS Pre-tests < 40 - Test of Normality (N = 59)

		Kolmogorov-Smirnov			Shapiro-Wilk		
Scores	Group	*Statistic*	*df*	*p*	*Statistic*	*df*	*p*
Pre-	Sign your Feelings	.14	30	.111	.93	30	.058
	TAU	.18	29	.024	.92	29	.024
Post-	Sign your Feelings	.23	30	<.001	.80	30	<.001
	TAU	.18	29	.015	.84	29	<.001
Diff.	Sign your Feelings	.14	30	.171	.94	30	.105
	TAU	.14	29	.174	.93	29	.066

Note: * This is a lower bound of the true significance. (a) = Lilliefors Significance Correction

Because the SRS pre-test and post-test scores of this subset of 59 clients were under .05 and therefore not normally distributed, the researcher did not run an ANOVA and instead ran a Mann-Whitney U test. As shown in Table 24, this resulted in p =.628, which is not statistically significant.

Table 24

SRS Pre-tests < 40 - Hypothesis Statistics (N = 59)

Analysis	SRS Total Differences
Mann-Whitney U	403
Wilcoxon W	838
Z	-.485
Asymp. Sig (2-tailed)	.628

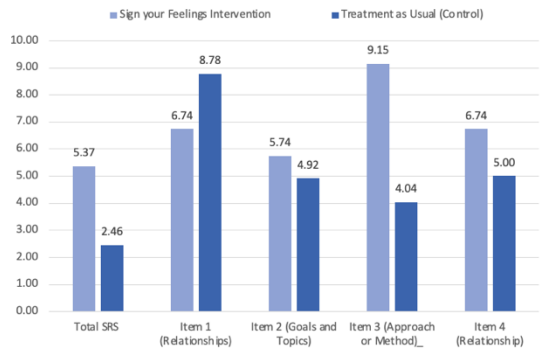
Note: Grouping Variable: Group Number

SRS Percentage Improvements (PIs)

Figure 14 highlights the percentage improvements recorded for each of the 80 clients when looking at the SRS pre-test and post-test data. As all five percentage improvements were smaller than 25%, the researcher considers them unimproved. (Lenz, 2020). This said, the researcher noted that the total SRS scores, Item 2, Item 3, and Item 4 all yielded higher PI scores in the intervention group than in the TAU group. The author considers Item 3 (Approach and Methods) of note because it yielded a PI of 9.15 for the intervention group clients as opposed to a 4.04 PI for TAU clients, representing a greater than 2-fold increase. This is particularly salient given that this intervention was a new approach to therapy.

Figure 14

Percentage Improvements - SRS Scores of All Participants



Post-Hoc Analysis on Research Question 2

Significant Differences for CORE-10 Item 9

The researcher then investigated whether any of the individual items on the CORE-10 would present any significant *p* values. The only item which presented a *p* value of less than .05 was Item 9, where clients answered the prompt "I have felt unhappy." Figure 15 and Figure 16 show Pre- and Post-test scores for Item 9.

Figure 15

Histogram of CORE-10 Item 9 (Unhappiness) Pre-test data

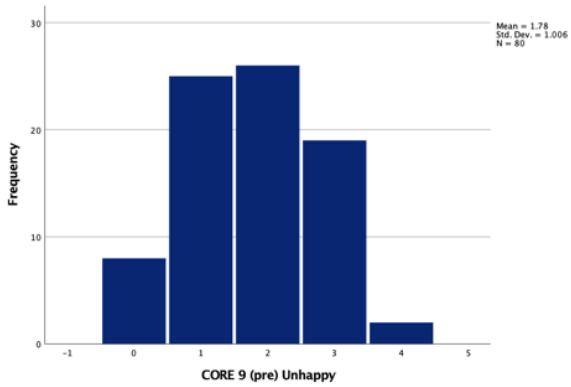


Figure 16

Histogram of CORE-10 Item 9 (Unhappiness) Post-test data

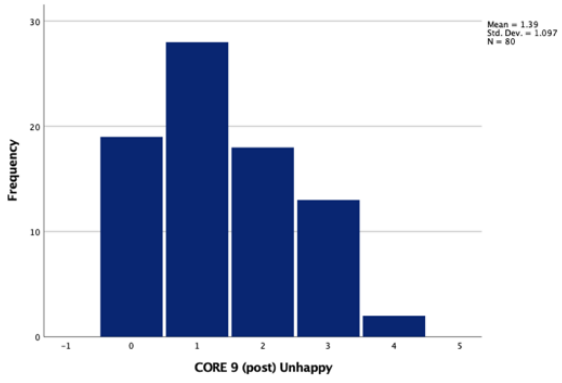


Table 25

Descriptive Statistics of CORE-10 Scores - Item 9 (Unhappiness)

	Group	*n*	*M*	*SD*
Pre-test	Sign your Feelings	39	1.72	.97
	TAU	41	1.83	1.05
	Total	80	1.77	1.01
Post-test	Sign your Feelings	39	1.1	1.00
	TAU	41	1.66	1.13
	Total	80	1.39	1.10

Table 25 illustrates the descriptive statistics for Item 9. As shown in Table 26, a Mann-Whitney U analysis of the data rendered a result of $p = .038$, meaning that there was a statistical significance between Item 9 scores for the intervention and TAU groups.

Table 26

CORE-10 Hypothesis Statistics for Item 9

Analysis	CORE-10 Item 9 Total Differences
Mann-Whitney U	594
Wilcoxon W	1374.5
Z	-2.08
Asymp. Sig (2-tailed)	.038

Note: Grouping Variable: Group Number

CORE-10 Percentage Improvements (PIs)

The researcher then decided to investigate whether any of the individual CORE-10 items demonstrated a significant difference between the intervention and TAU groups, as measured by percentage improvements, as shown in Table 27.

Table 27

PIs in CORE-10 Scores- All Participants

CORE-10	Sign your Feelings		TAU		Diff.	Ratio
Total Scores	30.69	IBNCS	28.57	IBNCS	2.11	1.07
1 - Tense, Anxious	22.92		25.77	IBNCS	-2.86	.89
2 - Support	34.92	IBNCS	37.88	IBNCS	-2.96	.92
3 - Cannot Cope	27.42	IBNCS	37.84	IBNCS	-10.42	.72
4 - Talking too Much	13.21		15.79		-2.58	.84
5 - Panic or Terror	33.33	IBNCS	60	IBNCS	-26.67	.56
6 - Plans to End Life	0		-150		150	0
7 - Difficulty Sleeping	37.66	IBNCS	29.49		8.18	1.28
8 - Despair, Hopeless	38.24	IBNCS	29.31		8.92	1.30
9 - Unhappy	35.82	IBNCS	9.33		26.49	3.84
10 - Unwanted Images	38.10	IBNCS	30.91		7.19	1.23

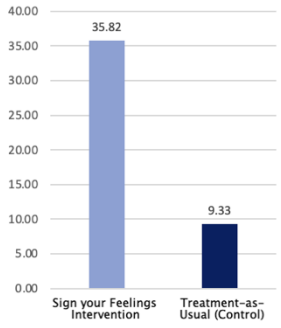
Note: IBNCS = Improved, but not Clinically Significant

Percentage Improvement on CORE-10 Item 9

The author found Item 9 of particular note, as it represented a PI of 35.82 for the intervention group clients, and 9.33 for TAU clients, for a difference of 26.49 PI points. This means that for Item 9 measuring levels of unhappiness, intervention group clients experienced decreases which were 3.84 times greater than those enjoyed by TAU clients, as seen in Table 27 and Figure 17.

Figure 17

Percentage Improvements on Item 9 ('I have felt Unhappy")



Post-Hoc Analysis on Research Question 3

Overall, as stated above, there is a statistically significant negative correlation of r = -.229 (p = .041) between the SRS Post-test scores and the CORE-10 scores. The researcher investigated whether there would be any differences between the intervention group and the TAU group as far as the size or direction of the correlation. As seen in Table 28, there was a negative correlation of -.13 for the intervention group, which was expected. Table 29 indicates p = .448.

Table 28

SRS and CORE-10 - Intervention Group (N = 39)

		CORE Total Post	SRS Total Post
Pearson Correlation	CORE Total Post-Test Scores	-	-.13
	SRS Total Post-test Scores	-.125	-
Sig. (1-tailed)	CORE Total Post-Test Scores	.	.224
	SRS Total Post-test Scores	.224	.
N	CORE Total Post-Test Scores	39	39
	SRS Total Post-test Scores	39	39

Table 29

Coefficients - SRS and CORE-10 Intervention Group (N = 39)

		Unstandardized Coefficients		Standardized Coefficients		
Model		*B*	*SE*	*Beta*	*t*	*p*
1	(Constant)	22.71	16.80		1.35	.184
	SRS Total Post-test Scores	-.34	.437	-.125	-.77	.448

Note: Dependent Variable: CORE Total Post-Test

Table 30 shows the correlation for the TAU participants. There was a larger correlation of r = -.35 for this group, and p = .024, as shown in Table 31.

Table 30

SRS and CORE-10 Correlation - TAU Group (N = 41)

		CORE Total Post-Test	SRS Total Post-test
Pearson Correlation	CORE Total Post-Test Scores	-	-.35
	SRS Total Post-test Scores	-.35	-
Sig. (1-tailed)	CORE Total Post-Test Scores		.012
	SRS Total Post-test Scores	.012	
N	CORE Total Post-Test Scores	41	41
	SRS Total Post-test Scores	41	41

Table 31

Coefficients SRS and CORE-10 TAU Group (N = 41)

		Unstandardized Coefficients		Standardized Coefficients		
Model		*B*	*SE*	*Beta*	*t*	*p*
1	(Constant)	42.194	13.498		3.126	.003
	SRS Total Post-test Scores	-.828	.352	-.353	-2.353	.024

Note: Dependent Variable: CORE Total Post-Test Scores

This analysis rendered a result which indicated that the TAU clients had a greater difference between their pre- and post-scores than the intervention group, i.e., *p* values of -.353 vs -.125. The researcher then investigated all 41 data points to see if there were any outliers, and they found that there was one, data point number 76, as shown in Figure 18.

Figure 18

Scatterplot of Regression Standardized Predicted Values (N = 41)

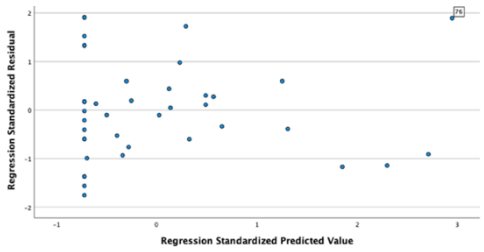


Table 32

TAU Clients Without Outlier (N = 40)

		CORE Total Post-Test S	SRS Total Post-test
Pearson Correlation	CORE Total Post-Test Scores	1.000	-.176
	SRS Total Post-test Scores	-.176	1.000
Sig. (1-tailed)	CORE Total Post-Test Scores	.	.138
	SRS Total Post-test Scores	.138	.
N	CORE Total Post-Test Scores	40	40
	SRS Total Post-test Scores	40	40

The researcher then re-ran the analysis, but without record number 76, as shown in Table 32. This analysis rendered a more logical result and indicated that the intervention group clients had a Pearson correlation of -.125 and the TAU clients had a correlation of -.176. The researcher posits that the difference between the two groups might be because the therapists working with TAU clients felt more comfortable as they were not required to change the manner in which they conducted therapy.

Summary

Although overall, results for research questions 1 and 2 did not support the author's original hypotheses, results for research question 3 did. As seen above in the post-hoc analyses, the author noted that CORE-10 Item 9, which measures decreases in clients' unhappiness levels, rendered a statistically significant difference of $p = .038$. In addition, data showed that Item 9 on the CORE-10 provided a 35.82 percentage improvement for intervention group participants, representing a 3.84-fold amelioration over percentage improvements for TAU clients. The implications of Chapter 4 findings will be discussed at length in Chapter 5.

CHAPTER 5. DISCUSSION

This chapter will cover the interpretation of the findings reported in the previous chapter and cover implications for practice, limitations encountered, and recommendations for future research. The researcher created the intervention to provide therapists and clients with a new technique to improve the therapeutic alliance and client outcomes. The study aimed to test whether the intervention significantly affected the therapeutic alliance and client outcomes and whether there is a correlation between the two. The researcher is pleased to contribute to the existing literature on these subjects and provide therapists with a new therapeutic modality.

Summary of Findings

The researcher's findings reported in Chapter 4 rendered several insights into the differences between the SRS and CORE-10 scores of the intervention and TAU group participants. Below is a summary of those findings, classified into those which pertain to research questions 1, 2 and 3.

Initial Data Analysis

Finding Pertaining to Research Question 1

The author's first research question was: "Will the gains from pre- to post SRS scores measuring the therapeutic alliance of clients and therapists be statistically different between clients receiving the Sign your Feelings intervention and clients receiving TAU?" Although not statistically significant, the Mann-Whitney U analysis run on 80 clients did show that the intervention group did demonstrate a larger mean difference

than the TAU group, as seen in Table 9. Intervention group clients scored a mean of 35.91 pre-test and 38.33 post-test, and TAU clients went from a mean of 36.49 pre-test to a 38.31. This represents a 2.42 increase in SRS scores for the intervention group clients and a 1.82 increase for TAU clients. However, given that $p = .565$, the difference between the groups was not considered statistically significant. The researcher's null hypothesis (H_{o1}) was that the gains from pre- to post SRS scores measuring the therapeutic alliance of clients and therapists will not be statistically different between clients receiving the Sign your Feelings intervention and clients receiving TAU. Given the data above, the researcher failed to reject the null hypothesis.

Finding Pertaining to Research Question 2

As shown in Table 14, intervention group clients scored a mean of 14.21 pre-test and 9.85 post-test, and TAU clients went from a mean of 14.68 pre-test to 10.49 post-test. This represents a 4.36-point mean decrease in CORE-10 scores for the intervention group clients and a 4.19-point mean decrease for the TAU clients. As seen in Table 16, the author analyzed the data with a Mann-Whitney U test and found $p = .736$, which is not considered statistically significant. The researcher's null hypothesis (H_{o2}) was that the gains from pre- to post CORE-10 scores measuring client outcomes will not be statistically different between clients receiving the Sign your Feelings intervention and clients receiving TAU. Given the data above, the researcher failed to reject the null hypothesis.

Finding Pertaining to Research Question 3

The author's third research question was: "Is there a significant negative correlation between the post-SRS scores measuring the therapeutic alliance between

therapists and clients and the post-CORE-10 scores measuring client outcomes of all clients participating in the study?" The researcher's null hypothesis (H_{o3}) was that no significantly negative correlation exists between the post-SRS scores measuring the therapeutic alliance between therapists and clients, and the post-CORE-10 scores measuring client outcomes of all clients participating in the study. Given the data above, the researcher rejected this null hypothesis and found that there was a statistically significant negative correlation between SRS post-test scores and CORE-10 post-test scores.

Post-Hoc Data Analysis

Pertaining to Research Question 1

As seen in Figure 14, the author considers Item 3 (Approach and Methods) of note because it yielded a PI of 9.15 for the intervention group clients as opposed to a 4.04 PI for TAU clients, representing a greater than 2-fold increase. This is particularly salient given that this intervention was a new approach to therapy.

Pertaining to Research Question 2

The researcher ran a Mann-Whitney U analysis on CORE-10 Item 9, where clients answered the prompt "I have felt unhappy." This analysis rendered a significant difference of $p = .038$, meaning that the difference in CORE-10 Item 9 scores from pre- to post-test was statistically significant. Additionally, Item 9 of the CORE-10 showed a percentage improvement of 35.82 for the intervention group clients, and 9.33 for TAU clients, representing a difference of 26.49 percentage points. This means that for Item 9 measuring levels of unhappiness, Sign your Feelings intervention group clients experienced decreases which were 3.84 times greater than those enjoyed by TAU clients.

Pertaining to Research Question 3

This question related to the correlation between SRS Post-test scores and CORE-10 scores. Post-hoc, the researcher investigated whether there were any differences between the two groups' Pearson correlations. The intervention group clients had a Pearson correlation of -.125 and the TAU clients had a correlation of -.176. The researcher posits that the difference between the two groups might have occurred because the therapists working with TAU clients might have felt more comfortable as they were not required to change the manner in which they were conducting therapy.

The Findings in the Context of the Existing Literature

Pertaining to Research Question 1

Although Finding 1 was not statistically significant, intervention group gains were greater than those for the TAU group. This is in line with the literature review in Chapter 2, notably research from Flückiger et al. (2020) citing significant reciprocal within-patient effects occurred between the alliance and symptoms, within the first seven sessions. Given the literature stressing the importance of the therapeutic alliance, the researcher not only tested it but incorporated it into the intervention itself.

Pertaining to Research Question 2

Finding 2 cited above did not result in a statistically significant difference between groups. However, the intervention group clients did display slightly larger decreases in CORE-10 scores. Literature cited in Chapter 2 points to the benefits of emotional disclosure in therapy, which was a crucial part of the Sign your Feelings intervention. According to Sloan and Kahn (2005), a client's tendency to disclose served

to predict a decrease in both symptoms and social-role concerns, and this only after three to four psychotherapy sessions.

Pertaining to Research Question 3

Finding 3 relating to the correlation between SRS post-test scores and CORE-10 scores was in line with research discussed in Chapter 2, notably that of Flückiger et al. (2020), who make a case for early alliance predicting posttreatment outcomes. As mentioned previously, the link between stronger therapeutic alliances and improved client outcomes was one of the foundational principles behind the creation of the Sign your Feelings intervention. Because of ample research supporting the value of improving outcomes through strong and open therapeutic alliances, clients in the intervention group not only learned signs related to the therapeutic alliance but also spent time discussing the subject with their therapists.

Implications of Findings

The researcher posits that various stakeholders stand to benefit from the findings reported in Chapter 4. To add context to the findings reported in Chapter 4 and described above, the author divided the implications into ones which will benefit counselor educators and therapists, the future of the Sign your Feelings intervention, the D/deaf and hard of hearing community, and the hearing community.

For Counselor Educators and Therapists

A Novel Multi-Cultural Intervention

Post-hoc analysis, as seen in Figure 14, highlights that Item 3 of the SRS entitled 'Approach and Methods' rendered a percentage increase (PI) of 9.15 for the intervention group clients as opposed to a 4.04 PI for TAU clients, representing a greater than 2-fold

increase. The researcher posits that the difference between the PI scores might be due to the intervention group benefitting from a novel approach or methodology, in the form of the administration of the Sign your Feelings intervention. This novel approach is multi-cultural, as it provides hearing therapists an introduction to a new language practiced by a linguistic-cultural minority and, indirectly, an introduction to a new culture.

Code F.7.c. of the American Counseling Association's Code of Ethics (ACA, 2014) stipulates the importance of incorporating and teaching material related to multiculturalism and diversity. Furthermore, ACA Code F.11.c. states that counselor educators should promote multicultural and diversity competency in their training and supervision practices and actively train students to gain greater awareness, knowledge, and multicultural skills and competencies.

Through this study, the author hopes that more counselor educators and therapists will learn more about ASL, D/deafness, Deaf Culture, and Deaf History and then pass on this knowledge to future therapists. The researcher also regards the Sign your Feelings intervention as a form of advocacy and social justice action in favor of the Deaf community and their language. The intervention raises visibility and fosters greater awareness of ASL and D/deaf issues. ACA Code of Ethics A.7.a. states that members of the counseling profession should act as advocates and address any potential barriers and obstacles which inhibit access or the growth and development of clients (ACA, 2014).

