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By

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**The Efficacy of Video Feedback on Self-Evaluation of Performance and  
Treatment of Bilingual Participants: A Linguistically and Culturally Sensitive  
Intervention for Public Speaking Anxiety**

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Intervention for Public Speaking Anxiety**

by

**Magdalena Perez, B.A., M.A.**

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*I dedicate this dissertation to my familia:  
the friend, academic, spiritual and blood-type.*

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**The Efficacy of Video Feedback on Self-Evaluation of Performance and  
Treatment of Bilingual Participants: A Linguistically and Culturally Sensitive  
Intervention for Public Speaking Anxiety**

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Abstract: The present study culturally modified a procedure known as video feedback that is being used to enhance exposure-based treatment for social anxiety. The video feedback intervention was modified in two ways. First, the video feedback procedure was modified to be administered in a bilingual fashion by having bilingual participants conduct their speech exposures in both of their known languages. Second, bilingual participants were asked to conduct their speech exposures in front of an audience composed of White or Latino members. The

primary objective of the study was to investigate the potential treatment effects that the combination of treatment type (bilingual or English only) and audience-race/ethnicity (White or Latino) had on speech anxious bilinguals' outcomes of public speaking and social anxiety measures. Participants who were of Mexican descent, English-Spanish bilingual, and were experiencing moderate degrees of public speaking anxiety were randomized to one of four treatment conditions: (a) bilingual treatment in front of a White audience, (b) bilingual treatment in front of a Latino audience, (c) English-only treatment in front of a White audience or (d) English-only treatment in front of a Latino audience. Assessments were conducted at pre-treatment, post-treatment and a two week follow-up. Results indicated that participants assigned to the White audience conditions showed a modest degree of improvement on speech anxious thoughts associated to their Spanish speech performances and fear of being negatively evaluated by others. Participants assigned to the English-only treatment in front of a White audience showed the greatest degree of improvement on the general trait measure of public speaking anxiety and social anxiety. The four conditions, however, did not differ across time on measures that assessed for state-related measures of public speaking outcomes. The results of this study highlight the importance of implementing specific cultural modifications to make exposure tasks more closely resemble the cultural reality of minority students attending predominantly White institutions. Theoretical and clinical implications are discussed.

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## Introduction

Social phobia is the third most common psychiatric disorder in the United States, surpassed only by major depression and alcohol dependence (Kessler, McGongale, Shanyang, Nelson, Hughes, & et al., 1994). Because social phobia can be very a debilitating disorder (Liebowitz, Gorman, Fyer, Klein, 1985; Schneier, Heckelman, Garfinkel, Campeas, et al. 1994; Turner, Beidel, Dancu, & Keys, 1986), a significant amount of research has been invested to develop numerous psychological treatments to alleviate socially anxious individuals of their symptoms (i.e., Hiemberg & Juster, 1995). Although many of these treatments are efficacious at treating social anxiety, the efficacy of these treatments have not fully been explored from a multicultural perspective. Specifically, the majority of previous studies have failed to examine how the efficacy of these treatments may be impacted by cultural variables. This lack of knowledge is unfortunate given that there is a growing body of evidence indicating that some cultures may endorse culture-specific social phobic symptoms (Dinnel, Kleinknecht, & Tanaka-Matsumi, & 2002; Heinrichs, Rapee, Alden, Bogels, Hofmann, Oh, & Sakano, 2006; Kleinknecht, Dinnel, & Kleinknecht, 1997). Consequently, it is imperative that research be conducted in order to determine if standard treatment for social phobia needs to be culturally modified in order to address certain culture-specific social phobic symptoms.