A Novel Approach to the Therapeutic Alliance

Table 9 illustrates that although the differences in SRS pre- and post-scores were not statistically significant between the two groups, the intervention group enjoyed a 2.42 increase in SRS scores and a 1.83 increase for TAU clients. The researcher posits that

this difference might have been larger if not for the instrument's ceiling effects and the large disparity in number of sessions prior to the commencement of the study. Given that this intervention is the first therapeutic intervention requiring therapists to purposefully discuss the therapeutic alliance with their clients, the researcher hopes that it would provide help improve the relationship's various components, namely alliance, empathy, and genuineness, as discussed in Chapter 2.

As detailed in Finding 3, the higher a client scored the therapeutic alliance on the SRS post-test, the lower their levels of mental distress, as reported on CORE-10 post-scores. As discussed in Chapter 2 the existing literature is rife with research demonstrating the importance of the therapeutic alliance for client outcomes. This study provides additional proof of this correlation and provides therapists with yet another way to approach the therapeutic alliance.

After the study was over, the researcher spoke with some of the therapists who administered the intervention. The researcher had provided each therapist with a letter code, from A-Q. Therapist I pointed out that: "teaching my client how to sign her feelings helped me with my attunement towards them, and it helped us feel a stronger alliance in the therapy space." Therapist O thought that "having the shared learning experience of using signs while actually engaged in conversation created a new level in the rapport previously built." Therapist A shared that they thought the Sign your Feelings intervention provided "a valuable additional way to communicate and enhance understanding between clinicians and clients." Therapist A also stated that the intervention helped recalibrate the power imbalance:

> I also thought that the learning experience was valuable in that it equalized us as learners, who each sometimes struggled, forgot, or goofed on a gesture. My status as a learner alongside them seemed to help reduce expectations or pressure around 'getting it right' and 'allowed' them to make mistakes while they participated, as the process of learning and sharing was more important than doing it perfectly. The format of the study also helped to make sure we were effectively clarifying intentions/goals for each session since it was more structured than normal sessions - I think this helped to cut down the noise and dive into what was most important to process each week.

The researcher spoke with several therapists who plan on incorporating discussions on the therapeutic alliance in the future. Therapist E reported that:

> This intervention training has made me aware that I do not focus on the therapeutic alliance relationship enough. I have started implementing this change when providing my professional disclosure to clients. I have added the language around the importance of building a healthy therapeutic alliance, warning signs of rupture because therapy can get uncomfortable, and ways to repair the rupture to promote healing. The interventions provided my clients with a nonverbal way to express their emotions when they find them difficult to share verbally.

A More Lighthearted Approach to Therapy

Post-hoc analysis highlights that intervention group clients rated CORE-10 Item 9, where clients answered the prompt "I have felt unhappy" higher than their TAU counterparts. This analysis rendered a significant difference of $p = .038$. Furthermore, this item showed a percentage improvement of 35.82 for the intervention group clients, and

9.33 for TAU clients, representing a difference of 26.49 percentage points. This means that for Item 9 measuring levels of unhappiness, Sign your Feelings intervention group clients experienced decreases which were 3.84 times greater than those enjoyed by TAU clients. Although individual items of a measure are not meant to be isolated, the researcher considers it of note that these post-hoc analyses are in line with the therapists' post-study comments, as decreases in unhappiness could be the result of the lighthearted experiences reported by intervention group clients during their therapy sessions.

Therapist E commented that their clients "reported that they had fun learning how to sign their emotions because they never thought of communicating in that way." Therapist C noted that "All my intervention clients had fun learning the signs, using them in sentences and trying to apply them to emotions throughout the session. We were able to laugh and joke together, which helped reduce stress and anxiety (if any)." Therapist O shared that:

> The intervention clients that I worked with were excited about learning something new. They were ready each time the discussions shifted to the teaching of the signs. Their body language indicated that they were prepared to learn as they leaned in closer to the cameras and maintained attention on me while I was modeling the signs. Both of them reported words to describe the intervention such as "cool", and "interesting." They often found their own ways to memorize the signs.

Therapist K shared that they thoroughly enjoyed sharing the signs with their clients, and that they had fun learning them together and talking about the emotions as they signed them. As for Therapist G, they reported that their intervention group clients

found the experience enjoyable, adding that their clients found that adding signs to the discussions lent a lighthearted tone to therapy. Therapist G noted that the Sign your Feelings intervention allowed for conversations about emotions that had not previously come up in therapy. Finally, they added that "Clients noted how fun it was to learn and many have requested to continue to use them following the end of the study, and have a copy of the list so they can continue to practice them."

ASL and the Benefits of Signing

One of the benefits of the Sign your Feelings intervention is that it expands the number of hearing people who know about ASL. Out of the 13 therapists who responded, 12 of them (92.3%) reported that following this experience, they wished to learn more ASL. Nine of the 13 therapists (69.23%) who responded reported that their clients were planning on learning ASL in the future.

Therapist A noted that one of her intervention clients "wanted to try to use the signs with her husband to improve communication skills." Therapist J had a similar experience and commented that one of her clients told her she "thought this would be useful in communicating with her husband and plans to teach him some of the signs she learned in session." Therapist O noted that their intervention clients "planned on using some of the signs with friends."

Therapist M reported that they had a client who, "through signing the word for anger, was able to acknowledge feelings of anger he had suppressed." Therapist M spoke about the benefits of the intervention: "By exploring emotions that were not often discussed in some therapeutic dyads, I had the chance, for example, to learn what

fascinates and brings clients joy, and to see them get to experience it in an immediate way, as they used their bodies to sign the feelings." They also noted that:

> By discussing and signing the word for empathy, a client and I were able to explore the positive impact of being truly seen, and also the frustration that comes from when assumptions are made about how she feels. We explored how important it is, in therapy, and other important relationships, to address when there are wrong assumptions made, otherwise there is a risk of rupture to the relationship.

When questioned about how challenging the therapists and clients found learning the signs, 14 out of the 16 (87.5%) therapists responded. Collectively, therapists reported that on average, they rated the signs as a 3.28 on a difficulty scale of 0 to ten, with ten being the most difficult. Therapists estimated that their clients found the signs a 4.14 out ten in difficulty. The researcher found these statistics to be encouraging and useful for the future of the intervention.

A New Approach to Emotional Disclosure

Thirteen out of the 14 therapists (92.86%) who answered the researcher's query reported that they believed that the intervention improved their clients' ability to emotionally disclose. The Sign your Feelings intervention is the first therapeutic intervention that requires therapists to prompt systematic emotional disclosure on a specific list of words relating to the client's emotions. Therapist J explained that "The feedback I got from clients was that it was very helpful to learn to express emotions and words with facial expressions and physical signing. They expressed it to be exciting and more helpful than just verbalizing thoughts and emotions."

Therapist G noted that "It was very beneficial to use it as an instrument to facilitate the emotional disclosure as well as strengthening the bond by taking the time to teach and discuss the application." Therapist H reported that the intervention made their clients "more likely to sit and think about their feelings to identify them, rather than so quickly jumping to saying that they did not know." Therapist A stated: "I found that the Sign your Feelings Intervention helped clients in the experimental group with affect labeling. I noticed that clients who are typically expressive but don't use that many feeling words seemed to label their emotional experience." Furthermore, Therapist A related that:

> This meant that I echoed, validated, and reflected their feelings while they were the ones taking charge of expressing themselves. It seemed like learning the gestures helped to make their 'word bank' of available emotion labels more accessible - some clients even expressed gestures from prior week's sessions as the weeks went on.

Therapist O related that the signs led to meaningful conversations, explaining that "Last week the terms adoration and admiration were the biggest catalysts for expression. One client spoke about their deceased parent in relation to this, while the other spoke about these terms in regard to self-esteem." Therapist E pointed out that the intervention "can also help clients become aware of their emotions so that they can express them in a healthier way." Therapist H explained that:

> Learning and implementing Sign your Feelings was incredibly useful, especially with clients who struggle with identifying and actually sitting with the feelings they are experiencing. For some clients, it came super natural and was almost as if

it was something just added and move on with it, whereas with other clients, it felt almost groundbreaking in genuinely attempting to identify feelings of a situation and being able to flesh it out. This intervention greatly impacted the clients' ability to comfortably identify feelings and speak about it, which greatly affected the treatment goals and the content of the session in general.

Therapist K reported that several of their clients' favorite sign was the one for “resistance." They explained that "The sign was instrumental in opening an exploratory dialogue about the people, events and emotions which they feel resistant about, whether positive or negative. They came back the next week and shared what and/or who they resisted during the week."

For the Future of the Intervention

The Intervention in its Current Form

Although initial data findings and post-hoc analyses did not show clear statistical significance for research questions 1 and 2, the author remains optimistic for the future of the Sign your Feelings intervention, especially if subsequent research results in statistically significant *p* values when measuring the therapeutic alliance and client outcomes. In the meantime, the author plans on improving the training module used for this study, and naming it the Starter Module.

The Starter Module would include the 36 signs used in this proof-of-concept study and would be formulated for therapists working with individual adult clients. It would incorporate lessons on Deaf culture, Deaf history, and Deaf issues. This would be to ensure that therapists will not be providing the Sign your Feelings intervention without at least some awareness of these issues. The researcher would create the Deaf culture

curriculum in collaboration with members of the Deaf and Hard of Hearing community. The author would hire Deaf persons fluent in ASL to record the ASL vocabulary lessons, and all videos will be close-captioned. The Starter Module would also include lessons on how to fingerspell the alphabet in ASL.

Additional Modules

The author is considering creating additional modules to help the Sign your Feelings intervention reach a larger pool of counselors and clients and expand the public's understanding of the connection between language, emotional disclosure, and the therapeutic process. Future modules could include ones:

- additional signs relating to emotions, in line with the work by Brené Brown (2022) on the importance of language and as described in her book *Atlas of the Heart*
- signs and concepts relating to the experiences of minorities and the oppressed (the "Social Justice" Module)
- signs to help discussions about LGBTQIA issues
- signs aimed at individual work with teenagers
- signs aimed at individual therapeutic work or play therapy with children
- signs aimed at those who work with elderly persons
- signs aimed at specific presenting problems
- signs for concepts commonly used in therapy
- signs and concepts for use in couples' therapy

The couples' therapy module would have the therapist teach couples various signs during therapy and have them practice in between sessions. The use of sign language

could help clarify communication and serve as a type of shortcut when couples find it challenging to discuss specific topics inherent to couples counseling. An extension of this concept would be a module for family use and, eventually, use in schools. In the long-term, the author would like to see the Sign your Feelings intervention develop further and exist in languages other than English and ASL. All therapists having enrolled in this original proof of concept study would be offered free tuition in all future modules. As the case for the Starter Module discussed above, all modules would incorporate lessons on ASL fingerspelling, Deaf culture, Deaf history, and Deaf issues.

When therapists from this study were asked about which future modules might be useful, Therapist I stated that they could "see this being a wonderful intervention for people that experience alexithymia." Therapist L could "see the benefits for clients who struggle with communication verbally." Therapist O said that the Sign your Feelings intervention reminded them of other interventions that help clients go deeper and gain insight. They stated that they "think that it is also beneficial to know some signs to help clients with limited vocabulary and limited verbal skills" and were curious to see how children respond to the intervention.

Therapist C added that they thought the intervention would work well for therapists who work with children on the autism spectrum or with ADHD. Therapist Q administered the intervention to a client experiencing depression, social anxiety, and low self-esteem. The therapist opined that the intervention would benefit anxious clients or clients who tend to be people-pleasing in relationships. They explained:

> My client has taught her family and fiancé some of her more often used signs. I did find some signs were used more frequently, like resistance, uneasy, frustrated,

anxious, happy, and sad. I feel the signs offer a safer; in-between way to express feelings. I also feel that this technique is going to help her communicate better with family, like a shorthand i.e., baby steps between word and feeling. I also feel this will help people get out of their head (intellectualizing) and learn to get more into feeling.

For the D/deaf and Hard of Hearing Community

The Sign your Feelings Projects

Despite the fact that the researcher was unable to reject the null hypothesis for research questions 1 and 2, the author would like to find ways to develop the intervention. The author is aware that the Sign your Feelings intervention uses the language of a minority culture for the primary benefit of the hearing, dominant, majority. It is natural that, given their long history of oppression, Deaf persons can find the use of sign language by hearing persons a sensitive topic. If the researcher successfully develops this intervention, the author's goal is to ensure that it also directly benefits the Deaf community. To do so, the researcher has several projects in mind, and would ask the Deaf community for help in vetting them for appropriateness before they come to fruition. Projects would center around improving D/deaf mental health and encompass a multi-tiered, pluridisciplinary, lifespan approach. These future projects would aim to:

- Facilitate D/deaf persons' access to mental health services.
- Raise awareness about D/deaf mental health within the hearing and Deaf communities.
- Create Scholarships for Deaf Mental Health Professionals.

- Advocate for D/deaf rights, both in the framework of existing laws and new legislation.
- Expand the number of professional ASL interpreters.
- Increase D/deaf representation in the mainstream media.
- Combat language deprivation by educating pediatricians, audiologists, and parents.
- Incorporate research on linguistic deprivation into mental health and social work curricula.

Facilitate Access to Mental Health Services. Pertz et al. (2018) note that Deaf American Sign Language (ASL) users identify themselves as a minority community, much like any other. However, unlike a non-native speaking immigrant who might eventually learn the native language, a Deaf person who uses ASL as their primary mode of communication cannot 'just' learn to verbally communicate the dominant culture's language. As a result, their challenges remain ongoing as opposed to temporary. Lack of knowledge about D/deafness, discrimination, lack of services ensuring inclusion, and a lack of persons fluent in ASL lead to several mental health challenges and logistical obstacles.

A recent study by James et al. (2021) points out that Deaf American Sign Language users are underserved in health education, health care research, and healthcare access. Pertz et al. (2018) state that only 2% of D/deaf adults who find themselves in need of mental health services ever receive them. Pertz et al. note that ensuring that D/deaf individuals receive access to adequate health care communication is also beneficial for preventive care.

Raise Awareness about Deaf Mental Health. Compounding the problematic access to mental health services, members of the D/deaf community, much like other minorities, experience a higher incidence of mental health issues. Pertz et al. (2018) pointed out that D/deaf and hard of hearing persons experience a higher prevalence of mental disorders linked to various psychosocial factors. Pertz et al. clarified that these factors include low socioeconomic status, social isolation, and challenges in finding accessible mental health programs.

Results of research conducted by James et al. (2021) demonstrated that D/deaf participants reported mental health issues as their top health concern, and 15.5% of them were likely experiencing a depressive disorder. James et al.'s study compared 92 Deaf ASL users and 12,589 hearing English speakers from the 2018 Florida Behavioral Risk Factor Surveillance System. D/deaf persons in the study were 1.8 times more likely than their hearing counterparts to binge drink during the past month. Access to ASL interpretation is challenging, with 37.2% of the study's D/deaf participants reporting that personnel at a medical facility had denied them access to an interpreter the past 12 months.

Furthermore, there is widespread support for D/deaf people's gaining greater access to ASL-fluent therapists via telehealth. However, current legislation in the United States of America presents hurdles for clients wishing to access ASL-fluent therapists who live in a state other than their own. The author hopes that the passage of the Counseling Compact in 2022 will provide D/deaf persons with greater access to ASL-fluent therapists since these therapists will be able to work with a larger pool of clients. This compact is an interstate compact that will allow professional counselors licensed and

residing in one compact member state, to be able to practice in other compact member state and to do so without the need for multiple licenses (National Center for Interstate Compacts, 2022).

Increase the Number of Deaf Therapists. The author wishes to have future therapist trainings help fund scholarship programs for Deaf persons wishing to join the field of mental health and social work. This would help address the lack of Deaf mental health therapists which is currently compounding the D/deaf mental health crisis. Pertz et al. (2018) points out that Deaf clients prefer to have direct access to therapists who are fluent in ASL and enjoy better client outcomes when doing so. The researcher posits that providing Deaf clients access to therapists who are not only fluent in ASL but who have first-hand experience with Deaf culture would be even more beneficial.

Advocate for D/deaf Rights. Pertz et al. (2018) explain that Deaf ASL users will often experience challenges understanding spoken English and may lack proficiency or fluency in written English, especially those who have had to overcome linguistic deprivation. Despite the Americans with Disabilities Act of 1990, D/deaf persons continue to experience grave communication and language barriers in other healthcare settings. Alexander et al. (2012) researched the matter and found that only 17% of Deaf ASL signers received interpretation services during their health care visits, although it is unclear whether this percentage is higher in mental health settings. Furthermore, Pertz et al. noted that Deaf signers are more likely to use Medicaid, further reducing access.

Another challenge Pertz et al. (2018) described is that many health care providers lack training on how to care for Deaf signers effectively, often leading to cultural

conflicts. The researcher deems it necessary to regard these actions not only in ensuring that providers enforce current laws but also in the context of new legislation.

Increase Representation in the Mainstream Media. It should be noted that D/deaf persons do not view hearing or D/deafness in the same way as hearing persons might. In their book *Deaf gain: raising the stakes for human diversity,* editors Bauman and Murray (2014) present an anthology of essays about Deafness. The authors explain that for many Deaf people, Deafness is framed as sensory diversity instead of as a loss. Bauman and Murray add that Deaf persons have much to gain from being D/deaf, including a greater sense of a large, international community. Given the medical model's omnipresence, this viewpoint on D/deafness might be novel to a hearing person unfamiliar with Deaf culture. Ideally, as more people communicate using ASL and Deaf culture makes strides in representation in mainstream media, hearing persons will alter their views on this subject.

The researcher hopes that a recent watershed moment in Deaf history marks a shift in the mainstream hearing world's perception of Deafness. In March 2022, the movie CODA, led by a Deaf cast, won the Academy Award for Best Picture (National Public Radio, 2022). The abbreviation CODA stands for Child of Deaf Adults, and the movie showcases the life of a young hearing woman and her Deaf family. Furthermore, Deaf Actor Troy Kotsur won Best Supporting Actor for this role in that movie, and Sian Heder won best-adapted screenplay for her adaptation (NPR, 2022). This was only the second time in history that a Deaf person won an Oscar for acting. The last time was in 1986, when American actress, author, and activist Marlee Matlin won Best Actress for her role in "Children of a Lesser God" (Academy of Motion Picture Arts and Sciences, 2022).

In addition to increased visibility in movies and television, Deaf representation is also on the rise in print. A recent memoir by well-known Deaf activist, producer, actor, and model Nyle DiMarco, Deaf *Utopia,* made the New York Times Bestseller list in the Spring of 2022. It garnered attention as a celebration of Deaf culture and provides a window into his life experiences (New York Times, 2022). DiMarco heads a foundation that aims at combatting linguistic deprivation and seeks to change the landscape of Deaf education. The foundation's current priority is to help families obtain access to early intervention programs and ensure that Deaf children acquire language at a young age (Nyle diMarco Foundation, 2022).

Combat Language Deprivation. Humphries et al. (2016) explain that parents who do not provide their D/deaf children with sign language at the earliest stages of their development are at risk of causing linguistic deprivation. These children may never attain fluency in any language and may present deficits in cognitive abilities which rely on a firm foundation in a first language. Not being exposed to sign language makes them more prone to be socially and emotionally isolated. Humphries et al.'s research demonstrate that inadequate language access also leads to adverse health and psychological outcomes and that this type of maltreatment is both underrecognized and underreported. This is especially problematic because it can lead to other types of maltreatment, and a D/deaf child deprived of language cannot report the abuse in question. Framed in this manner, Humphries et al. noted that linguistic deprivation in failing to provide exposure to an accessible language constitutes a form of child neglect.

Hall (2017) reported that mental health clinicians frequently witness language deprivation and language dysfluency in D/deaf individuals seeking mental health

treatment. Hall et al. argued that the disruption of language development frequently experienced by D/deaf persons is a crucial factor contributing to the epidemiology of mental illness in the D/deaf population and the cause of mental health difficulties across the entire lifespan.

Language deprivation can lead to what some clinicians dub Language Deprivation Syndrome, starting in infancy and progressing throughout a young person's early childhood. This syndrome impacts literacy and creates impairments in higher cognitive function and memory, skilled time sequencing, understanding cause and effect, regulation of mood, and other features involved in abstract thought and executive function (Hecht, 2020). Hecht pointed out that functional neuroimaging research conducted on D/deaf adults having experienced language deprivation reveals a reorganization of their cortical architecture.

This life-altering disability is rarely seen in the hearing community but is epidemic in D/deaf populations. Full access to sign language during the period in which the brain's plasticity is optimally primed for language development can prevent language deprivation (Humphries et al., 2016). Deaf babies born into D/deaf families who use ASL, or another sign language, do not experience language deprivation because parents expose them to a native language from birth, just as parents of typically developing children who are not D/deaf. The only difference is that their language acquisition occurs via the visual-manual modality instead of the auditory-oral modality (Cheng et al., 2019).

Educate Medical Professionals. The researcher wishes to create programs that specifically address pediatricians' and audiologists' incorrect or incomplete perceptions of sign language and D/deafness. Historically, a primary cause of language deprivation was

the late age of diagnosis of D/deafness, which was, on average, 2.5 years (Hecht, 2020). This is no longer the case with the advent of early detection programs. Hecht's research highlights that the medical model of D/deafness is creating current delays in language input. This model prioritizes providing parents hope for the eventual acquisition of spoken language at the expense of the urgent and immediate need for exposure to accessible language.

Hecht's viewpoint is that Early Hearing Detection and Intervention (EHDI) professionals have traditionally viewed D/deaf people's poor academic and social outcomes as a direct and inevitable result of their Deafness. However, they explained that this is incorrect and that the professionals themselves have been in pivotal positions to reverse this trend and have failed to do so. Hecht (2020) advocates for pediatricians and others leading the EHDI system to consider the evidence-based benefits of early sign language and inform all parents of the multiple manifestations of language deprivation as a devastating and permanent disability.

Dismissing sign language as merely a last resort to be employed only if medical options are unavailable, is deeply rooted in negative, ableist biases. Hecht argued that physicians must recognize that sign language is the sole means that D/deaf infants may immediately access language and therefore enjoy undisrupted brain development. Not doing so is, according to Hecht (2020), unethical. Equally, Hecht makes a case for doctors to advocate sign language learning for babies scheduled to receive cochlear implants.

Hecht explains that by the time a baby is four months of age, both phonemic awareness and the foundations of neurolinguistic processing are possible. The

development of a baby's language centers is time sensitive. For complete language acquisition, adequate stimulation, coupled with robust and complex language, must take place during a baby's appropriate developmental windows. As high order processing relies on previously acquired lower-level processing, a baby's complex cognitive abilities will only emerge if their brain has successfully acquired language first.

It is understandable that hearing parents feel unsure how to proceed when presented with the information that their newborn is D/deaf. Over 90% of deaf children are born into hearing families (The Outreach Center for Deafness and Blindness, 2022). For many hearing parents, their deaf newborn will be the first person they ever meet who is D/deaf. Some of these hearing parents decide to learn sign language to communicate with their children, and some prefer to use oral communication, often using a combination of hearing compensation technology such as cochlear implants and speech training. However, some D/deaf children do not gain full access to either spoken or sign language under certain conditions, resulting in early language deprivation. Statistics from 2011 fewer state that less than 8% of deaf children receive regular access to sign language in their home, meaning that they experience fluent, bidirectional conversations (Hall et al., 2017).

For the Hearing Community

A person who is currently able to hear and does not require sign language to communicate might see D/deafness as something which either does not concern them or will not concern them in the future. The researcher points out although a hearing person is currently a member of the majority from an audiological standpoint, one day they might join the minority of people who have hearing loss or who cannot hear altogether.

Goman et al. (2017) points out that the National Academies of Sciences, Engineering, and Medicine (NASEM) recommended that public policy initiatives improve access to interventions and hearing health care services due to demographic predictions about the aging of the U.S. population. Goman et al. explain that by 2040 the number of people with hearing loss in the United States will almost double. This is largely due to rise in the percentage of older adults, which will outpace the overall population growth rate.

Furthermore, by 2060, Goman et al. specify that number of people who will experience moderate to significant hearing loss will increase significantly and will exceed the number of people who have a mild loss today. This increase means that researchers expect the number of adults in the United States who are 20 years or older with hearing loss (equaling a pure tone average of greater than 25 dB) to increase gradually from a total of 44.11 million in 2020 to 73.5 million by the year 2060 (Goman et al., 2017).

Public policy decisions could help create programs that provide ASL tuition and create more Deaf Studies programs at elementary, middle, high school, and university levels. Having ASL in their communications arsenal could help persons newly experiencing hearing loss and could help prevent the sense of isolation experienced by persons who cannot effectively communicate with others. Given what the mental health community already knows about the negative repercussions of feelings of isolation on mental well-being, the issue of the aging population and hearing loss is also a mental health issue.

Higher levels of fluency in ASL in the general hearing population would also help groups which already depend on sign language as a mode of communication, such as persons on the autism spectrum, who experience selective mutism or who have cerebral

palsy. Another reason why hearing persons might wish to learn sign language is that as explained above, approximately 90% of deaf babies are born to hearing parents, and these babies fully depend on their parents to teach them sign language (The Outreach Center for Deafness and Blindness, 2022).

Limitations

In Chapter 3 the author cited several limitations they thought might influence the outcomes of the randomized control trial. After conducting the study, and after finding that the data was not normally distributed, the researcher considered additional limitations which might have led to the author needing to carry out non-parametric analyses. Heppner and Heppner (2004) explain that limitations can be divided into four categories: sampling, instruments, procedures, and methodology.

Related to Sampling

Initially, the researcher intended to ensure that participating clients had already established a therapeutic alliance with their therapists prior to starting the study. For this reason, the author required clients to have already completed three sessions with their therapist before enrollment. Meier and Feeley's (2022) research on ceiling effects state that the greatest improvements in the therapeutic alliance occur in the first seven sessions, and after that, improvements tend to flatline.

Given that the researcher had (a) required clients to have had no less than four sessions; and (b) had not set a maximum the number of previous sessions, the researcher's data showed a wide range of prior sessions ranging from three sessions to 309 sessions (equivalent to approximately 6 years of therapy). In hindsight, the researcher believes that this might have contributed to some of the non-normality in data distribution. The author

posits that it might have been difficult for a client who has been seeing a therapist for several months or years to discern improvements in the therapeutic alliance. Lastly, the researcher did not collect demographic data, and therefore was unaware if any specific demographic factors might have influenced results. Future research could include collection of this data.

Related to Instruments

After the Sign your Feelings study commenced the researcher noticed that 21 out of the 80 clients (26.25%) scored a 40 out of 40 in their SRS Pre-tests. These ceiling effects, inherent to the use of working alliance measures (Meier & Feeley, 2022), created limitations as they gave rise to differential scores of 0 when comparing SRS Pre-test scores and SRS Post-test scores. Future iterations of this study could use a different alliance measure which leaves more room for improvement, such as the Working Alliance Inventory, known as the WAI (Munder et al., 2010).

Related to Procedures or Non-Adherence to Procedures

Non-Consecutive Attendance

Although all clients starting out the study had initially intended to attend four consecutive weekly sessions, approximately 1 in 5 (20%) were unable to do so. This meant that some clients had two-week breaks between some of the sessions. This might have contributed to the non-normality of SRS and CORE-10 scores. As this might have acted as a confound, future iterations of this study could exclude data from clients who do not receive weekly therapy.

Potential Therapist Error

Although the researcher provided therapists with training, quizzes, and a clear protocol, it is possible that some therapists could have committed errors in carrying out the required procedures. In addition, therapists might have felt trepidation at teaching the signs, making the clients uneasy about the process. Lastly, therapists might have harbored some reservations about spending some of the client's time in a new modality. Improved fidelity testing through increased contact with the therapists could help overcome this limitation in the future.

Potential Researcher Error

Another procedural limitation might have been that the researcher is a hearing person and is not fluent in ASL. This constraint might have created procedural errors in the framework of the intervention itself. Additionally, this might have negatively affected the study as the ASL signs the researcher presented in the Sign your Feelings training were not as well-executed as they would have been by a person who is fluent in ASL. In future iterations of this project, the author plans on hiring Deaf ASL teachers to record all ASL instruction. Furthermore, the researcher is not a member of the D/deaf community and is still learning about the issues she hopes to incorporate in future therapist trainings. The author will seek collaboration from well-established organizations in the Deaf community specializing in teaching hearing persons about D/deaf issues, in the spirit of cultural humility.

Related to Methodology

In hindsight, the author believes that the split between teletherapy (virtual) and in-person clients might have caused abnormal data distribution. The researcher posits that

the data would have been more normally distributed if each therapist would have systematically used the same modality for all their clients. Although all of Therapist M's intervention were virtual, they related that "I think in-person would be ideal for this so as to have as much body language accessible as possible." As for Therapist H, they pointed out that "Although I did the virtual modality, I feel that in-person might be better simply for teaching the signs and it might almost promote comfort in the room with processing and repeating the signs and their understanding as well." Therapist C was of the same opinion, explaining that "All of mine were virtual, but I think in person would have gone better. Mostly because with virtual it's hard to get the whole-body movement in with the sign. It worked well virtually, but I think in person would have been a bit better." Therapist F administered the intervention both virtually and in-person, and reported that in her opinion, "in-person worked better."

Recommendations for Future Research

Increase Diversity

The researcher conducted the randomized control trial on 80 clients. Future studies could involve larger sample sizes. The current study was limited to the United States of America, and future research could entail greater geographic diversity by including clients in other countries. Lastly, research could focus on whether the intervention works well in another language and with different sign languages such as Libras, British Sign Language or Spanish Sign Language.

Expand Target Audience

The current study did not ask clients to provide any demographic markers. Future studies could include this in the data collection. This would allow for the analysis of

potential moderating variables such as education, religiosity, gender, sexual orientation, number of sessions already completed with the therapist. This study was limited to persons 18 years of age and older, and future research could also include children. Future research could also focus on the intervention's use with clients experiencing alexithymia or selective mutism and clients on the autism spectrum. The researcher posits that limiting the number of sessions prior to the study to a maximum of eight might render higher pre- to post-test score differences, due to ceiling effects (Meier & Feeley, 2022).

Modify Therapist Demographics

The current therapist criteria excluded therapists having completed their degree in social work, as the researcher considered it a confounding variable. Future research might include Social Workers in the therapist pool. Furthermore, it could include an analysis of whether therapists' licensure status, theoretical orientation, years of practice, and master's degree are moderating variables.

Vary the Approach

Future studies could employ a qualitative approach and focus on the therapist's experience and how the intervention affects therapists' perceptions of the therapeutic alliance and their effectiveness as a therapist. Researchers could employ either qualitative interviews with the therapists or clients. The author used the SRS and CORE-10 measures for this study, and future studies could use different instruments, such as the Working Alliance Inventory, known as the WAI (Munder et al., 2010). Additional research could focus on measuring other areas, such as therapist effectiveness.

Future research could find potential correlations between the number of sessions a client has had prior to starting the study with the SRS Pre-test levels. The author could

conduct future research on the long-term effects of the Sign your Feelings intervention by running a longitudinal study. Clients could be re-tested 6 months after the end of their participation in the initial study to see whether the gains held over time.

Increase Number of Weeks

The Sign your Feelings study was conducted over 4 weeks. The research posits that a 6-week intervention would have rendered higher levels of differentiation between the two groups. The author's logic is that 6 weeks would have provided more time for the clients and therapists to become comfortable with the intervention and the signs.

Introduce New Dependent Variables

Future research could delve into a possible correlation between higher levels of emotional disclosure, lower levels of shame, and higher levels of vulnerability. The researcher posits that higher tolerance for feeling vulnerable in session might lead to improved client outcomes, stronger therapeutic alliances, and an improved ability to seek support from their entourage. Incorporating Brené Brown's (2006) existing work in these areas might illuminate the interplay between these elements of the human experience.

Investigate the Intervention's Effect on Unhappiness Levels

Given post-hoc analyses relating to Item 9 of the CORE-10, the researcher posits that future research could delve further into the Sign your Feeling's effect on unhappiness levels. To this end, a new study could require participating clients to rate their unhappiness or depression prior to starting the intervention and then again at the end. Researchers could employ instruments such as the PHQ-9 (Beard et al., 2015) or Beck's Depression Inventory (Segal et al., 2008). In addition to reporting their distress, future studies could also include instruments that measure clients' happiness, such as

Lyubomirsky and Lepper's Subjective Happiness Scale (O'Connor et al., 2015). Additionally, these studies could focus solely on clients reporting depression to investigate further the intervention's effects on reducing unhappiness.

Engage in Participatory Action Research

A few months after completing the Ph.D. program, the researcher plans on opening a private practice as a Licensed Mental Health Counselor (LMHC). One way of continuing to develop the Sign your Feelings intervention will be to engage in participatory action research (PAR). The author would like to work alongside clients who would like to help develop the intervention in exchange for pro-bono therapeutic services. This would allow persons who might not necessarily be able to afford sessions to receive therapy and feel the pride of being part of research on therapeutic interventions. One benefit of this research approach is that it allows for a leveling of the client-therapist power dynamic. It turns the client into the expert and the client's lived experiences into knowledge which will help empower not only the client but others as well.

The PAR approach will be especially appropriate as the researcher develops a module aimed at therapeutic work with minorities and marginalized people. This 'Social Justice Module' would aim to help hearing clients discuss these issues with their therapists in therapy. Just as emotions can be challenging to bring up in therapy, so can matters pertaining to oppression. Through the PAR approach, the researcher will be consulting with clients who belong to minority or oppressed groups and therapists who serve these communities to decide which signs should be included in this module.

Glassman and Erdem (2014) explain that PAR does not stem from the ideas or contributions of one single person or group of researchers. Instead, it is born from linked to social movements of the 20th century, including land reform, anticolonialism, and the need for new types of research methodologies. As such, PAR would be a good fit for both the researcher and the Sign your Feelings intervention.

Conclusion

The Sign your Feelings intervention was the researcher's attempt to combine three different elements into one new therapeutic modality. By merging frank conversations about the therapeutic alliance, sign language learning and systematic emotional disclosure, this therapeutic intervention endeavored to break new ground. This is the first intervention to have utilized any of the three components mentioned above, as well as the first one to have integrated all three.

For the researcher, this project has been more than a requirement for completion of her Ph.D. degree. Developing the Sign your Feelings intervention provided a way for the author to satisfy her desire to create a new intervention and inspire hearing persons to learn more about sign language. Over the course of this program, the more the author learned about ASL, Deaf culture and linguistic deprivation, the more energy she infused into this dissertation. Delving into these subjects has also resulted in a long list of future projects, all having to do with ASL and Deaf mental health, as discussed above.

Data analyses in Chapter 4 did not demonstrate a statistical significance between the intervention and TAU groups for research questions 1 and 2. However, they did for research question 3, which concluded a negative correlation between SRS post-test scores and CORE-10 post-test scores, as originally hypothesized. In order to explore potential

signals of the intervention's effectiveness and areas for future research, and although individual items of a measure are not designed to be isolated, the researcher nonetheless investigated potential differences between the groups for each CORE-10 item. The author found that Item 9, which had clients report their unhappiness levels, rendered a statistically significant result of $p = .038$. Additionally, this item's percentage improvement (PI) scores provided a 35.82 PI for the intervention group against a 9.33 PI for the TAU control group, thereby resulting in a 3.84-fold amelioration.

In this chapter the author suggested several paths for future research, in the hope that this work will ignite a veritable 'Fibonacci tree' of therapists around the world, all introducing sign language to their hearing clients via the Sign your Feelings intervention. The researcher hopes that her love for the counseling profession, languages, ASL and the creative process and, were all evident on the pages of this dissertation, and that the reader will have found her enthusiasm contagious and her research inspiring. The author dreams of a day in which sign language use in both D/deaf and hearing communities is ubiquitous, D/deaf mental health rates are not higher than those for hearing persons, linguistic deprivation of is a thing of the past, and ASL and other sign languages around the world finally receive the respect and recognition they deserve.

APPENDICES

APPENDIX A

List of 36 Signs Used in the Study

36 signs in total, 9 signs for discussion about Therapeutic Alliance, Ruptures and Repairs and 27 from the Berkeley Social Interaction Laboratory's Department of Psychology's Capture of 27 Distinct Categories of Emotion Bridged by Continuous Gradients (Cowen & Keltner, 2017)

			Session 1	Session 2	Session 3	Session 4
1	Therapeutic Alliance	Therapeutic Alliance signs	Teach client	Briefly review	Briefly review	Briefly review
2	Therapeutic Rupture	Therapeutic Alliance signs	Teach client	Briefly review	Briefly review	Briefly review
3	Therapeutic Repair	Therapeutic Alliance signs	Teach client	Briefly review	Briefly review	Briefly review
4	Sorry	Therapeutic Alliance signs	Teach client	Briefly review	Briefly review	Briefly review
5	Resistance	Therapeutic Alliance signs	Teach client	Briefly review	Briefly review	Briefly review
6	Uneasy	Therapeutic Alliance signs	Teach client	Briefly review	Briefly review	Briefly review
7	Frustrated	Therapeutic Alliance signs	Teach client	Briefly review	Briefly review	Briefly review
8	Shame	Therapeutic Alliance signs	Teach client	Briefly review	Briefly review	Briefly review
9	Empathy	Therapeutic Alliance signs	Teach client	Briefly review	Briefly review	Briefly review
10	Enthusiasm	Cowen & Keltner (2017) study		Teach client		
11	Anxiety	Cowen & Keltner (2017) study		Teach client		
12	Confusion	Cowen & Keltner (2017) study		Teach client		
13	Fear	Cowen & Keltner (2017) study		Teach client		
14	Happy	Cowen & Keltner (2017) study		Teach client		
15	Calm	Cowen & Keltner (2017) study		Teach client		
16	Anger	Cowen & Keltner (2017) study		Teach client		
17	Disgust	Cowen & Keltner (2017) study		Teach client		
18	Sadness	Cowen & Keltner (2017) study		Teach client		
19	Surprise	Cowen & Keltner (2017) study			Teach client	
20	Admiration	Cowen & Keltner (2017) study			Teach client	
21	Interest	Cowen & Keltner (2017) study			Teach client	
22	Adoration	Cowen & Keltner (2017) study			Teach client	
23	Fascination	Cowen & Keltner (2017) study			Teach client	
24	Appreciation of Beauty	Cowen & Keltner (2017) study			Teach client	
25	Craving	Cowen & Keltner (2017) study			Teach client	
26	Amusement	Cowen & Keltner (2017) study			Teach client	
27	Satisfaction	Cowen & Keltner (2017) study			Teach client	
28	Awe	Cowen & Keltner (2017) study				Teach client
29	Awkward	Cowen & Keltner (2017) study				Teach client
30	Boredom	Cowen & Keltner (2017) study				Teach client
31	Compassion	Cowen & Keltner (2017) study				Teach client
32	Horror	Cowen & Keltner (2017) study				Teach client
33	Nostalgia	Cowen & Keltner (2017) study				Teach client
34	Relief	Cowen & Keltner (2017) study				Teach client
35	Romance	Cowen & Keltner (2017) study				Teach client
36	Sexual Desire	Cowen & Keltner (2017) study				Teach client

APPENDIX B

Technique to teach a Client a Sign

Step 1 - MODEL THE SIGN

Therapist says
"Now we will practice the sign for FRUSTRATED"

Therapist models sign by
saying the word FRUSTRATED while simultaneously making the sign (twice)

Client mimics
says FRUSTRATED while signing it (twice)

Therapist affirms, encourages and corrects if needed.