To the author's knowledge, only one treatment study has addressed the need to culturally modify standard social phobia treatment protocols to address culture-

4specific social phobic symptoms. This treatment study was conducted by Kleinknecht, Dinnel, Herbert, and Harwell (2001). In this study a CBT protocol for social phobia was administered to individuals who were endorsing social phobic and Taijin Kyofusho (TKS) symptoms. TKS are social phobic symptoms that are predominantly prevalent in the Japanese culture. TKS is described as an obsession of shame, manifested by morbid fear of embarrassing or offending others by inappropriate facial expressions, physical deformity, a blemish, blushing, staring inappropriately or emitting offensive odors or flatulence (Takahashi, 1989, Tanka-Matsumi, 1979). The results of the treatment study indicated that although participants reported a significant decreased in their social phobia and TKS scores, their TKS scores did not decrease as much as their social phobia scores. The authors speculated that if the CBT treatment protocol had been modified to target TKS symptoms, it is likely that participants would have experienced a greater change in their TKS scores. A thorough review of the literature indicated that no studies have been done to examine the authors' speculation. Consequently, it remains unknown if a culturally modified CBT treatment protocol leads to greater improvement on culture-specific social phobic symptoms than a standard protocol.

Thus, in the present study, a procedure that is typically included in CBT packages for social phobia was culturally modified to examine its' efficacy when applied to a population that may endorse culture-specific symptoms in regards to their social anxiety. The procedure that was modified in the present study was video feedback (Harvey, Clark, Ehlers, & Rapee, 2000; Kim, Lundh, & Harvey, 2002;

Rapee & Hayman, 1996). Video feedback is a technique in which a social performance, such as a speech performance, is played back via video recording. The population chosen for the present study consisted of Mexican American English-Spanish bilinguals who were endorsing moderate degrees of public speaking anxiety. Since previous research has indicated that bilinguals experience different levels of anxiety according to the language which they are speaking, (Stein, van der Linden, & Schmidt, 1998), it is argued that interventions that treat individuals in one language may not generalize to those situations that require them to speak in their other language. Interventions, therefore, may have to be culturally modified to include both of their languages in order to reach maximal effectiveness. Thus, in the present study the video feedback procedure was culturally modified in two ways. First it was modified to be administered bilingually. Then, outcome effects of this bilingual procedure were compared to those of a single language procedure. Given that all participants in the study were members of a minority group, making them susceptible to stereotype threat (Bosson, Haymovitz, Pinel, 2004; Osborne, 2001; Spencer, Steele, & Quinn, 1999; Steele & Aronson, 1995; Stone, Lynch, Sjomeling, & Darley, 1999), it was also decided to examine the potential impact that the race/ethnicity of the audience members listening to their speeches (White or Latino) could have on their outcome. Therefore, given the design of the present study, the overall main objective was to examine the treatment effects of the combination that treatment-type (bilingual vs. monolingual) and audience-race/ethnicity (White or Latino) have on speech anxious bilinguals measures of public speaking anxiety and social anxiety.

### *Theory of Video Feedback*

Recent research has focused on developing new techniques that enhance CBT for social anxiety. The rationale behind these new techniques stems from cognitive models of social phobia (Clark & Wells, 1995; Rapee & Heimberg, 1997) that attempt to explain how social anxiety is maintained via various factors. These maintaining factors include: (a) an increase in self-focused attention and monitoring with reduction in observation of other people and their responses; (b) the use of misleading internal information to infer how one appears to others; (c) the use of safety behaviors to anticipated threats; and (d) the tendency to use negatively biased and anticipatory processing. One of the new techniques that has been incorporated to target some of these maintaining factors is the video feedback procedure.

The video feedback procedure is believed to help facilitate social anxiety reduction by exposing an individual to their inaccurate self-perceptions toward their social performance (via the video recording), thus allowing for more accurate perceptions to be developed. Recent studies that have examined the effects of video feedback have mainly been conducted with participants who endorse moderate degrees of public speaking anxiety (Harvey, et al., 2000; Kim, et al., 2002; Rapee & Hayman, 1996). In these studies, participants endorsing moderate degrees of speech anxiety are instructed to conduct speech exposures (in front of an audience or experimenter) while their speech is videotaped. Participants are typically asked to evaluate their speech performance before and after viewing their videotaped performance. As the following literature review will indicate, preliminary evidence

indicates that video feedback helps speech anxious participants correct their distorted perceptions (Harvey et al., 2000) and develop a more positive view toward their public speaking performances (Rapee & Hayman, 1996). However, findings of recent treatment studies (conducted with participants suffering from social phobia) indicated that it remains questionable whether or not the video feedback procedure facilitates a reduction in social anxiety (Clark, Ehlers, McManus, Hackmann, Fennell, Campbell, Flower, Davenport, & Louis, 2003; Smits, Powers, Buxkamper, & Telch, in press).