STEP 2 - EVOKE EMOTIONAL DISCLOSURE

Therapist asks:
"I am curious - when was the last time you felt FRUSTRATED? "
or if they don't remember:
"What type of situation has you feeling FRUSTRATED?"
Please tell me and do the sign while you say the word FRUSTRATED...

Therapist *can give an example of sentence with the word FRUSTRATED.*

Client cites example:
"I guess I felt FRUSTRATED when I found out I didn't get the raise."
(Client makes the sign for FRUSTRATED while they say the word)

Therapist affirms:
"Ah, yes, that makes sense!"

Therapist and Client continue:
... talking about how FRUSTRATION has been a theme in past conversations in therapy, etc, or how the client has managed to successfully overcome FRUSTRATION in the past, or techniques for dealing with FRUSTRATIONS in the future...

APPENDIX C

Step-by-Step Intervention Protocol

TEACHING HEARING CLIENTS SIGN LANGUAGE IN THERAPY: THE SIGN YOUR FEELINGS INTERVENTION'S EFFECTS ON THE THERAPEUTIC ALLIANCE AND CLIENT OUTCOMES

PRIOR TO COMMENCEMENT OF THE STUDY

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1. Researcher ensures that therapist fulfills criteria to deliver the intervention.

2. Therapist fills out Therapist Consent on the Qualtrics platform, as well as the form giving them permission to join the study if they are not self-employed.

3. Therapist provides the researcher with participating clients' emails (with their permission) and researcher emails client, providing them with the link to the Qualtrics Client Consent. Client fills out Consent form.

4. Researcher invites therapists to start their online training on www.signyourfeelings.com, and to take the quizzes to ensure that they know how to teach the sign language signs.

5. Researcher randomizes clients and places them into either the intervention or TAU group.

6. Therapist provides the researcher with the dates on which their clients will have the first and fourth sessions.

7. Therapists are invited to download the Step-by-Step Protocol and Cheat-Sheet and Sessions Checklist from www.signyourfeelings.com in preparation for starting to work with clients in the Sign your Feelings study.

8. Researcher sends therapists the Qualtrics links they will need for the SRS and CORE-10 measurements (in Session 1 and Session 4).

Week 1

Intervention Group Client(s)

1 At start of session:

- Teletherapy clients: During the session, therapist sends the client a link to the Qualtrics SRS instrument page, which the client fills out immediately, followed by another link to the Qualtrics CORE-10 instrument page, which the client also fills out immediately.
- In-person clients: Client fills in CORE-10 and SRS measure on paper.

2 Therapist introduces the study

3 Therapist briefly explains the therapeutic alliance

4 Therapist briefly explains that client will learn a little bit of sign language

5 Therapist teaches the client the following Therapeutic Alliance signs, while incorporating
(a) discussions about the client's experiences with the emotions
(b) related past issues, current presenting problems,
(c) the client's ongoing therapeutic treatment
- **therapeutic alliance**
- **therapeutic rupture**
- **therapeutic repair**
- **sorry**
- **resistance**
- **uneasy**
- **frustrated**
- **shame**
- **empathy**

6 Up to 24 hours after the session (for in-person clients only): therapist uploads client's SRS and CORE-10 scores via the Qualtrics link and destroys the paper copy.

Treatment-as-Usual Group Client(s)

1 At start of session:
- Teletherapy clients: During the session, therapist sends the client a link to the Qualtrics SRS instrument page, which the client fills out immediately, followed by another link to the Qualtrics CORE-10 instrument page, which the client also fills out immediately.
- In-person clients: Client fills in CORE-10 and SRS measure on paper.

2 Therapist proceeds with treatment-as-usual.

3 Up to 24 hours after the session (for in-person clients only): therapist uploads client's SRS and CORE-10 scores via the Qualtrics link and destroys the paper copy.

Week 2

Intervention Group Client(s)

1 Therapist and client review Therapeutic Alliance signs taught in Session 1

2 Therapist teaches the client the following Therapeutic Alliance signs, while incorporating
(a) discussions about the client's experiences with the emotion
(b) related past issues, current presenting problems
(c) the client's ongoing therapeutic treatment:
- **enthusiasm**
- **anxiety**
- **confusion**
- **fear**

- **happiness**
- **calm**
- **anger**
- **disgust**
- **sadness**

Treatment-as-Usual Group Client(s)

1 Therapist proceeds with treatment-as-usual.

Week 3

Intervention Group Client(s)

1 Therapist and client review Therapeutic Alliance signs taught in Session 1

2 Therapist teaches the client the following Therapeutic Alliance signs, while incorporating
(a) discussions about the client's experiences with the emotions
(b) related past issues, current presenting problems
(c) the client's ongoing therapeutic treatment:
- **surprise**
- **admiration**
- **interest**
- **adoration**
- **entrancement**
- **appreciation of beauty**
- **craving**
- **amusement**
- **satisfaction**

Treatment-as-Usual Group Client(s)

1 Therapist proceeds with treatment-as-usual.

Week 4

Intervention Group Clients(s)

1 Therapist and client review Therapeutic Alliance signs taught in Session

2 Therapist teaches the client the following Therapeutic Alliance signs, while incorporating
(a) discussions about the client's experiences with the emotions
(b) related past issues, current presenting problems
(c) the client's ongoing therapeutic treatment:
- **awe**
- **awkwardness**

- **boredom**
- **empathic**
- **pain**
- **horror**
- **nostalgia**
- **relief**
- **romance**
- **sexual desire**

3 At end of session:
- Teletherapy clients: During the session, the therapist sends the client a link to the Qualtrics SRS instrument page, which the client fills out immediately, followed by another link to the Qualtrics CORE-10 instrument page, which the client also fills out immediately.
- In-person clients: Client fills in CORE-10 and SRS measure on paper.

4 Up to 24 hours after the session (for in-person clients only): therapist uploads client's SRS and CORE-10 scores via the Qualtrics link and destroys the paper copy.

Treatment-as-Usual Group Client(s)

1 Therapist proceeds with treatment-as-usual.

2 At end of session:
- Teletherapy clients: During the session, the therapist sends the client a link to the Qualtrics SRS instrument page, which the client fills out immediately, followed by another link to the Qualtrics CORE-10 instrument page, which the client also fills out immediately.
- In-person clients: Client fills in CORE-10 and SRS measure on paper.

3 Up to 24 hours after the session (for in-person clients only): therapist uploads client's SRS and CORE-10 scores via the Qualtrics link and destroys the paper copy.

Compensation for Therapists' Time: The researcher will not compensate clients for their participation. The author will compensate therapists for their time, at the rate of 75 dollars for each client they work with in the context of the study. If for any reason a therapist decides to drop out of the study after they begin, or if any of their clients decide to drop out after they begin, the therapist will still receive a 75 dollar compensation per each client enrolled.

At the end of the study the researcher will send the therapists a Sign your Feelings Randomized Control Trial certificate of completion.

APPENDIX D

Transcript of Demonstration Videos with a Fictional Client

(Client's words in Bold)

SESSION 1----------

Introduction to the Study

- ***Hi.***
- *Good morning.*
- ***Good morning!!***
- *Thank you for coming in.*
- ***Thanks for having me in!***
- *It's nice to see you, as it always is, every time I see you every week... Well, today is the first day that we do the study, the 4 sessions of the study. First of all, I want to thank you for filling in the consent form... and that stuff that we need to do. And for just really being part of this. So that's very cool. As I said to you a little bit earlier, last time. The cool thing about the study, just like in science, there are studies in order to advanced medicine, people come up with interventions, in therapy. and so, we need to test them to make sure that to see their utility and also, of course, correct different things. So, it would be interesting to have your feedback on what this is like for you as well. So that's what we're going to be doing. I think what you can do is you can think of it as well like, you and I have been doing some work, obviously, for quite a few weeks now. And so, this is just a continuation of that work.*
- *But just imagine that we are just traveling temporarily to a different country, a different place in which we continue to work together, but just in a different modality. So, in a different way. So, we're still going to be speaking about the same subjects, all the different things you've told me about work, about your family, by your past experiences. Now we're just going to be using different tools, during these 4 weeks. How is that? How does that sound?*
- ***That sounds good to me!***
- *Wonderful!*

Introduction to the concept of Sign Language in Therapy

- *So, what this study is, what's the intervention will be doing is I'm going to be... I did a training for it, and I'm going to be teaching you some sign language. Now, I know you explained before that you don't have any experience whatsoever in sign language, which is a great thing because then we can see how, you know it's good that you don't have any prior knowledge of it, because that's really what it's intended for. So, people don't have any prior knowledge of sign language, and we're just going to weave that into our conversations.*
- *So, like I said, I did a training. I learned some sign language, and I'm going to be teaching you the signs I learned in the trainings. The good news is that this is not like your school days. There's no test. You don't have to make sure that you remember them, so I am just reassuring you there...*
- *The only thing is - when we sign... It's a very expressive act. So, I'm going to be teaching you to how to be expressive in that there's a sign and then trying to have your face match what it is say you're expressing. And also, when you think about it when you walk into a room and you can even sometimes even without somebody telling you what they're feeling like, you get the gist of it because they're actually using their nonverbal communication. And so, with sign language, we try to have all of our bodies say the word in question, and we're also going to be speaking as we always do, because it's also talk therapy!*
- ***Alright.***
- *So, we're gonna be just speaking like we always do... how does that sound?*
- *Any questions so far?*
- ***No, seems clear to me!***

- *Ok, so if there's any questions because I might be explaining something incorrectly or in an incomplete matter, you know me well enough to know that I really like when you ask me questions or if you correct me. OK?*
- ***No, all good!***

Introduction to the concept of a Therapeutic Alliance

- *So, in addition to the sign language component, the other component of this intervention is the component of the Therapeutic Alliance. And what the Therapeutic Alliance is - is just really fancy term for our relationship. Right? You have been coming here... I think we said the other day that it was like 11 times already. So, we have been talking for 11 weeks, and we've had this relationship. And so that's called a Therapeutic Alliance. And so, in this intervention, it's actually taking that Alliance. and we purposefully talk about it. And so, if you were to think all of the different relationships you have in your life, imagine having relationships, but then you never talked about the relationship! That would be kind of weird because there's a great utility. We're going to see that... my goal, in any case, as therapist, is that we do this intervention, and then we talk about our alliance, and how I can do a better job of making our alliance stronger of... whenever we have, if there's a rupture - meaning that I screwed up in some way, maybe I don't know, since I am human, I might like, say something that offends you. I hope that I don't! I hope that I don't get things wrong, but I also know that I might along the way. And, so, this is going to be a way to help you not feel shy and say, Hey, like, this is something that I'm feeling uncomfortable with now. Something like that. I'm also going to talk about repairs, how to fix that, just like any relationship you have, in which there's a rupture, and then you do a repair. How's that? I don't know. I'm doing all the talking right now.... How does this sound?*
- ***That sounds good to me!***
- *Okay.*
- ***Excellent.***

Explanation of the Structure of the Four Sessions

- *So, there's four sessions. This first session is going to be a little bit different than the other ones. In this one we're going to be only doing signs that have to do with The Therapeutic Alliance.*
- *And then sessions 2, 3 and 4. At the beginning of the session, we're going to just briefly review the Therapeutic Alliance signs, and then we learn nine in each one of them completely new signs that have to do with all the different feelings that you have in a day, in a week, in common human experiences that that we all have, which there are 27.Okay, then we'll get that that will be end of next week so for now, we're just going to be doing these ones. OK?*
- ***Yeah.***
- *Perfect!*

Teaching the Sign for Therapeutic Alliance

- *So, our first sign is actually the sign for the Therapeutic Alliance. So, you know how there's teamwork within therapy, right?*
- ***Yeah***
- *So, teamwork. So, there's you. And then there's me. And so, we're working together. And so, to make the sign you're putting together and there's like, a bond, right? So, things you tell me I keep secret... You know, it's like this cocoon that we have that we're in together like a bubble. And so, you and I working together. And so, there's strength when we hold together real fast. So, this is actually the sign for Alliance.*
- ***Excellent.***
- *And so, I like, that you did it correctly and that there's kind of like, you know, we're holding each other, and then it's hard to tear apart, right? Because it's it can be quite strong if we do a lot of really good work.*
- ***Right.***

- *So, this is the Therapeutic Alliance, and so each time that we're going to be doing a sign, I'm going to encourage you to either come up with a sentence or say something that has that sign so that you can practice it. So, for example, if you could say the first one is to say something like, I just learned the sign for Therapeutic Alliance. Can you say that? 'I just learned the sign for Therapeutic Alliance'*
- *Excellent.*
- ***All right.***
- *Okay.*

Teaching the Sign for Therapeutic Rupture

- *So, the next one is Therapeutic Ruptures. So actually, this is making me think of different stuff you've told me about work and how you're actually getting along better with someone, and that before you had this rupture, and then you guys were able to work on it, and it got better. So, this happens also in therapy.*
- *I've had I once, many years ago, and I was in therapy. And so, my therapist, I had shared with her by my views on religion because it had come up. And so, something happened, and I don't know if she mixed me up with another client or what happened, but she came up with something that just was not a fit as far as what I was experiencing. And it was just so awkward. I just wanted to cringe, and I felt hurt, and I felt not heard. And it was absolutely terrible. And that was actually a rupture. But I didn't know what to do! I was like, she's so she's the person she should know what she's doing. And so that was a rupture.*
- *So, rupture, the sign for that is actually imagine holding a stick and imagine that it snaps. So, it's just like, rupture.*
- ***Yeah.***
- *So, for me, I'm just saying that when I was working with that therapist and she said what she said that was a rupture for me.*
- *Can you think of like just in our work together - What could there be that I could say that would be either offensive to you or that you would consider, like, a rupture? Can you think of anything that even that I could do so that I would know, like not to do it or that have real concerns...*
- ***I guess something that I can think of is and this is what people do to me, in general, I really struggle with anxiety and just kind of telling me, don't worry about it! Get over it! It's not that big deal. Just kind of invalidating my experience. Not really kind of sitting with me where I'm at and just kind of trying to help me to get over it. And don't worry about it. So that would probably be a rupture.***
- *That's kind of what my previous therapist did. Just kind of thinking you feel invalidated with that...*
- ***Yeah**.*
- *I can see how that would be invalidating.*
- *So, in order to remember the sign, or to embody the sign, would it be a fit if you said the sentence: My therapist being invalidating is like a rupture for me?*
- ***Yeah! Okay. So, my therapist being invalidating to me is a rupture.***
- *Yeah. And so actually, because you know how believe it or not, I used to be a very shy person, and sometimes it can be easier - one of the benefits with the signs is that some stuff it's just it's hard to say, but it actually can be easier just to do that sign.*
- *So, imagine if I say something invalidating, right? Like, Yeah, like. "Snap out of it, get over it!' Whatever - you could, because it's a shock sometimes, when we're offended because we don't expect to be offended by - we're going around our business our day, and then we don't see it coming. So, it can be like Woah! and you can do this (sign) without even saying the word rupture.*
- *And if I am an attentive, which I hope I am- an attentive therapist, I will see you with an amazing look of shock and it's, probably horror. And you just did this. So, it's like, you have this tool for communication that we have pre-agreed to, and then I can be like, hold on. Oh, oh - what did I just do? And that's a present for you. But it is also present for me, right? Because when we don't know how to speak up, and it's also about practice, how to talk about the uncomfortable, which we do all the time in therapy - and you can get even better at talking about the hard stuff.*
- ***Yeah.***
- *Absolutely.*
- ***Okay.***

Teaching the Sign for Therapeutic Repair

- *And so, the next one is repair, right? Because if I create in our Therapeutic Alliance, if I create a rupture, what do I need to do? I need to repair it. So have you gotten your nails...*
- ***Yeah?***
- *And do you ever get, like, a crack that you have to fix it?*
- ***All the time!***
- *Okay.*
- ***So, imagine fixing yours***
- ***Yeah.***
- *So, this is called is called repair. So, I think that's kind of a girly way to interpret it, but I think of doing my nails.*
- ***Okay.***
- *And so, repair it's kind of, like tinkering with something until we try to make it good again.*
- ***Makes sense!***
- *So, what could I do? Imagine that I messed up and I accidentally invalidate your experience. And in the alliance, there's a rupture. What can I do to repair?*
- ***Honestly, I think just creating space to talk about it. Just giving me the space to talk about is a comfortability to talk by which I feel like you do generally just talk it out. Yeah. I think that would be helpful for fixing it and repairing the relationship.***
- *Excellent.*
- *Just as we're speaking, you just leave another idea, which is, I know you've had conflict at work, and I know it comes to goes depending on what's happening and all of that. But I'm just thinking, could this be useful in your everyday life for you to get more used to talking about when things do, when things happen, whereby sometimes I know that you can get offended, and it is hard to talk about. So, I was just thinking that you and I talking about me screwing up and me, you know, that there's some sort of a rupture. Could that be useful for you to take forward into your everyday life?*
- *Me?*
- ***Absolutely.***
- ***Yeah. And I think having a sign for because I do struggle sometimes to bring it up, I think I do understand it's helpful to go on feel has to actually look like because it is uncomfortable to talk about its kind of like you're inviting me to talk about it, having that invitation, that invitation to talk about it is really helpful.***
- *Yeah. And so, one of the things I was reading about this intervention as well, is that the idea is also to invite clients who are doing this intervention to, you know, to bring that home. Like, for example, you could say with your significant other, you know, you. can say, sweetie-pie when you do this thing you irritate me, and I just really want to strangle you! So, if we can come up for a sign for that, and then we can see, like, we can say, Okay, you haven't done that that you're like, I'm so shocked. I can't speak. But this is just what happens. And then the other person could be like, Oh, I don't know how to fix this.*
- ***Yeah.***
- *Could that be a connecting thing? As you imagine, two of you with those different things that you guys - that you told me about.*
- ***Totally. That would be really helpful.***
- *Absolutely! Yeah. And also, there's a thing that he has. We were in shock. And so, like, I think that if I offend you, I would be also in shock. I want to make sure I don't think say anything to make it worse. So, sign language can afford us a way of communicating, using a different part of our brain that can sort of supersedes the 'let me find the right word' part...*

Teaching the Sign for Sorry

- *And this actually leads me to our next sign, which is which is a sign you'll see me do - the day I will have screwed up and caused a rupture! - I'm sorry. So sorry! What you can do, you can go like this close fist and just imagine, like when we feel sorry. It's really like in our heart, right? It's just like from center of our being I'm like, Oh my goodness. I can't believe it, I'm so sorry. And so, it's also about just having the face match. And so, within communication, it's really good sign language helps us be more expressive. And so all three*

things, all four things are happening right now. As you see, okay? I'm going to show you the fourth things So right now I'm doing like this. My body is kind of like down because I'm feeling so sorry. I'm also having a face saying, like I'm sorry. And I'm also saying I'm sorry.