Rapee and Hayman (1996) were the first to show the beneficial effects of video feedback with a speech anxious population. These authors compared the self-performance ratings between participants assigned to the video feedback and non-video feedback conditions. Participants assigned to the video feedback condition had the opportunity to view their videotaped performance and evaluate this performance upon viewing it. Results indicated that video feedback participants rated their speech performances more positively after watching the video than did the non-video feedback participants. However, although participants in the video feedback conditions had developed more positive perceptions toward their speech performance, results indicated that they did not experience a greater reduction in speech anxiety or social anxiety compared to participants in the non-video feedback condition. Authors concluded that video feedback needed to be combined with another method that would make the inaccurate perceptions more salient for those in

the video feedback conditions in order to experience a greater reduction in anxiety scores.

Subsequent studies added a cognitive component to maximize the effects of video feedback referred to as “cognitive preparation” (Harvey et al., 2000; Kim et al., 2002). In these studies, before participants viewed their videotaped performance they were given the cognitive preparation component instructing them to (a) predict in detail what they would see in the video, (b) imagine their speech in detail and (c) watch the video objectively as if they were watching a stranger. It was expected that cognitive preparation would prime participants to notice the discrepancies between their distorted perceptions and their actual performance, thus facilitating the correction of distorted perceptions leading to a reduction in anxiety.

Harvey et al. (2000) were the first researchers to examine the impact of cognitive preparation plus video feedback (CP + VF) with speech anxious participants. They compared the discrepancy scores between observers and participants assigned to the CP + VF condition to those assigned to the video feedback only condition. Results indicated that participants in the CP + VF condition became more accurate at rating their speeches than those in the video feedback only condition. In a follow-up study, Kim et al. (2002) added further support to the beneficial effects of receiving cognitive preparation. In their study, participants in the CP + VF condition made more positive ratings of their overall performance compared to those in the video feedback only condition. In addition, their study indicated that the effects of CP + VF generalized to participants’

evaluation of a second speech task (an additional task introduced in this study) and that this effect tended to be both more robust and of larger magnitude. As expected, Kim et al. (2002) also showed that the addition of cognitive preparation lead to a reduction in anxiety (worry) compared to participants that did not receive this part of the protocol.

Treatment studies for social phobia have begun to incorporate video feedback procedure as part of CBT based treatment protocols (Clark, et al., 2003; Hofmann, 2004). For example, Clark et al.'s (2003) new cognitive therapy program incorporates video feedback as one of the therapeutic inventions aimed at reducing social anxiety. In the treatment study that investigated the efficacy of this cognitive therapy program, participants meeting criteria for social phobia were assigned to (a) cognitive therapy, (b) fluoxetine plus self-exposure or (c) placebo plus self-exposure condition. Findings indicated that participants assigned to cognitive therapy showed a greater degree of improvement on social anxiety scores than those assigned to fluoxetine plus self-exposure or placebo plus self-exposure conditions. Although these findings are promising, they are limited because it is difficult to sparse out the individual effects that video feedback contributed at improving social anxiety scores.