- *So, imagine the difference between that and you're seeing "I'm sorry" in a little smiley face and a Grisel on a piece of paper. Imagine the difference - here you have four different messages. Yeah, and I know we talked before about the importance of communication, so this is part of it. This is part of the idea is for us to express what we're feeling in therapy and also express to each other and better communication so that we are. And can you think of a time of what you were sorry? Perhaps with your husband - you might have done again to see if you can come up with a sentence and then you use the hand signal for sorry when you say the word*
- ***Yeah. I'm just thinking about how sometimes I get upset with my husband for not understanding me, but I'm not really communicating with him that he upset me! So, I'm just expecting him to understand that he made me angry or hurt my feelings without me actually telling him because I have it with that sometimes to talk about the uncomfortable stuff. So, I'll snap at him and do all that and hurt his feelings. in turn So I do feel very, very sorry about that for hurting his feelings when I truly it was me that didn't communicate with him in the first place.***
- *Excellent! Well expressed!*

Teaching the Sign for Resistance

- *So, this is a very common word in therapy. I tell you that much, which is resistance. So, resistance is and we all experience this, therapists too... So, what that will look like is two hands. Like is now notice how my face has already changed. That's the idea of like, I have like NO! resistance... Alright, so you're gonna have two hands. You're actually going to protect yourself from the thing in question, and you're so weary You're just like, Yeah, you've got that face. You're like, Whoa, so resistant. So, for example, I've gone to therapy in the past and I was talking about stuff in my relationship with someone, and there were certain things that I didn't want to talk about, and I was really resistant to them bringing it up.*
- ***Okay.***
- *So, I was resistant.*
- ***Okay***.
- *So, can you think of anything in which either in past therapy or this therapy that you feel - now this could be resistant that you absolutely don't want to talk about it, or you could be like, Okay, Grisel, I know that I've been resisting to talk about my childhood, but I'm actually I'm going to do it right? So, it can be resistance coupled with, okay, I'm just I'm gonna try it out. And I was gonna see I'm gonna dip my toes of water to start with this part of my childhood or whatever. Who are you still being in control over how much you share it? So, can you think of something that you're present as resistant to?*
- ***Yeah. I can think of something. I feel like I'm quite resistant to talk about the relationship with my dad. And, you know, I can see the present- day effects of that. He is quite verbally abusive, and I do feel, quite resistant to talk about that because it does generate a lot of emotion for me. But I know it would be ultimately, really helpful to and to talk about it.***
- *Yeah. And that makes sense to me. And actually, once again, with what these signs can help us with is it can be you using this to talk about it, like I saying, so how has your dad been? You can even remind me, excuse me that you have that resistance. And you like, Okay, I'll talk about my dad. And I remember, like, we had that thing in that sign. I don't want to go too much into it, Grisel! And then - So, that's just data for me. And also, could be some new subject. Right?*
- *So, for example, you were talking about I was trying to think all the different things we've talked about, but, like, your neighbor. And so normally you're totally okay with talking about her and all of that. And you can say for something. It's just really weird. But something happened with my neighbor last week, and I'm just feeling really resistant to talk about it. And I don't know why. Right? So, we can use that as, like, so we have an idea of this new subject that you've also experienced. We listen and then we can be like So what do you want to do? With that resistance? Should you try to "melt" it? Who should we leave it in place? And you need, like, nope I want to leave it in place, and Let's not talk about it! And since you're honestly in control and you decide you'd be like, Well, I don't want to talk about it or you can say talk that a little bit so that we can see the next week.*

Teaching the Sign for Uneasy

- *So obviously in therapy, it does happen when you do good work that we can feel uneasy or uncomfortable.*
- ***Okay.***
- *So, to do that, it's about two parts. The first part is the sign for the negative or No.*
- ***Okay.***
- *So, this is like this. And since I'm being negative already automatically because you know, it's sign language is like is the sign for easy. So, it's this on top of that - Is it easy, right? The English say "Easy peasy lemon-squeezie"*
- ***Okay.***
- *So uneasy. So, I can say, I don't know, can be a non-therapeutic sentence... It just came to mind I was thinking about how I went to Disney with my girlfriends and I was all excited. And then I got on the roller coaster and I really felt absolutely uneasy about getting on there.*
- ***Okay.***
- *And then a therapeutic sentence about feeling uneasy, talking about my brother because its complicated. Can you think of something...?*
- ***Yeah. I mean, my coworker invited me to the work party this weekend. I definitely made me uneasy to think about that I know they want me to go. But when I just feel very nervous to go, I want to go deep down, I want to work through this. I'm uneasy about it.***
- *What is it that's making you feel like uneasy about it?*
- ***I was just thinking about talking to people going and just sitting in with everybody, not embarrassing myself - Uneasy.***
- *Yeah. Well, that is something that we can continue working, and it is part of a larger theme. So that way we can keep on discussing that...*

Teaching the Sign for Frustrated

- *And so, the next one that we have - Oh, frustrated! So Yeah, all of these signs are present in therapy. and in everyday life - So to different frustrations that we can have so...frustrated once again, like irritated, fed up... So, you're using your right hand, correct?*
- ***Yeah.***
- *You're using your right hand, dominant hand, and it's like you're just fed up and frustrated - and just so frustrated. So, you do like the two taps - on your chin maybe a bit more in front, here? You did it!*
- ***Yes.***
- *And so, the more frustrated you want or the more you're like...*
- ***All right.***
- *Yeah.*
- *And this is a little bit frustrated.*
- *Oh, come on! I am frustrated when you don't set the table or I've had enough of you not setting the table, right? So you can dial it up and you can dial it down with how you use your body and how you are speaking and the tone and also the volume and your face Right? So, if you think of something, actually, my first question is, is there anything that's frustrating about therapy?*
- ***What's frustrating therapy is just talking about things that I wish I could just work through. Like, it's so frustrating for me! I see these things and I feel like I see a solution to that. I want to be able to work through it and do it and get over it when I can't. And it's just so frustrating! So that's probably the main thing.***
- *So, to understand it correctly, is it kind of like this? It's this maybe impatience or something like that. It's frustrating about it in that you expect to have this magic wand. I wish I had a magic wand, it would be worn out from using it for sure! But that can be frustrating. What about in your everyday life? What's the number one frustrating thing you can say with your husband would you say?*
- ***Well, that's first it's hard to decide the number one thing. So, something frustrating, I think, Yes, probably, honestly, that you just like he calls me so uptight. But I'd like to keep the house really mean tidy. I am more type A and he is type B, and he just throws things around, just doesn't care about how it looks. So, its***

incredibly frustrating when I tell him to clean things up and he just likes to wait till later. I like, order in everything to be just so

- *Yeah.*
- ***So that's very frustrating - Very frustrating!***
- *I can see your eyebrows are going up and that is helping you express that and once again, as far as signs and their utility and everyday life and our relationships, I mean, you're not necessarily going to be working it all out with a stranger you meet on the bus - the signs you can use to deal with your relationship because you're never going to see them again. But you spend a lot of time with your husband that if you had a handy dandy sign in which he could know that certain things. If you just go like that, and then he might say, Okay, I know what's happening here and vice versa! There's things he finds frustrating about things you do. And in that this is kind of almost a preventive measure really. And then it can be used with humor...*

Teaching the Sign for Shame

- *So, we are on our last one of the day. So, it is shame. And we talked about shame before, in previous sessions in different things that can bring up shame. So, for than what we're gonna be doing is we're gonna take our dominant hand, and we're gonna put it here almost like when you have a secret, and it's almost like if I had a secret, I would really keep it here, because then nobody would see where it is. And so, shame is stuff that we feel icky about. And that's like the uncovering of it just feels so it's going like this, like a shame, almost like showing that people can see our icky stuff because if it stays here, then it's my secrets. Now is we've had these conversations before about shame and how when we share something, it's kind of like - shame in order to continue breathing requires a lack of oxygen or in this petri dish. So that when we share it, whether that's in therapy or with your significant other somebody else, that kind of takes away its power. So, Yeah, this is the sign for shame.*
- *And even just automatically, as I'm doing that, I am noticing my own body that my shoulders just went up and I didn't even think as part of the instruction. So, when you're doing a sign, it's even cool for you to notice. Like, what is my body doing in order to express this emotion? Because my guess is that whenever I'm in my everyday life and I experience shame, my guess is that my shoulders also go up because now I'm thinking about shame. So, this again, one of these signs that when you and I are talking and I might have no clue that I have entered upon the waters of shame in your life about something I might just innocently ask, What would I like to be in first grade? And you're completely silent. Let's say you're completely silent. You don't know how even explain what's going on in your head in your body, in your memories. If you've had trauma in the first grade and you can just do this and I can be like, got it.*
- ***Okay.***
- *So let me tread carefully. Let me tread with care. Let's talk about that. Or, you know, I'll say, Look, I understand correctly,, are you feeling or you recollecting some feelings of shame and you can be like, Oh, no, I just had something in my hair! and then, okay Or you can say, well, actually, Yes. And that is a big can of worms that I would rather leave for next session or whatever. So, this is yet another thing that you and I are agreeing to ahead of time that can help us in our in talking about different things are going on to life.*
- *How does it sound?*
- ***Yeah.***
- *Can you think of a sentence of a personal-ish nature that would include the word shame or you can also share about other people? You would say, Oh, well, is there was the movie and the protagonist felt shame about somebody else?*
- ***Yeah. Thinking about a lot of the times I get pretty irritable and I snap at my loved ones and I just pass that irritability to them and they didn't do anything a lot of the time.***
- *Yeah.*
- *And then after that you can take that, and then you can then say I'm sorry, and then you can put it all together and trying to repair a rupture... I guess that's why I mean, they put all these words together, right? Because it's just sort of like all of these things that happen in relationships just to call it the commonality of the human experience. You know, we require relationships in order for mental health. And, yet, so many relationships send us to therapy! So, Yeah, you can see that, right?*
- ***Totally, Yeah.***
- *Excellent!*

End of Session 1 - Recap

- *Okay, so, first of all, how is that this is our first session? And how was the experience of learning signs and weaving*
- *them into our conversation?*
- ***Definitely something new, I was at first quite skeptical just thinking about it I never had my experience with this, but it's very understandable, and especially for me, because I've struggled into, I just bring that express myself with words. So, I feel like it's really helpful to have this.***
- *You will have that.*
- ***And I can use it with other people, too Especially my husband So I know this is really great. I'm so looking forward to trying it out.***
- *Good!*
- *So again. so, next week, what we'll be doing is at the beginning of the session. We'll just review the ones we learned today, and then we'll go on to nine common human feelings that we all have every day. And then work on those...*
- ***Thank you.***
- *Thank you!*

SESSION 2

(Start of Session, Recap of Therapeutic Alliance signs learned in Session 1)

- *Welcome back!*
- ***Thank you!***
- *Nice to see you again.*
- ***You too!***
- *How was the past week?*
- ***My last week has been okay overall...***
- *Yeah. Okay. Well, this session is going to be very much like the last session - So I also want us to bring in - we'll be learning more signs but then we can bring in like how your experience over the last week has been - all the stuff that we would normally talk in therapy. I would like us to talk about it, but once again, it was in this new lens from this intervention. We're going to be using signs to help us express ourselves... So, the first thing I wanted to do is just to do it very quick. Brief review of the signs that we learned last week. If you don't remember one single one of them to save your life... that's also completely fine! Like I said, we're not in school! This is just so that we can just get it back in the front of our minds. All right?*
- *So, the first one is Alliance...*
- *You see! you did it before I even got the chance to do it! So, I guess your brain really does remember it from last time! That's a really important one! How do you remember that?*
- ***Oh, especially, I think just squeezing my hand...***
- *It memorable because it just shows like the power of the Therapeutic Alliance...*
- ***Ah! I like that metaphor!***
- *And so actually, this brings me to an important point, which is any ways in which you remember, like me is my doing my nails thing - that helps you remember it, and so definitely use whatever it is that your mind came up with...*
- ***So, I like that!***
- *And for me, I think of there's you and me. And then we're working together because I've had experience of being in therapy and feel like the therapist just sitting there thinking about, I don't know, "Gray's Anatomy," or something completely unrelated. And here I am, pouring out my guts and I am like I am the only one doing any work! So that was just like one person working in my, thought, you know? So, this for me is really powerful - and it's like I am saying "I am here with you."*

- ***All right.***
- *Do you by any chance, remember what the sign was for Once again, it's okay if you don't - for rupture? So, something's breaking, right?*
- ***I don't remember that one...***
- *So just think of something breaking, snapping in two - you'd also pretend to like to pretend that you're hearing something snaps. Like when people say: "Boy, that really pissed me off and then something snapped", you know, like if you were to make that sound - you know. So, this is a rupture.*
- ***Yes! And then repair?***
- *So, we're going to tinker on until we can get it back to as much as possible as what it was. OK? to repair. So, we've got this. This is what we want, but sometimes that kind of... weakens by things that might happen. So, there's these guys happen, and then we want to work on them. Ok?*
- *And what will you see me do if I screw up and I suddenly realized what I did. I'm going to feel so sorry! I'm gonna be like, Oh, my goodness! I can't believe that I said that, or I did that! Or I'm so sorry. It was not my intention for you to feel dismissed or unheard, because I remember that from last week...And you said that that was something that made you uncomfortable.*
- ***Thank you.*** *Yeah.*
- *So there's that. What else do we have? We did sorry - So, yeah, so I'm going to do a sign, and then you can tell me if this you can think of what that stands for.*
- ***Resistance!***
- *Exactly! So that happens as a therapist, sometimes I'll bring something up and the client, even without having that sign will go. So, Yeah. that's like resistant. Resistance.*
- ***Yeah.***
- *Yeah. And so, the next one, Yes. Uneasy.*
- *So, it's the Un - easy - So what would be a sentence with uneasy to do with therapy subjects?*
- ***I guess I felt pretty uneasy during one of our sessions when we talked about my dad I felt uneasy.***
- *And I remember that you talked about it nonetheless!*
- ***Yeah!***
- *So, you took that resistance - You felt uneasy, and you still forged on, which was really cool.*
- ***Thank you!***
- *So, and what else? Oh yeah, frustrated So that was, like, frustrated. So, the reason I guess this is included in this group of signs because the process of therapy can be frustrating! Like we said last week, there's no magic wand here! So, Yeah, if you could just need one session of therapy and then off go, that would be something! But that's not the case. So, for different reasons, therapy can be frustrating and working with your therapist, that you can find me frustrating sometimes! So, you have this... blank check of permission and the tools to talk about that, you know, and express that. And I can say, I don't know. I'm trying to think of a scenario which I would be, which would give rise to frustration. I guess if I insisted on something. And you are like, No, I don't want to talk about X-Y-Z. And I just like push and push and push... And then you might say, Grisel, please! Like, I am getting frustrated with you! And we're about to have - to keep it on - (a rupture) So there's, like, different levels.*
- *I think that we can sort of, like, start with uneasiness. Sometimes it can sometimes build - if the situation doesn't shift, it can build into frustration. And then you have a rupture, which then you can repair...*
- ***Exactly!***
- *And the last one. Do you remember by any chance, what the last one is? My hint is that something that everybody experiences, and it's something that Brené Brown, you know, she's one of my favorite authors. Brené Brown is always talking about this...*
- ***I know!... Shame!***
- *So that - Yeah, halfway starts like this. And there's an expression of some people feel shame, just they feel resistance is coming into therapy because of things that they feel shame about. And so, they don't want to speak with the - to come to therapy or once they're here - it's like they don't want to talk about the things that they're ashamed about. And also, a lot of us grew up in families where we didn't discuss things that make us uneasy. Right, We just kept quiet about it. You don't air your dirty laundry - you know that expression? And so, overcoming that shame, is really hard! It can be really hard.*

- *And so Yeah, like I said, remember last week I was saying that the cool thing with signs is that you can sort of give me the hint signal right now. I am feeling shame, and that can help me clarify how to proceed or not proceed with the information on that. So, how does that sound?*
- ***So good!***
- *Yes!*
- *So, it seems like you've remembered them, good for you, its been a whole week! So today is different in that we're going to be going on within nine brand new ones. Okay?*
- *Yeah, there was study in Berkeley, California at a University of Berkeley, not that long ago, and right now it escapes my mind, 2020? or 2019? And it was categorizing the human experience, whittling it all down to 27 emotions. And so, we're going to do 9 today, 9 next Wednesday and 9 the week after. So, you would have really gone through Therapeutic Alliance signs and then the signs of the human experience. Well, there's always seen many, many more. But if we had to categorize them, then because otherwise we would be here forever!*

Teaching the Sign for Enthusiasm

- *So, we're going to start with enthusiastic. Okay. So enthusiastic what you need both hands. And first, actually, I'd like you to put your hands down And I want you to think of something that you are enthusiastic about Can you think of something?*
- ***Yeah, I got something. I got this one friend I feel like I've mentioned before. She's just kind of accepts me as I am. She doesn't try to change me. She's just a perfect friend. She's my best friend. And I haven't seen in a really long time. And I get to see her really soon! So, I'm feeling really enthusiastic about that. It's the best example that I can come up with.***
- *Excellent, and so as you're saying that I can see that enthusiasm on, that, some on the inside that you like to see on the outside view. And so, in order to even capitalize on that and express it even more so, we have a sign for that, and what it is so your two hands go together, and, you are like I am so excited to see my friend! What is your friend's name?*
- ***Bev.***
- *So, you're like YES! I get to see Bev, I can't wait! So, notice how with this sign that there is something very logical in most of them, in case in that. So, they're based... I forgot to tell you this. They are signs in American Sign Language. There are many sign languages around the world - over 200. And so American Sign Language - the acronym is ASL is just one of them. And so that's what we're getting these signs from. So, I didn't invent anything. I am not fluent, so I think in future versions of this I will hire someone Deaf and fluent in ASL to do the teaching. So Yes, it's like and when I do this movement, I feel like a little kid. I don't know about you...*
- ***That's true!***
- *Yeah*
- *Right? I'm like - going to get a brand new bike at Christmas! I can't wait! So, will you say the sentence, but with the added sign?*
- ***I haven't seen her in a long time. And she's my best friend!***
- *Excellent.*
- *And what I noticed from the outside, and I'm curious what that was like for you. But I noticed that by doing the sign at the same time, you seemed almost to embody that enthusiasm even more because, like you, we got to show them well, in a winning we've got is so it's almost like, you were more enthusiastic by virtue of explaining it in this way. Is that?*
- ***Yeah! I felt that!***
- *Excellent. And it's also interesting how we have, like, when we are doing- it's called emotional disclosure. So when we are therapy and we're disclosing how we feel, I think, and I love people watching, maybe that's one of the reasons I got into this in the first place But I noticed how clients when they do emotional disclosure, there's kind of like, it lingers - almost like this perfume in the air in this particular case.*
- *Enthusiasm. Right?*
- *Because you weren't acting. You were just thinking about Bev Like, you can't wait to see her and it just kind of like, this is a long trail of a "perfume" of that feeling. That's just my therapeutic rambling....*

- *Okay, On to the next one then!*
- ***Yes?***
- *So, which one did we just do? Okay, you remember that?*
- ***Enthusiasm!***
- *Alright, the next one...*