In a subsequent study conducted by Smits, et al. (in press), they investigated the individual effects of adding the videotape feedback procedure to an exposure-based treatment protocol for social anxiety. In this study, participants meeting criteria for social phobia were assigned to one of four conditions: (a) exposure to public speaking plus video feedback focusing on the participants' performance, (b)



exposure to public speaking plus video feedback focusing on the audience's reaction, (c) exposure to public speaking without video feedback or (d) credible placebo treatment condition. Participants in the active conditions received a total of 45 minutes of speech exposures over two sessions. Results indicated that contrary to the prediction made by the authors, the video feedback procedures did not enhance the effects of exposure-based treatment. Specifically, participants in the video feedback conditions did not show any greater advantageous gains on their social anxiety scores when compared to participants in the exposure to public speaking without video feedback condition. The authors argue that video feedback may be more effective at modifying *probability bias*, the tendency to overestimate the probability of a negative outcome, than *cost bias*, the tendency to overestimate disastrous consequences of a negative outcome. Since it has been suggested that social anxiety reduction warrants modification of cost bias than probability bias, it is perhaps the reason that video feedback is not as effective in reducing social anxiety.

In summary, studies conducted with non-clinical samples have consistently found that the video feedback procedure helps moderately speech anxious participants perceive their public speaking abilities more positively as well as more accurately. However, the video feedback procedure still warrants further investigation before determining whether or not it enhances the efficacy of exposure-based treatment protocols for social anxiety.

### *Cultural Modification of Video Feedback*

Although video feedback findings are promising, there is still considerable room for improvement of this procedure. From a multicultural perspective it will be important to explore the efficacy of the video feedback procedure with more diverse populations living in the United States, especially with people who speak more than one language. According to the most recent US census, approximately 20 percent of the population speaks more than one language at home (U.S. Census Bureau, 2001). Yet, the potential impact that language can have on treatment efficacy has been largely overlooked (Altarriba & Santiago-Rivera, 1994; Santiago-Rivera, 1995; Santiago-Rivera & Altarriba, 2002).

In treating social anxiety, the lack of knowledge in this area is a major limitation for two distinct reasons. First, empirical evidence has shown that bilinguals experience different levels of social anxiety according to language which they are speaking (Stein, et al., 1998). Specifically, bilinguals tend to experience more anxiety when they are required to speak in their less proficient language than their dominant language, especially if the situation is formal (Stein et al., 1998). Subsequently, it is arguable that interventions that treat individuals in one language may not generalize to those situations that require them to speak in their other language.

Second, various psychotherapeutic case studies have consistently reported the advantageous gains of conducting bilingual treatment with bilingual clients. These case studies have shown that bilingual clients who receive bilingual treatment have

the opportunity to process material in both languages. This in turn exposes them to a wider range of thoughts and behaviors that positively influence their treatment outcome (Buxbaum, 1949; Clauss, 1998; Greenson, 1950; Hong, Morris, Chiu, Benet-Martinez, 2000; Perez-Foster, 1996).

Thus, given these two considerations, it is important to determine if social phobia treatment can be enhanced when the procedures of its' protocol are administered in a bilingual fashion versus in one language to socially anxious bilingual individuals. Thus, one of the aims of the present study was to explore the efficacy of video feedback in reducing speech *and* social anxiety when given bilingually versus in one language to a group of speech anxious bilingual participants.

The present study was also interested in determining how the characteristics of the experimenter/audience members would impact the effects of the video feedback procedure. Previous literature indicated that the anxiety that a person experiences in a socially stressful situation can be partially attributed to the characteristics of the experimenters staging the study (Leary & Kowalski, 1995; Mahone, Bruch, & Heimberg, 1993; Zimbardo, 1977). For example, male college students experience greater degrees of anxiety the more they perceive a female confederate as being attractive (Mahone et al., 1993). Although the literature on video feedback has not yet addressed the impact that experimenter's characteristics may have on their findings, the present study deemed it important to manipulate this variable, especially because all bilingual participants recruited in this study belonged

to a U.S. minority group (participants were of Mexican descent). Thus, these participants were susceptible to stereotype threat depending on the racial/ethnic composition of their experimenter/audience members. Stereotype threat is “a discomforting or distracting concern about being viewed and treated stereotypically” (Marx, Brown, & Steele, 1999, p. 493). Stereotype threat is activated when individuals are placed in performance situations where the negative stereotypes of their group become salient (i.e., gay student having to perform in front of a group of heterosexual students). The literature on stereotype threat has consistently found that when the threat is activated, a person’s performance is impaired. For example, previous studies have found that when ignited, stereotype threat can impair academic (Osborne, 2001; Spencer et al., 1999; Steele & Aronson, 1995), athletic (Stone et al., 1999) and social performance (Bosson et al., 2004) of commonly stigmatized groups (i.e., minorities, women, gays). Although findings are still inconclusive, it appears that anxiety partially mediates the relationship between stereotype threat and performance (Osborne, 2001; Stone et al., 1999; Bosson et al., 2004). Thus, in order to control for and examine the potential impact of stereotype threat in this study, participants were asked to give their speech exposures in front of an experimenter and audience members (henceforth: audience members) who all possessed stereotypical phenotypes of White (i.e., lighter colored skin, hair and eyes) or Latino (i.e., darker colored skin, hair and eyes) people.

Thus, the present study employed a 2 (treatment-type: bilingual or monolingual) x 2 (audience-race/ethnicity: White or Latino) experimental design.

Given the design of the study, the primary objective of the current study was to examine the combined impact that treatment-type (bilingual-video feedback vs. monolingual- video feedback) and audience-race/ethnicity (White vs. Latino) has on the reduction of public speaking anxiety and social anxiety outcome measures in a bilingual speech anxious population. In order to accomplish this objective, a sample of English-Spanish bilingual Mexican and Mexican American speech anxious participants were randomized to one of four conditions: (a) Bilingual Video Feedback-White Audience (BVW), (b) Bilingual Video Feedback-Latino Audience (BVL), (c) English Video Feedback-White Audience (EVW) or (d) English Video Feedback-Latino Audience (EVL). A Spanish-only video feedback condition was excluded from the study because researchers have consistently shown that people who speak some English are more likely to receive treatment exclusively in English (c.f., Altarriba & Santiago-Rivera, 1994) than another language. Thus, the author felt that the four conditions listed were most representative of the reality of the situation in our current mental health system.

Two different types of outcomes were assessed: (a) public speaking ability and anxiety and (b) social anxiety. Various public speaking outcome measures were collected separately for their perceptions on their English and Spanish public speaking abilities and anxieties. Outcome assessments were conducted prior to treatment, one-week post-treatment and at two-week follow-up. Cultural measures were also collected on degree of English/Spanish proficiency, cultural identity, acculturative stress and values.

## *Hypotheses*

### *Language Specific Anxieties and Self-Performance Ratings at Baseline*

Based on a previous literature, participants were expected to endorse language specific anxiety and self-performance ratings at baseline. More specifically:

**Hypothesis 1:** Participants were expected to experience differential levels of anxiety when performing in English versus Spanish at pre-treatment.

**Hypothesis 2:** Participants were expected to evaluate their English behavioral speech performance differently than their Spanish behavioral speech performance at pre-treatment.

### *Within-Group Differences on the Video Feedback Effects*

Consistent with previous research on video feedback, within-group differences were expected on certain public speaking outcome measures:

**Hypothesis 3:** Participants in all the four conditions (BVW, BVL, EVW, EVL) were expected to experience a significant reduction on their *English*-related state measures of public speaking anxiety at post-treatment and follow-up. However, only participants in the bilingual conditions (BVW and BVL) were expected to experience a significant reduction on their *Spanish*-related state measures of public speaking anxiety at post-treatment and follow-up because they were the only conditions receiving treatment in Spanish.

**Hypothesis 4:** Participants in all the four conditions (BVW, BVL, EVW, EVL) were expected to rate their English behavioral speech performances more positively at post-treatment and follow-up than they had at pre-treatment.

However, only participants in the bilingual conditions (BVW and BVL) were expected to rate their *Spanish* behavioral speech performances more positively at post-treatment and follow-up than they had at pre-treatment because they were the only conditions receiving treatment in Spanish.