Teaching the Sign for Anxiety

- *So, we're going to go on a little bit of an emotional whiplash, here. We gonna go back and forth between, I don't like the expressions positive and negative emotions so much because it's kind of some of them are complex and don't necessarily fit in one category or the other. So, I'm gonna say the emotions that we like and some that we don't like. And so, the next one is anxiety. And I know that you have shared in terms about of different things that cause some anxiety for you. And so, where have you felt this anxiety? probably all over*
- ***I know usually my heart beats really bad. I get stomach aches, I sweat***
- *... So - sorry, I cut you off*
- ***No, you're fine!***
- *OK, So Yeah, everybody's going to be different in how they feel this anxiety. So, for me, the way to remember it, the sign for anxiety, for me a way I'm lucky because I feel that anxiety in my stomach and the sign we're gonna make, we're gonna use both hands and we're gonna put them on the stomach and we're just going to say anxiety and notice it's like churning and notice that my face is not a happy face anymore because it's just like it's like, I'm uncomfortable. It's like you have a feeling. So, if I had to make a sentence, I would say, Yeah, I have a friend in the hospital and so I feel really anxious about that. Anxiety. So, what about what about you?Because you said earlier, like, that you had felt some anxiety over the past week?*
- ***Yeah, I mean my week was OK overall, but I had a huge presentation at work. And I got super nervous about it. It ended up going OK. But prior to the presentation, I was just full of anxiety about what I was going to be sick... It was pretty uncomfortable****.*
- *Was there, like, a major thing that was making you feel anxiety. So, what was the thing that was making that churn inside, would you say?*
- ***Yeah, just because like my boss is very critical of everybody and has really high expectations out of us? And I just I wanted to make sure that I met those expectations and I was afraid that I could potentially lose my job if I didn't So a lot of thoughts that going through my head and I just felt really, really anxious about it***
- *Ok. How did you overcome that anxiety? Did you do the breathing exercises and stuff we've worked on before?*
- ***I did, I did a lot of mindfulness as well, along with the breathing exercises I meant to tell you they were awesome. They really do help - just to physically make me feel better, and that's super helpful. Because a lot of my anxiety is physical***
- *Yeah, I can tell... Good, I was also, I don't know if you remember that we did some REBT when you and I started working together. So, like REBT and all the double checking if what you're thinking is something that's true or false or like, I know in REBT they use the words rational and irrrational. So that can be a thing that can be helpful because, like, our minds will rush to. "If I don't do well in this presentation, I'm gonna lose my job," which is like, quite the conclusion, considering in my recollection is that you're not congratulated for your work not that will ago, and promoted as well!*
- ***But I don't know... I did!***
- *Yes!*
- *Right? Right? So, that can be one way in which, you know, when you're feeling anxious, you're doing on one hand in the mindfulness, and then double checking of what you're thinking is probable or not probable, or you know*
- ***Yeah, I am doing that too. And it wasn't necessarily rational - the situation.***
- *How did the presentation go?*
- ***It ended up going fine! My boss also actually came up to me, and but to me privately that I did such an amazing job!***

- *So, it went very well! Very good!*

Teaching the Sign for Confusion

- *Alright, onto. the next one - confused. So, you tell me how you want to remember this - I'll tell you how I remember that sign. So, you're going to need both hands and you're going to put them like this. I like this or like this - you decide. And it's like, see, I am already looking confused! I'm like - this is really confusing. So for example, what I would say is I would say sometimes therapy can be confusing - it's a confusing process because you can, you know, that expression three steps forward, one step back? Now... What's that expression? I don't know my expressions... All these intercultural expressions But, as far as being confused.*
- ***Yeah**.*
- *For me, this is like a hazy Crystal ball that I can't see well. What do you think of when you think of ...*
- ***It's** funny you say a crystal ball shape. I was actually thinking of, like, planet Earth and how just the Earth is confusing. People are confusing - for me. So that's the way I'm going to remember it.*
- *I like that! Thanks!*
- ***Yeah.***
- *And over the past week, has there been, like, what's been going on - something that's been going on that's been confusing for you?*
- ***Yeah.I mean, I think I maybe misinterpret the way my coworkers may perceive me. Like, I feel like I think that a lot of the time that they don't like me, that they are perceiving me as someone who doesn't know what they're doing - But then their words don't match. Like they'll tell me that I'm doing really well. And then they'll invite me out to places because I still have these thoughts that they don't like me or maybe they'll do something, but I'll be like, Oh, they don't like me. But I have to kind of take a step back and think, like, is that necessarily a rational conclusion to come to? Not really...So just people in general and kind of like that confuses me...***
- *And actually, for me, my experience of just watching you say that it's almost like you were just naturally with your own - because we all gesticulate. Gesticulate is just a name for, And I do it a lot. I use my hands to speak. And so, when you were saying that you were almost, it was almost like you were taking this and you were naturally doing it. And for me, confusion, another way to remember this sign is that when there's not a match up. So, like you were saying, so on the one hand, I think that, like, you know what I think, and then their behaviors are not magic effect, this incongruent kind of a thing. It's because it's not matching up. Yeah, that makes sense. So, anything and that can be, like an additional way of remembering it. But also, this can be a sign for... Well, let me double check if I'm right what I'm thinking, because the world keeps on giving me this other data that just doesn't match up - like the job what you were saying that you thought, Oh, I'm probably gonna be really, really terrible. And for all I know I'm gonna be fired! And then so that was YOUR thought and then your boss is, like, best presentation ever! I can't believe it! And by the way, three weeks ago I gave you a promotion! Right? So, it's like that lack of match up and that causes confusion within us.*
- ***That's.... Yeah.***
- *Yeah? Um hum... And that's something we can talk about at another point as well too*
- ***That would be great. To talk about those two things. And it does.***
- *There's this uneasiness when it doesn't when it doesn't match up. And then we talked about cognitive dissonance, and all these different things. But I just say it's really cool, how our signs will match like a sign. You know, I am very interested in languages...*
- ***That makes complete sense! I didn't even realize!***

Teaching the Sign for Fear

- *The next one is fearful or scared. So, for this one. Remember, I think of a cat and a black cat who - I don't know why a black cat - but I'm thinking of the idea of a cat that is scared. And you know, how hide? What is it called? like*
- ***The fur?***
- *Yeah. Like goes up and like, their tail gets pooffy. So fearful is like the theme that rises and like they look scared. So this is like the tension in our body. So, for me, things that are fearful, like if I am walking alone in a parking lot at night and I'm fearful for my safety, and then all of a sudden, I hear, like, the engine revving*

or something, so that will just automatically give me a fright. And so, the way to do that then would be I'm scared, right? So, I can be scared of a noise. And then I can also be scared to bring up the subject in therapy. So, you might hear me like, when we're working together, I might say, so can we talk about this is something that you're feeling kind of scared about? So, you can understand me better.

- ***Yeah.***
- *So, anything that you've been feeling scared about or that you want to use a sentence with fearful?*
- ***So, to be honest, I've been quite fearful. My husband's family is coming to town soon, and they just have very different political views, very different views for me completely. And his father tends to kind of fly off the handle and yell, and if someone brings up something that he disagrees with. And, you know, I feel quite triggered in that type of environment. And I don't really know how to handle myself. So, I'm feeling quite fearful that something like that is going to happen.***
- *Yeah. Yeah, from what you described before, it's been a challenging - a challenging experience.*
- ***It really has!***
- *And just as in the example of what you thought versus what your boss thought, and then there was, like, some confusion about that because it wasn't congruent I think that - things that you have discussed, where you said Oh, it will probably be going to be this way. When the family comes, it kind of ends up really being that way. So, it does - There is of congruence between what you think is going to happen and what happens. And, you know, that fear.*
- *And then then we're back to the toolbox of what different things you can do, just like you are fearful of that presentation. You can be like Ok, so my mindfulness meditation, I don't only have to use it at work. I can also go in my room and close the door and put up a little post-it saying "Bugger off everybody!" I'm gonna be just like or a bubble bath or whatever that looks like for you. And then, same with the REBT, you can be like, OK, you know, one of the things that I believe to be true. And is that really the case? And then you check and make a plan*
- ***Yeah.***
- *Sometimes we don't realize how the same tool can be used in so many different situations. That's so true! It's just about reminding myself if they're there. Yeah, I think writing them down will be really helpful in the moment. sometimes it's hard for me to kind of harness those tools - I forget that I have them...*
- ***So I think writing them down...***
- *We can write them down but also in another session, we could also decide that we can create a sign for those tools.*
- ***Ah!***
- *You know? And then that's something that you can be a part of in that over the next session, we know in the seven days that we don't see each other - and you practice the mindfulness thinking what would be a sign for mindfulness that would help you?*
- *I had former client who had trouble putting things in the past. I mean, it was really like she would ruminate... And she would always be like dredging up stuff from the past. And so, this is fine for past, actually, in sign language... And so, she got into the habit of when she was like, Okay, this is not serving me, you know, Helpful or Hurtful? Super hurtful... And then so she herself, took it upon herself to be like, Okay, the past is the past. And there is something about physically making a sign for where it's like... Okay, I get that or whatever you want to use in time for mindfulness. But that'd be cool when we talk about that next week,*
- ***That sounds good to me!***

Teaching the Sign for Happy

- *On to the next one: it's happy. So, for this time before I teach it to you, I would like to just close your eyes and take it deep breath. Give your brain lots of beautiful, beautiful oxygen and think of something that makes you happy!*
- ***Ok. I have something.***
- *Ok*
- *So don't tell me what it is, what I want you to do now that you have that happiness. I want you to use both hands, one hand - doesn't matter which one on your chest, one hand on your stomach, and then just pretend that this is where you have that happiness*

- *Like, you know, Oh! like you now OWN this amount of happiness and it is inside you - and that is one way how I remember the sign for it, because I like to share my happiness. And I know it's one thing that's like, Super contagious. And so, the sign for happiness is feeling happiness and share sharing twice.*
- *It's like, happiness, I'm just so happy!*
- ***I love that!***
- *So, what were you thinking when you had your eyes closed?*
- ***I was just thinking about being with my mom. She loves to cook and just being with her while she's cooking and just share a meal with her.***
- *What does she cook?*
- ***She does everything and she is openminded to every culture, foods that she has never tried. She's really great experimenting. And I just feel really safe with my mom. And like, again, it's just somewhere I can just be myself. I don't feel like I have to change***
- *Do you want to give me a sentence with happy? And do the sign?*
- ***Sure! I feel so happy when I'm sitting with my mom at the table and sharing a meal with her!***
- *Nice. Thanks! Excellent!*
- ***Thank you!***

Teaching the Sign for Calm

- *Let's go on to the next one. It's Calm. So, calm - the way to remember this I pretend that I have troubles that I put here, and they are going to ... melt away... And I make it go slow. And I think, you know, the Land O'Lakes butter?*
- ***Yes!***
- *Logo? Slogan? Whatever? And it's like, sort of sitting there and just calm and just. And I'm also noticing as I'm doing this that my shoulders are going down.*
- ***Me too!***
- *What I find interesting is that doing the sign for something as opposed to me saying, Yeah, I'm calm right now. So, it's kind of easier to fake because either to you or to myself, I might just want believe that I'm calm and that's the end of it. And that's my story, and I'm sticking to it. But if I'm doing the sign and trying to embody the sign it's just there's something like, really calming about and then just, you know, we're doing it slowly as well as at the same time and we're mirroring each other, and let's do it again. And there's also something about the fact that we're starting here. And then there's a centering thing about it very much unlike the confusion, which is kind of off kilter, right?*
- ***Yes!***
- *So, this doesn't match and it's to the side - what is going on here?*
- ***Here?***
- *We have calm, and this is going down is like, so we just this makes you calm*
- ***I love doing mindfulness meditation.***
- *That what I was just thinking - like it's really helpful for my anxiety. And I remember you were reticent in the beginning when I came up with it.*
- ***Yeah!***
- *You were like "I'll skip that part..." Do you remember that? It's not gonna work. Very skeptical. Skepticism is good. And I encourage that! And I also encourage you to even though you were skeptical, you were, like, resistant the idea that it would help you. So, I am really pleased about you I imagine, you're just thinking... and like that*
- *There's something I'm also noticing, even doing this sign that I'm sitting up very straight. I was originally sitting straight so that I can show it to you. But I'm also noting that there's a purposefulness in which I'm like OK - kind of like there is almost a flavor of self-care. Like I'm going to be really calm right now!*
- ***Yes! Even if husband's family is coming to this house!***
- *Right?*
- ***I'll have to remember that!***
- *Right?*

- *So, what would that be like? And the thing is, is that these signs - What's interesting is - imagine yourself being at this big, long table and perhaps exactly what you have experienced many times ...starts happening. You know, they're talking about these different things - I just realized I have one sleeve rolled up! and one not I assure you that my arms are both the same length! So, imagine yourself sitting in the future and your husband's family comes to visit. Imagine - so close your eyes - Like, imagine you're sitting there, and people are passing the potatoes and passing to this and people, people are drinking, and then all of a sudden, politics and blah, blah, blah, blah. Now, without moving your body whatsoever, it is important Imagine yourself doing the sign for calm, but you're not doing it physically, but you're seeing yourself do it.*
- ***Okay.***
- *That's step one.*
- ***Yeah.***
- *It almost feels like an act of rebellion, doesn't it?*
- ***(Nods)***
- *Because nobody can see what you're doing now! Like, you open your eyes, still, stay still and not move and I want you to do it in your mind again. Nobody can tell you doing it, but there is this kind of you are deciding on your inner experience.*
- ***Yeah!***
- *Can't change the guy, can't change what's happening, can't change that everything was fine a minute ago. remember all those conversations we had about what we can control*
- ***Yeah.***
- *And how there are two columns and all that stuff... So, this is making use of the fact that you have quite a bit of control over here, your inner experience. and you can be there, eating your mashed potatoes and your turkey and whatever it is and you are imagining, right now, doing this and there is something else, that we discussed, which is how every thought that we have, how this affects our bodies.*
- ***Right.***
- *So, like, we can feel happy. It's not just our brain that is having that experience Like, we're just happy, and it affects my posture and I our heart rate and all these different things physiologically. So, I'm thinking, Let's take the sign of Calm.*
- ***Yes.***
- *And have it affect your body with that thought without even having to do the sign! You're just sitting there... What would that be like? First of all, can you imagine yourself doing it?*
- ***I really can! I can picture the whole family and all the ruckus! All the tension!***
- *Was "ruckus" the right word?*
- ***Yes! It's the perfect word!***
- *And I just really like how it starts at the center. I can really picture myself if it feels very like I want to take a deep breath and let it out. I'm kind of going down like it just feels very centering and very empowering.*
- ***Like I really have struggled with this concept of not having control in situations. And it feels like we talked about some of many times how I do have the power to control my reactions to things, how I perceive things. And I feel like it's just having that sign and being able to do in my head is just a really good reminder of that and that I can do it any time during dinner.***
- *But the thing is that we don't have to, you know, like awkward! right? That stuff happening. And then it almost sounds it looks like it sounds like it and in a movie or something, would you mean, imagine someone thinking... what happened to her? because all of a sudden you're doing the sign, but you can do that.*
- ***Yeah.***
- *And actually, because I did the training before learning these signs. And one of the things that I did was practicing the signs without doing them. Once I knew that I knew them physically, then I challenged myself to.*
- ***Ok - enthusiastic, yes.***
- *That is me. And I would imagine me not only rubbing my hands together, but me almost like this kind of up on the tippy toes, you know, like going up and down and having a bit my shoulders up. But in this kind of like... People tell me that I do. And just like what the face would be like without even doing the sign. And do you notice how just me talking about what I would look like doing the sign Enthusiastic,*
- ***Yes, it is even changing!*** *How I am being... Yeah.*

- *Right? so that's the connection and we talk about between the mind and the body and expression and all these different things*
- ***Well said.***
- *Does all of this make sense? Or am I just going on and on now...*
- ***It makes complete sense.***
- *All right, cool. So, Yeah, I'd be curious how that goes, you know, the calm, and you can try it at work, and it also can be you know, you're about to do a presentation Just think a lot of visualization stuff that sports people do.*
- ***Yeah.***
- *You know, they practice themselves doing that practice before they go ahead and do it. So, you're bringing in, like, to bring lots of different techniques and stuff. Very good!*

Teaching the Sign for Anger

- *On to the next one. We did calm, and now we're going to do Anger. Ok?*
- *So, what that is I'm going to start - we need both arms, we're gonna start with a little bit with our arms going up, because then I'm gonna really look pissed off now. So now I do anger and notice that it's really also in my face. So, all of a sudden magically I have this happening and I have my brows that are furrowed. And even, like, my shoulders, because I did a little bit of the expression of angry. Angry! So, there's, like, this suddenness, there's a power to it there's. So instead of me saying to you - so let's pretend - I always so that thing where I say to you - let's pretend you're the therapist and I am the client...*
- ***OK***
- *So, I am the client now. And so, if I say to you, and you say to me, OK Grisel, you've seen your friend for a whole week now. Have you gotten angry at her? I'd be like, Yeah, Yeah, sure. I've gotten angry, but with the sign, the therapist will help me get in touch with that is the idea whereby... if I am really angry because (my friend) left a mess in my kitchen and so notice how like - look at my hands! A minute ago, my hands were fine! And that really makes me angry when she does that. And so, it's like there's the prompt of talking about anger. And then when I do in this set of just the words, I really look like, I'm actually angry, right? By using the sign and so it's tapping into that and sometimes we don't dare get in touch with certain emotions and anger is - that can be a hard one, depending on how we were raised. I know I was raised with absolutely like-anger? that's really just for people who don't have any control of themselves. You can be sad all you want... And then in other families, it can be - OK, this is kind of reductionistic - but in some families, it can be also that they said, Oh, well, sadness or depression that's for "sissies," that's just like, absolutely not, can't do that - but you can go ahead and be angry all the time. That's socially acceptable. And then there's still gender differences and stuff that we talked about before. So - Right? So, let's hear about anger, anger in your life. Tell me more about that. You keep breathing in, and out*
- ***Ok.***
- *Tell me.*
- ***I think - just in light of talking about my in laws, I feel like I just try so hard to be the daughter in law that I think they want me to be. I put a lot of effort into it, and I'm just not getting the feedback that I want from them I feel like I try to change a lot, which is wrong, but I still do it - I want them to be a certain way and treat me a certain way, and they're just not... and I just feel so ANGRY. This is frustration as well***
- *Yeah.*
- ***And frustrated!***
- *Yes. Absolutely.*
- ***Frustrated and just angry whenever they come over. And our interactions are just the greatest and just a lot of tension. Yeah. I'm still extremely angry when I think of that that!***
- *Yeah. That sounds challenging!*
- ***It is.***
- *And so, what sorts of things that we've talked about before help with that? Is it? I mean, you know, over the course of therapy you've talked about lots of different things. So, you know, the REBT, the mindfulness stuff.*

So, I mean, let me just ask you - do you have the right to be angry I mean, is that allowed? or are you... Is it that just allowed for every single person on the Earth - and not for you or how does this work? Or?

- ***As I have learned from you... I absolutely do have the right. I was raised, you know, as we have talked about... Anger was just not, any sort of negative emotion was just not really something that I could express. And I feel really guilty for feeling those types of ways. So, I think I still carry that with me. I appreciate the work that we've done and trying to work through that. But - that's a challenge for me, for sure. And I do have the right to be angry. And so maybe the fact of learning a sign for it can be empowering in a very... this might sound unusual.***
- *But I'm just thinking, like what that would be like for somebody who has been told both overtly and between the lines, that you don't have the right to be angry and there's nothing to be angry about I mean, if even if you did, just keep it quiet anyway, I'm just curious what that would be like for you to be in front of a mirror, all by yourself husband's not home, only the dog to see what you're doing and just seeing yourself get angry - and just think of different things that that make you angry and to be okay with that.*
- ***Hmmm.***
- *I'm just curious what that would be like just to see yourself as, Wow. I am a person who can be angry, and it's not in the getting purposefully get angry at things that don't normally make me angry, but just taking things - feelings that you have I know some of the things that you've shared with me before think that they were very logical situations that would engender anger for anybody - But I think there is an extra weight to feeling that you don't have a right to it You know what I mean? And I think that maybe just feeling it and even seeing that you know, and then you know, taking it from there, you know, different steps.*
- ***That would be something that I'd be willing to try for sure! I think it would be really valuable and doing it more regularly might actually just kind of get me accustomed to just seeing myself get that way.***
- *And I try so hard to resist feeling that way generally. But I think just like you said It's like, it is just a human thing, I mean like actually see myself be human in front of a mirror - to. be human, with nobody else around...*
- *Okay. And maybe on your phone, you could keep an Anger List and then at the end of the day You could do this for every single thing that angers you, and then you could even do it on scale! So remember how we used the Motivational Interviewing - saying about, like, one to 10 things, you could even do this specifically you could say this, pretend this is a dial, right? So, this is zero. And then this is a 10.*
- ***Okay, right.***
- *So, for example, if I were... Ok I am back to being the client, so I would say - I get angry when people cut me off in traffic, like at three Now, some people that might be a 10! You don't like road rage and all that a little really good stuff amongst the long list of human behaviors... One of things makes me angry So injustices in the world, things like that. I mean, gosh, I can't! Even as I am just thinking about it... my body's starting to change, and that's making me angry! So that's like, that's my 10. And so, I think that one way, which once again, signs bringing that into what we're talking about. Anger is you could keep on your phone. You could be like, Okay, I couldn't find the butter in the refrigerator, and that was a nine! So, you know we can talk about that in therapy Oh, gosh, not finding the butter in the refrigerator is a nine! That's data, right?*
- *Or maybe - maybe it's a one. And then we can then talk about not only anger, but just different levels of it And, then what can make it go up and go down. So, for example, somebody cut me off in traffic Let's say that's a 2 - and I can bring it down to 0 if I pretend that they a pregnant person, and they're on their way to the hospital and they are off the hook. I am all of a sudden to a 0! So, there's ways that we can sort of have it ready made And that way, when you are in the "ruckus" which you so well described, you can decide ahead of time what are 5 things that make the dial go down on your anger! So, you're still showing up with a) the right to be angry... You're showing up to the experience to be with the calm thing. By the way, you can also say, I'll just be right back and go to the bathroom and, like, do it for real. That's true, right? With or without the mirror, I think the mirror is really helpful*
- *Yes, I know you could also do it quietly at the table, but I think that there's something about an emotional disclosure and emotional, like eating times with our emotions just seems like what number we're at, and it just helps for expressing happiness. I do that to emotionally general, but I have this thing, I think I told you that I have kids - in which I say to them. Like, you guys, I am happy at, like, in 10! Now imagine how much more data that is than me saying, Oh, I'm really happy! Like, they might say, Oh, Yeah. We're pains in the*

butts so maybe she is a happy at a 3! But if I'm saying, guys, I'm so happy to see you! It's been Corona... I haven't seen anybody ages! I'm like, I'm happy at a 10!

- ***I love that!***
- *So good communication - it's this gift - so it's a three-part gift So it's a gift to the person. It's a gift to you and give for the relationship for the Alliance. Right? So that's one way in which you can use being specific and then taking something that - how to deal with these difficult situations, like frustrating, anger and unease...*
- ***Yeah, I love that one!***

Teaching the Sign for Disgust

- *On to the next one? Okay. So: disgust.*
- ***Yes.***
- *So, disgust is, like, in our stomach. It's a physiological response to something gross and suits just rubbing your tummy.*
- ***Yeah.***
- *It's just like you're kind of, like, grossed out And so it could be in situations of great ruckus that you feel you feel uneasy and you're not sure why... One thing is good for you to do is like... Hold on! Am I feeling angry at what's going on? Or am I just disgusted or grossed out at what this person just said? So sometimes it can be really, really helpful because it's confusing to not know what we're feeling!*
- ***Yes.***
- *So, this way, you could be like, Okay, so Yeah. No, I'm totally not on board with what was just said and I am feeling resistance to this conversation. And then you decide what you want to do! You can argue, not argue, accept, not accept... You know, the long list of things that are in front of you for choice! Ready?*
- ***Yeah.***
- *So, what's disgust?*
- *Very good!*

Teaching the Sign for Sad

- *OK, ready? So, we're going to do sad. So, sad, sad so far, you're going to need both hands, because sometimes we we've got lots of sadness and things that have happened to things that we can be sad about it here. And we're gonna think about those clowns that have those sad faces on, we're just gonna go and so sad. I felt sad when I heard that happened to you! I really felt sad! So, you can make sort of like, you're holding that sadness in here and just go down and then just notice how naturally things happen in your face whereby you were and even our bodies and shoulders are going down... So, can you think of different things that... a time that either make you sad in general or as of late just made you sad?*
- ***A coworker of mine just lost her mom. And I've been trying to find different ways to be supportive. It's just so hard because the situation I can't imagine, and just seeing her come to work and try to put on a brave face...***
- *So that, Yeah, that makes sense. It's just so sad.... It's hard when people experience things, and we don't know what to say.*
- ***Yeah.***
- *And part of that not knowing what to say. There's almost a... I know that from my experience is that when I get when I get fixated on, I don't know what to say. It's almost like I'm under the illusion that there's a right thing to say! And that's why I'm frustrated because I'm not knowing what the right thing is. But then I realized, Oh, my God, this is so interesting! I just got myself into this total trap because I am... Back to the REBT... Let me double check. Is it true that there is the right thing to say? Spoiler alert... Absolutely not! There is enough one special thing to say, and it's really about or to do that. Remember that thing, about how we are human beings, and not human doings? Do you remember that? So, it's also about how you are like, how can I be with her? So, all of these things, all of these ways in which you are, that I can see that I have evidence, clear evidence of, you are empathic, that you're caring. The fact that she comes to mind, you know, you didn't see and say, Oh, I'm sad because I didn't get the last whatever she was, you know, like you're thinking of other people. And so that's a way of being. And that way of being is a gift. So, it doesn't have to be*

doing, like, let me bring her the right cookies. Well, there's no such thing as the right cookies or the right anything! but the being the sort of that frees you from thinking I might get it wrong.

- ***I'm so happy to hear it because I actually felt quite a bit of shame after she shared with me what happened I felt like I said the wrong way at the wrong thing with. I really had to take a step back... And I was thinking of just being with her. Listening to her was all she really needed! I was trying so hard to think or say the right thing***
- *Absolutely! And in my experience with bereavement is just that is really it was about how people were with me. I mean, I'm think that half the time I couldn't even remember or listen to what anybody was saying... in the throes of it. And so, it really was about how people were with me - how our actions and just our intention and our connection. So, it can really be a magical thing, actually. And then it takes us away from the... you know, we were talking as well many times about this desire to be perfect. And like, how society, and sometimes our parents as well they get on board and then it's like, well, the right thing, the perfect thing. It's just this spiral, in which we're these hamsters on a wheel with our hamster tongues hanging out, stressed about doing something, and there's this perfection that we chase. And the fatigue that comes from it Just a reminder to liberate yourself from that...*
- ***Yeah. Helpful.***
- *Okay.*

(Session Wrap-Up)

- *So, what we're going to do as we're finishing up. I am curious how as to how many of these our brains still remember*
- ***Okay**.*
- *Should we... What I'll do is I'll do the sign. And then I want you to guess what sign it is*
- ***Enthusiastic.***
- *Yes!*
- *And what was your example Do you remember? What the example that you gave me?*
- ***I'm super enthusiastic about the idea of being my friend Bev!***
- *Ok, Yeah. Excellent. And?*
- ***Anxiety!***
- *Yeah.*
- ***Confusion!***
- *Good!*
- *So either I'm good at doing it or you're good at remembering it... Or both! or both! teamwork!*
- ***Fear!***
- *Yeah.*
- ***Happy!***
- *Very good!*
- ***Calm!***
- *I just noticed also that I'm breathing out as I am doing that...*
- ***Yeah, it's interesting.***
- *Yeah. Your whole body is like... And so, in order to do that, my body has to change physiologically. In order to get that right. Get that RIGHT! Hahaha listen to me. Like I say this...*
- ***Okay.***
- *cast that aside...*
- ***Okay.***
- *Next one, we have to question next one.*
- ***Anger!***
- *Yes!*
- ***Disgust.***
- *Yeah!*

- *Last one. Yeah.*
- *I'm curious.*
- *What was - how was session 2 for you - anything that's...*
- ***I was really excited to try this out! Just out, you know? Besides, like, doing it here, I just feel, like, in talking with you Like, I've come up with some key examples that this could be applicable, like at work or when my in-laws come...***
- *That's the idea, yeah...*
- ***I'm really enthusiastic to try it out!***
- *Show me show me?*
- *Almost!*
- ***enthusiastic...***
- *Enthusiastic!*
- ***Yeah.***
- *It's almost like, the way that I remember this is that I'm making a fire, a fire of enthusiasm. And so, because my hands get hot!*
- *Oh! I like that - So rub them again, a lot... they get hot! Right! It's helpful to come up with these ways...*
- ***Yes!***
- *and the thing is that something you come up with. Well, obviously, we use different examples, but if you can make it your own,*
- ***I love that!***
- *Yeah.*
- ***I'm really excited to apply these outside here can be very helpful.***
- *Excellent! So, I will see you in a week, and then we will go on with 9 other of the next ones. And at the beginning of it, we'll once again, go through the therapeutic alliance signs. And don't forget that if at any time during our work together that there's something that you want to bring up, remember about the alliance that its really important, and we'll take from there*
- ***Sounds good to me!***
- *Alright, well, have a great week!*
- ***Thanks!***
- *Thank you!*
- ***Thank you!***

APPENDIX E

Institutional Review Board
Division of Research
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Boca Raton, FL 33431
Tel: 561.297.1383
fau.edu/research/researchint

Charles Dukes, Ed.D., Ph.D., Chair

DATE:	August 2, 2021
TO:	Carman Gill, Ph.D.
FROM:	Florida Atlantic University Social, Behavioral and Educational Research IRB
PROTOCOL TITLE:	Validation of the "Sign your Feelings" Intervention
IRBNET ID #:	1767382-1
SUBMISSION TYPE:	New Project
ACTION:	APPROVED
APPROVAL DATE:	August 2, 2021
NEXT REPORT DATE:	August 2, 2022
REVIEW TYPE:	Expedited Review
REVIEW CATEGORY:	Expedited review category # *B7*

Thank you for your submission of New Project materials for this research study. The Florida Atlantic University Social, Behavioral and Educational Research IRB has APPROVED your New Project. This approval is based on an appropriate risk/benefit ratio and a study design wherein the risks have been minimized. All research must be conducted in accordance with this approved submission. NO CONTINUE REVIEW IS REQUIRED FOR THIS PROTOCOL. Please submit VIA e-mail a brief progress report on or before the "Next Report Date".

- This study is approved for a maximum of 82 subjects.
- Please submit a progress report before the indicated date.
- It is important that you use the approved, stamped consent documents or procedures listed below:
  - Consent Form - Lopez-Escobar Damgaard Therapist Consent Form Template V.8..docx (stamped)
  - Consent Form - v2 Lopez-Escobar Damgaard Client Consent Form without track changes.pdf (stamped)
  - Protocol - Basic Protocol for IRB Lopez-Escobar Damgaard.docx (stamped)
- ***Please note that any revision to previously approved materials or procedures, including modifications to numbers of subjects, must be approved by the IRB before it is initiated.*** Please use the amendment form to request IRB approval of a proposed revision.
- All SERIOUS and UNEXPECTED adverse events or unanticipated problems must be reported to this office. Please use the appropriate serious adverse event (SAE)/ Unanticipated Problems (UP) report form for this procedure. All regulatory and sponsor reporting requirements should also be followed, if applicable.

- Please report all NON-COMPLIANCE issues or COMPLAINTS regarding this study to this office.
- Please note that all research records for federally funded or non-funded investigator initiated studies must be retained for a minimum of three years after completion of the research. For multisite, international studies conducted under ICH Guidelines, records must be retained until notification by the sponsor that all marketing applications have been completed. Research records involving protected health information (PHI) must be retained for a minimum of six years.
- Please submit an IRB final report when the study is completed or discontinued.

If you have any questions or comments about this correspondence, please contact Donna Simonovitch at:

Institutional Review Board
Research Integrity/Division of Research
Florida Atlantic University
Boca Raton, FL 33431
Phone: 561-297-0777
researchintegrity@fau.edu

* Please include your protocol number and title in all correspondence with this office.

This letter has been electronically signed in accordance with all applicable regulations, and a copy is retained within our records.

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Patricia Maslin-Ostrowski, Ed.D., Chair

DATE: December 21, 2021

TO: Carman Gill, Ph.D.
FROM: Florida Atlantic University Social, Behavioral and Educational Research IRB

PROTOCOL #: 1767382-2
PROTOCOL TITLE: [1767382-2] Validation of the "Sign your Feelings" Intervention

SUBMISSION TYPE: Amendment/Modification

ACTION: APPROVED

EFFECTIVE DATE: December 20, 2021

Thank you for your submission of Amendment materials for this research protocol. The Florida Atlantic University IRB has approved your request to modify your protocol as outlined below:

- Amendment includes change to the therapists in the study to provide 4 weeks of therapy to the intervention group and the control group at the same time, making this a 4-week study

Please use the stamped, revised (consents, instruments, etc.) that accompany this approval letter.

  - Consent Form - 12.16.21 CLEAN COPY Client Consent Form.docx (stamped)
  - Consent Form - 12.16.21 CLEAN COPY Lopez-Escobar Damgaard Therapist Consent Form Template V.8..docx (stamped)

If you have any questions or comments about this correspondence, please contact Donna Simonovitch at:

Institutional Review Board
Research Integrity/Division of Research
Florida Atlantic University
Boca Raton, FL 33431
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* Please include your protocol number and title in all correspondence with this office.

This letter has been electronically signed in accordance with all applicable regulations, and a copy is retained within our records.

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Patricia Maslin-Ostrowski, Ed.D., Chair

DATE: February 18, 2022

TO: Carman Gill, Ph.D.
FROM: Florida Atlantic University Social, Behavioral and Educational Research IRB

PROTOCOL #: 1767382-3
PROTOCOL TITLE: [1767382-3] Validation of the "Sign your Feelings" Intervention

SUBMISSION TYPE: Amendment/Modification

ACTION: APPROVED

EFFECTIVE DATE: February 18, 2022

Thank you for your submission of Amendment materials for this research protocol. The Florida Atlantic University IRB has approved your request to modify your protocol as outlined below:

- Addition of compensation to therapists for their participation in the study

Please use the stamped, revised (consents, instruments, etc.) that accompany this approval letter.

- ◦ Consent Form - 2.3.22 CLEAN COPY Lopez-Escobar Damgaard Therapist Consent Form Template V.8.docx (stamped)
  - ◦ Protocol - 2.3.22 CLEAN COPY Basic Protocol for IRB Lopez-Escobar Damgaard copy.docx (stamped)
  - ◦ Protocol - 2.3.22 CLEAN COPY Intervention Protocol - Grisel Lopez-Escobar Damgaard.docx (stamped)

If you have any questions or comments about this correspondence, please contact Donna Simonovitch at:

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* Please include your protocol number and title in all correspondence with this office.

This letter has been electronically signed in accordance with all applicable regulations, and a copy is retained within our records.

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Patricia Maslin-Ostrowski, Ed.D., Chair

DATE: March 25, 2022

TO: Carman Gill, Ph.D.
FROM: Florida Atlantic University Social, Behavioral and Educational Research IRB

PROTOCOL #: 1767382-4
PROTOCOL TITLE: [1767382-4] Validation of the "Sign your Feelings" Intervention

SUBMISSION TYPE: Amendment/Modification

ACTION: APPROVED

EFFECTIVE DATE: March 25, 2022

Thank you for your submission of Amendment materials for this research protocol. The Florida Atlantic University IRB has approved your request to modify your protocol as outlined below:

- Amendment includes change in the consenting process

Please use the stamped, revised (consents, instruments, etc.) that accompany this approval letter.

- ◦ Consent Form - 3.8.22 CLEAN COPY Lopez-Escobar Damgaard Client Consent Form.docx (stamped)
  - ◦ Consent Form - 3.8.22 CLEAN COPY Lopez-Escobar Damgaard Therapist Consent Form.docx (stamped)
  - ◦ 3.8.22 CLEAN COPY Basic Protocol for IRB Lopez-Escobar Damgaard.docx3.8.22
  - ◦ CLEAN COPY Intervention Protocol - Grisel Lopez-Escobar Damgaard copy.docx

If you have any questions or comments about this correspondence, please contact Donna Simonovitch at:

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Boca Raton, FL 33431
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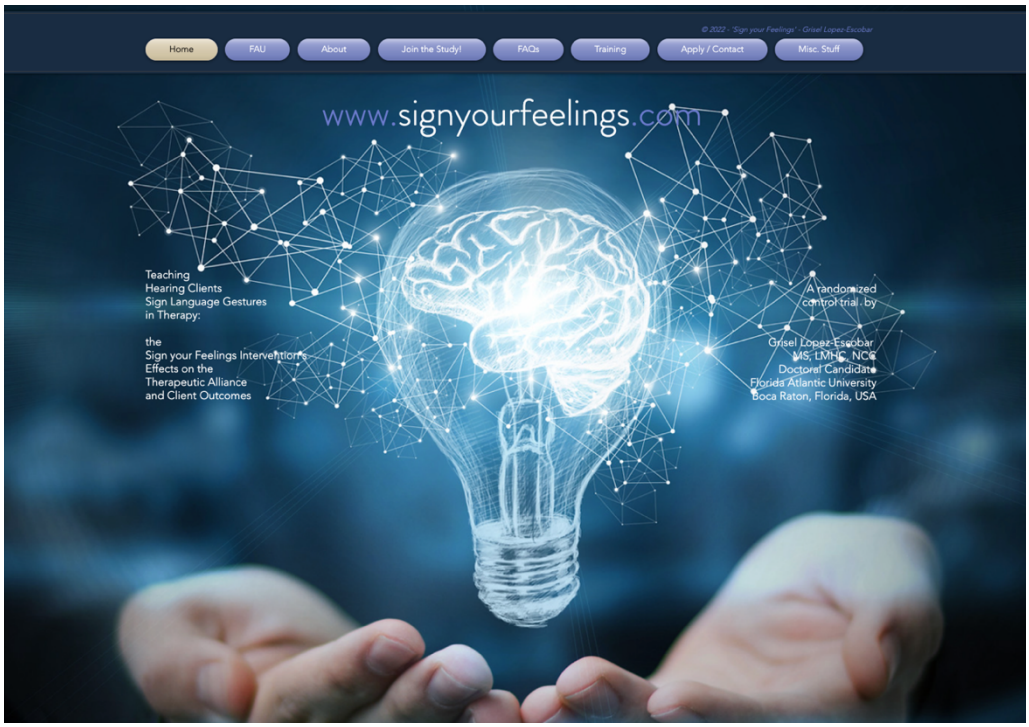
* Please include your protocol number and title in all correspondence with this office.

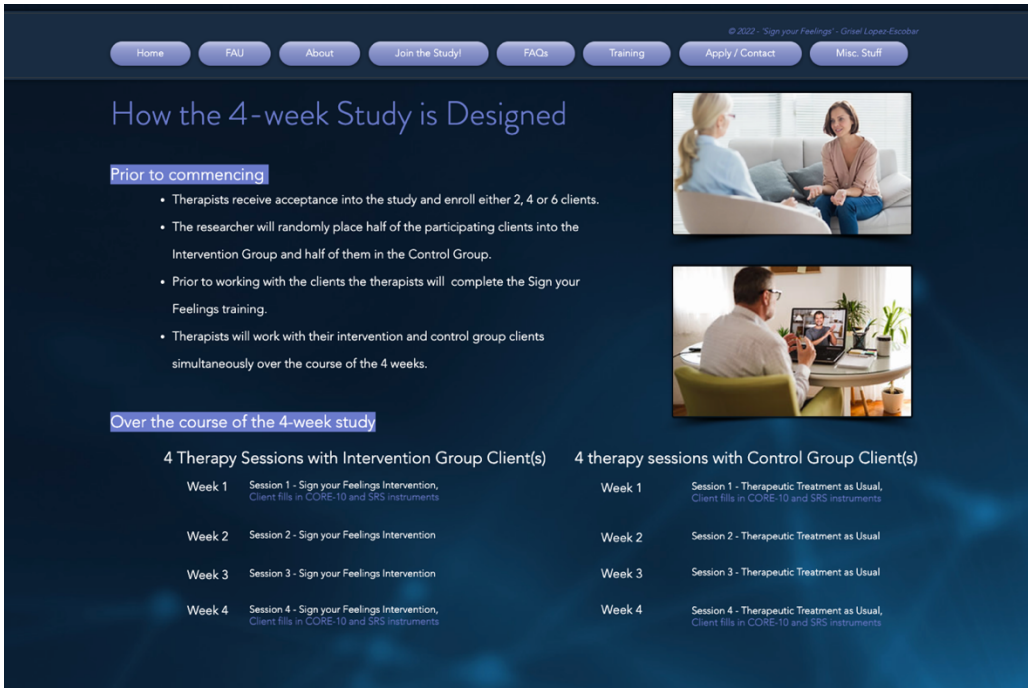
This letter has been electronically signed in accordance with all applicable regulations, and a copy is retained within our records.

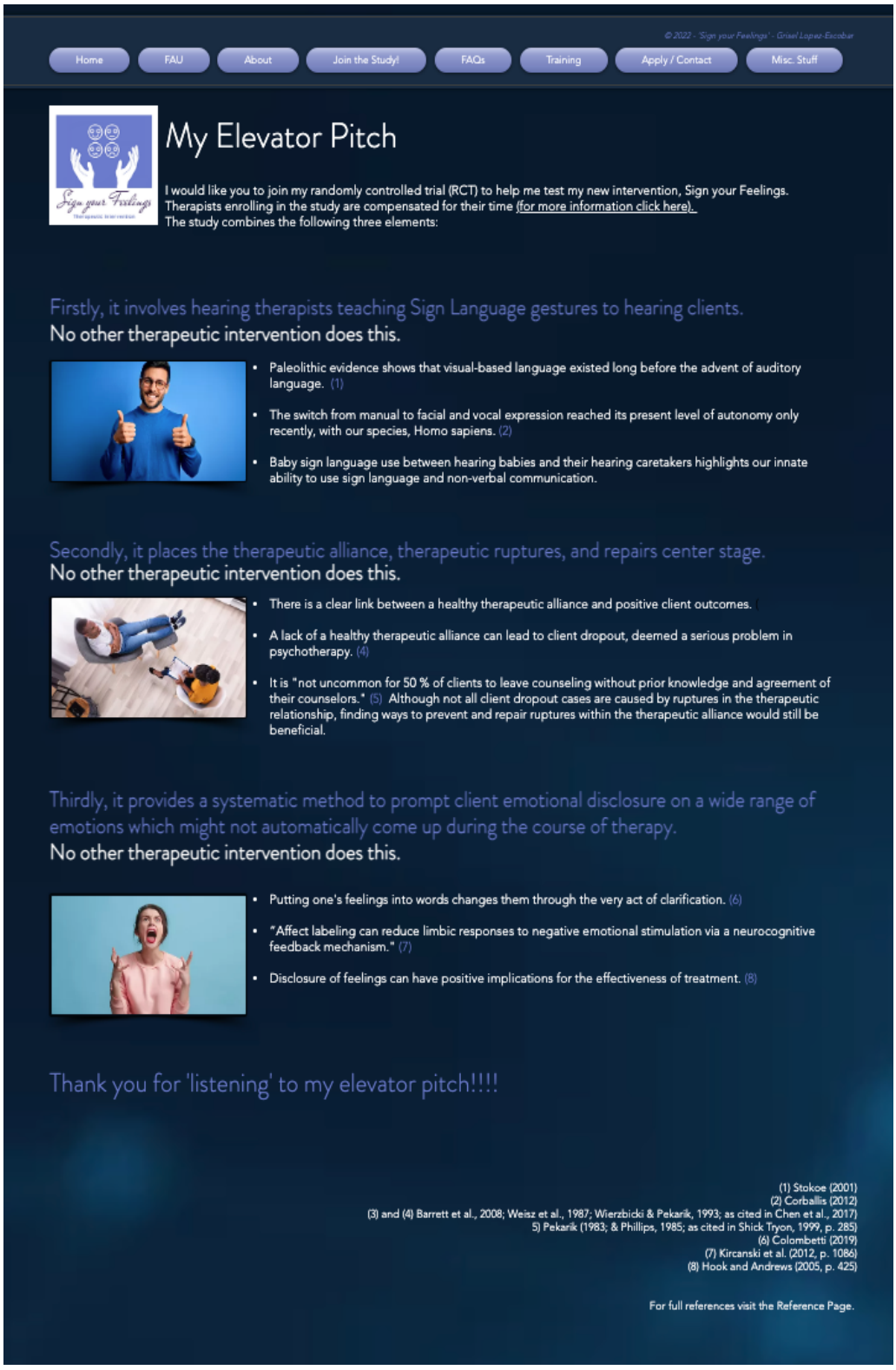
APPENDIX F

Screenshots of the Sign your Feelings Website www.signyourfeelings.com

Created to Recruit, Train and Test Therapists for the Study



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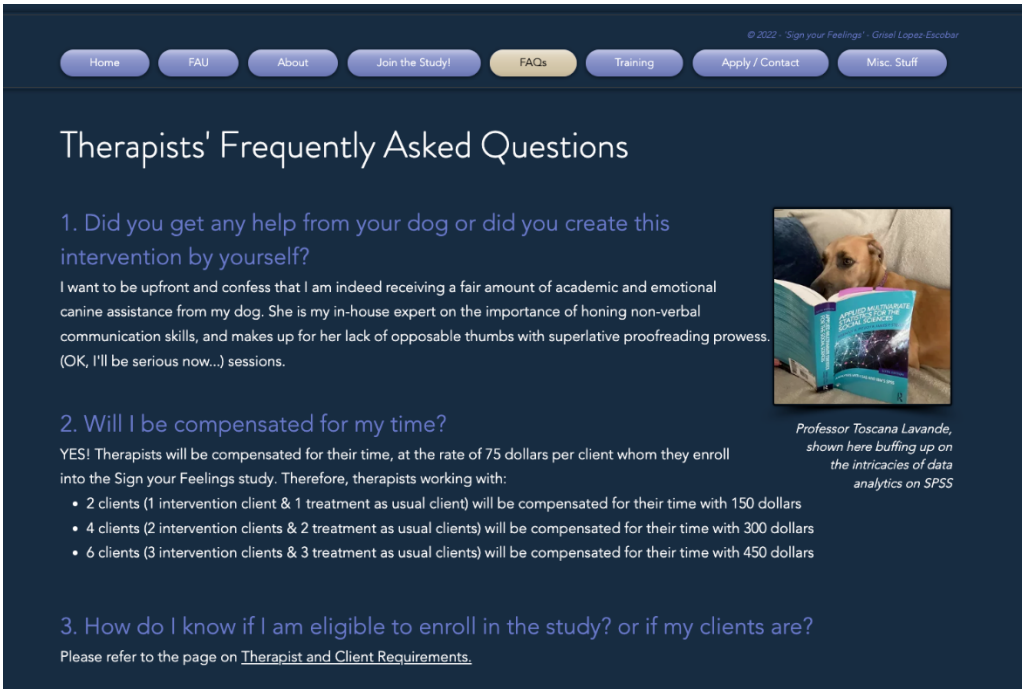
Misc. Stuff
My Elevator Pitch
I would like you to join my randomly controlled trial (RCT) to help me test my new intervention, Sign your Feelings.
Therapists enrolling in the study are compensated for their time (for more information click here).
The study combines the following three elements:
Firstly, it involves hearing therapists teaching Sign Language gestures to hearing clients.
No other therapeutic intervention does this.
• Paleolithic evidence shows that visual-based language existed long before the advent of auditory language. (1)
• The switch from manual to facial and vocal expression reached its present level of autonomy only recently, with our species, Homo sapiens. (2)
• Baby sign language use between hearing babies and their hearing caretakers highlights our innate ability to use sign language and non-verbal communication.
Secondly, it places the therapeutic alliance, therapeutic ruptures, and repairs center stage.
No other therapeutic intervention does this.
• There is a clear link between a healthy therapeutic alliance and positive client outcomes. (3)
• A lack of a healthy therapeutic alliance can lead to client dropout, deemed a serious problem in psychotherapy. (4)
• It is "not uncommon for 50 % of clients to leave counseling without prior knowledge and agreement of their counselors." (5) Although not all client dropout cases are caused by ruptures in the therapeutic relationship, finding ways to prevent and repair ruptures within the therapeutic alliance would still be beneficial.
Thirdly, it provides a systematic method to prompt client emotional disclosure on a wide range of emotions which might not automatically come up during the course of therapy.
No other therapeutic intervention does this.
• Putting one's feelings into words changes them through the very act of clarification. (6)
• "Affect labeling can reduce limbic responses to negative emotional stimulation via a neurocognitive feedback mechanism." (7)
• Disclosure of feelings can have positive implications for the effectiveness of treatment. (8)
Thank you for 'listening' to my elevator pitch!!!!
(1) Stokoe (2001)
(2) Corballis (2012)
(3) and (4) Barrett et al., 2008; Weisz et al., 1987; Wierzbicki & Pekarik, 1993; as cited in Chen et al., 2017)
5) Pekarik (1983; & Phillips, 1985; as cited in Shick Tryon, 1999, p. 285)
(6) Colombetti (2019)
(7) Kircanski et al. (2012, p. 1086)
(8) Hook and Andrews (2005, p. 425)
For full references visit the Reference Page.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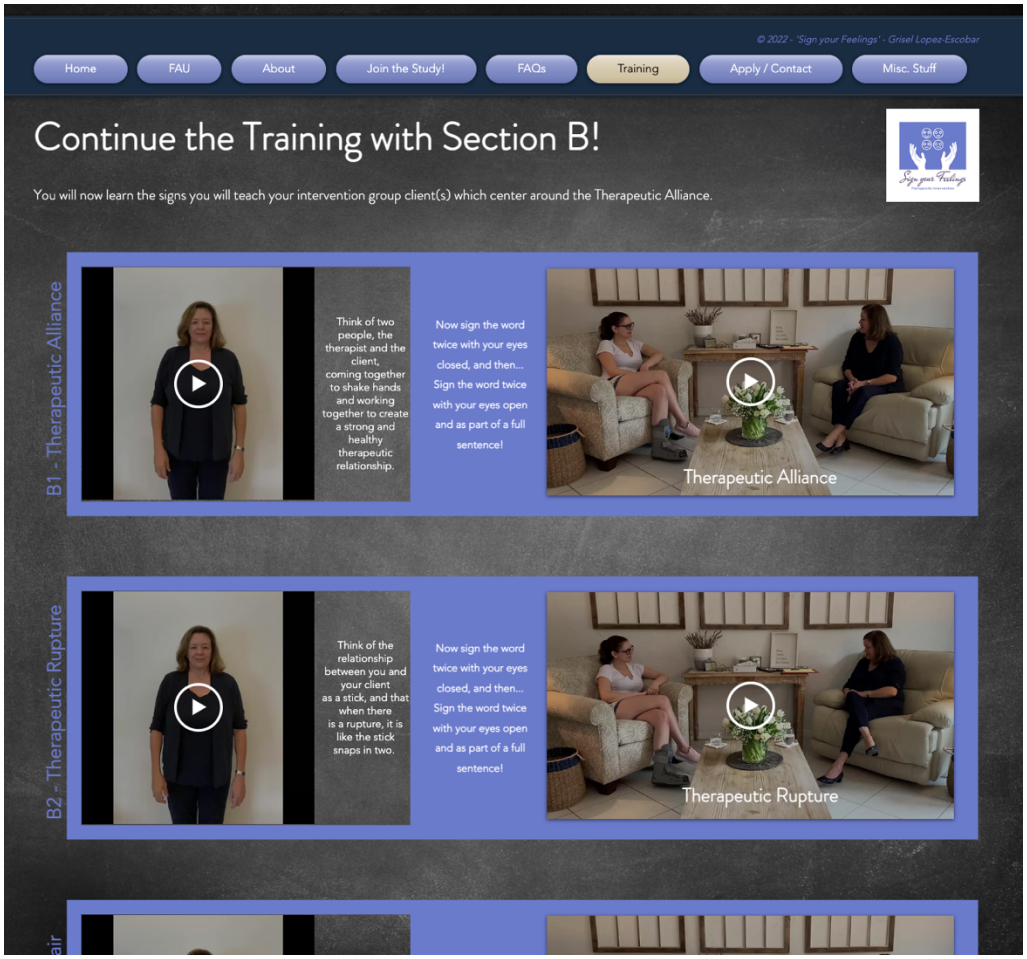
Misc. Stuff
Therapists' Frequently Asked Questions
1. Did you get any help from your dog or did you create this intervention by yourself?
I want to be upfront and confess that I am indeed receiving a fair amount of academic and emotional canine assistance from my dog. She is my in-house expert on the importance of honing non-verbal communication skills, and makes up for her lack of opposable thumbs with superlative proofreading prowess. (OK, I'll be serious now...) sessions.
Professor Toscana Lavande, shown here buffing up on the intricacies of data analytics on SPSS
2. Will I be compensated for my time?
YES! Therapists will be compensated for their time, at the rate of 75 dollars per client whom they enroll into the Sign your Feelings study. Therefore, therapists working with:
• 2 clients (1 intervention client & 1 treatment as usual client) will be compensated for their time with 150 dollars
• 4 clients (2 intervention clients & 2 treatment as usual clients) will be compensated for their time with 300 dollars
• 6 clients (3 intervention clients & 3 treatment as usual clients) will be compensated for their time with 450 dollars
3. How do I know if I am eligible to enroll in the study? or if my clients are?
Please refer to the page on Therapist and Client Requirements.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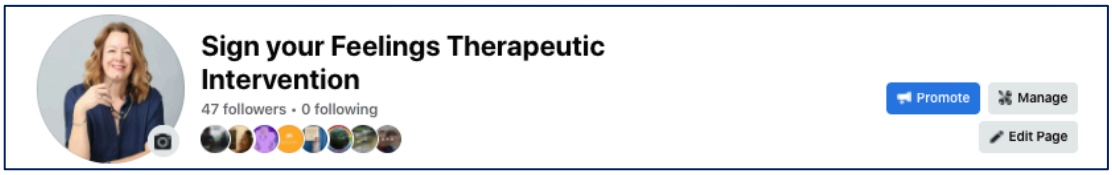
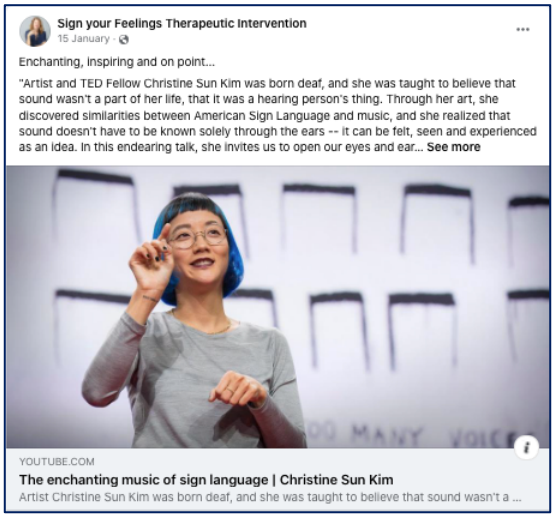
Misc. Stuff
Continue the Training with Section B!
You will now learn the signs you will teach your intervention group client(s) which center around the Therapeutic Alliance.
B1 - Therapeutic Alliance
Think of two people, the therapist and the client, coming together to shake hands and working together to create a strong and healthy therapeutic relationship.
Now sign the word twice with your eyes closed, and then... Sign the word twice with your eyes open and as part of a full sentence!
Therapeutic Alliance
B2 - Therapeutic Rupture
Think of the relationship between you and your client as a stick, and that when there is a rupture, it is like the stick snaps in two.
Now sign the word twice with your eyes closed, and then... Sign the word twice with your eyes open and as part of a full sentence!
Therapeutic Rupture

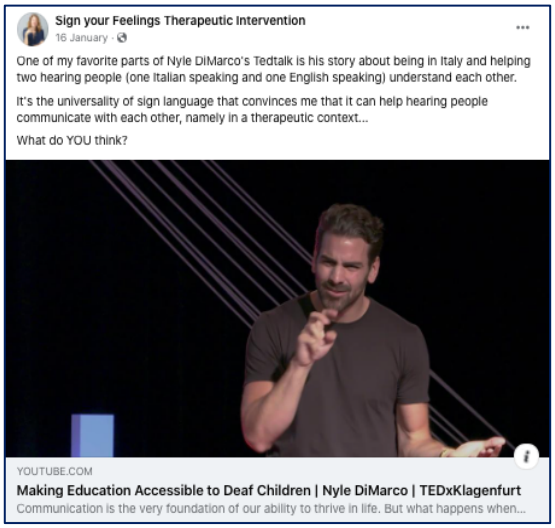
APPENDIX G

Screenshots from Facebook Page Created to Promote the Study

https://www.facebook.com/profile.php?id=100076885159671

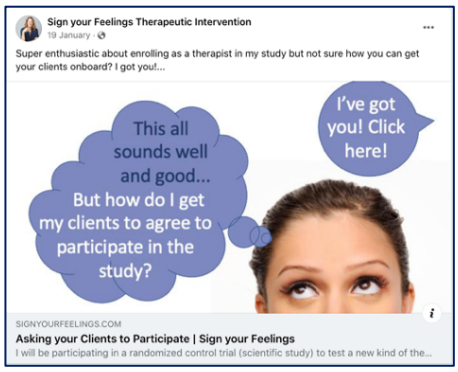


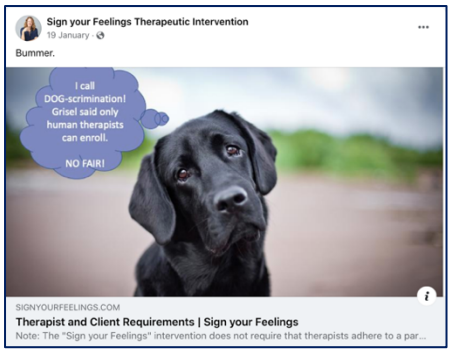




APPENDIX H

Screenshots of Facebook Promotional Posts





APPENDIX I

Sample of Cheat Sheets & Sessions Checklists

Sign your Feelings Cheat Sheets & Session Checklists

Session 1 - Intervention Group

- ☐ 1 Have client fill in the CORE-10 and SRS forms
- ☐ 2 Explain the intervention to the client
- ☐ 3 Teach the 9 Therapeutic Alliance gestures below.

☐ **B1** **Therapeutic Alliance**
Think of two people, the therapist and the client, coming together to shake hands and working together to create a strong and healthy therapeutic relationship.

☐ **B2** **Therapeutic Rupture**
Think of the relationship between you and your client as a stick, and that when there is a rupture, it is like the stick snaps in two.

☐ **B3** **Therapeutic Repair**
Think about having broken fingernails, and that to repair them you have to rub together the nails from your right hand with those on the left.

☐ **B4** **Sorry**
Make a fist with your dominant hand, representing your sorrow and place it in the middle or your chest, making 2 or 3 circles, all while looking like you feel sorry!

☐ **B5** **Resistance**
Pretend that your left hand is coming towards you and that your right hand is pushing it away, all while making a grimace.

☐ **B6** **Uneasy**
Part 1: thumb under the chin going out. Part 2: tips of hands flapping against each other.
Plus make sure you look uneasy!

☐ **B7** **Frustrated**
Use the back of your dominant hand and tap your chin in frustration, as if you are saying 'I have had it up to HERE'!

☐ **B8** **Shame**
Use all the fingers of your dominant hand except your thumb placing them below your ear, and make a movement as if you are 'coming out' with something that you feel shame about.

☐ **B9** **Empathy**
Part 1: Use the middle finger of your dominant hand and stroke the middle of your chest, going up, Part 2: Make two 'people' with your index fingers, who pop up simultaneously.

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