### *Exploratory Questions*

#### *Between-Group Differences*

Given that the present study was the first to examine the combined effects of bilingual/monolingual video feedback and ethnicity of the audience (White/Latino), a priori hypotheses were not made regarding which condition would be the most efficacious at improving participants' outcome measures. Hence, the following exploratory questions were investigated:

#### *Public Speaking Measures*

**Exploratory Question 1:** The present study would attempt to identify the combination of treatment-type and audience-race/ethnicity (Treatment x Ethnicity) that would show the greatest degree of improvement on public speaking outcome measures which included the following: concerns about giving a speech in English/Spanish, self-performance ratings on English/Spanish speeches, public speaking anxiety ratings on English/Spanish speeches, English/Spanish speech anxiety thoughts and a gross (not language specific) public speaking anxiety rating.

*Social Anxiety Measures*

**Exploratory Question 2:** The present study would attempt to identify the combination of treatment-type and audience-race/ethnicity (Treatment x Ethnicity) that would show the greatest degree of improvement on social anxiety outcome measures.



## Methods

### *Participants*

Two recruitment strategies were used in the study. The first recruitment strategy asked University of Texas at Austin (UT) students enrolled in an introduction to psychology course to complete a prescreening measure which consisted of the items that make up the Public Speaking Fear Subscale of the Liebowitz Social Anxiety Scale-Self Report measure. The second recruitment strategy consisted of sending an email message to all UT and St. Edward's University (SEU) students with a Spanish surname. The email message informed the students about the study and invited them to log onto a website to complete the prescreening measure. Students who obtained a score equal to or higher than eight on the Public Speaking Fear Subscale were contacted and invited to participate in the prescreening phase of the study. Upon completion of the pre-screening phase, participants who met the following entry criteria were invited to join the treatment study: (a) reported that they were of Mexican descent, (b) scored 8 or higher on the Public Speaking Fear Subscale, (c) indicated that they were English-Spanish or Spanish-English bilingual and (d) reported a significant degree of anxiety on two impromptu speeches that were given separately in English and Spanish.

Eighty participants who were enrolled at UT were prescreened and only 46 met the criteria and were invited to participate in the study. Four students, however, declined to participate in the study leaving 42 participants from UT. Five students from SEU were prescreened and four met criteria and agreed to participate in the

study. Thus, the sample consisted of a total of 46 participants of which 35 were female participants.

### *Overview of Experimental Design*

Before the prescreening procedure began, participants were randomly assigned to one of four conditions: (a) Bilingual Video Feedback-White Audience (BVW), (b) Bilingual Video Feedback-Latino Audience (BVL), (c) English Video Feedback-White Audience (EVW) or (d) English Video Feedback-Latino Audience (EVL). Thus, pre-treatment speeches were always conducted in front of an all White or Latino audience.

During their first treatment session, participants were asked to conduct four speech exposures, followed by cognitive preparation and video feedback. At their second session, one week following their first session, participants were asked to conduct an additional set of four speech exposures, followed by cognitive preparation and video feedback. At the end of their second session, post-assessment measures were taken. Lastly, two weeks following their second session, follow-up measures were taken. Participants in BVW and BVL conditions conducted half of their speech exposures in Spanish and half in English. Whereas participants in the EVW and EVL conditions, conducted all of their speech exposures in English.

### *Measures*

Measures were collected to assess for improvement in public speaking and social anxiety related outcomes. Two different types of public speaking outcome measures were collected. *State* measures were collected in reference to speech

performances that participants had given at pre-treatment, post-treatment and follow-up. These measures were always taken immediately before or after each speech performance and were always in reference to the speech they had just performed. In addition, *trait* measures were also collected at these three different time points. The *trait* measures were always collected at the end of the sessions when participants were instructed to report on their overall perspective of public speaking thoughts and anxiety (not specifically in reference to any particular speech performance). In addition, cultural and demographic questionnaires were collected.

#### *Social Anxiety Outcome Measures*

*Fear Negative Evaluation Scale (FNES; Watson and Friend, 1969).* The FNES is a 30 true/false item questionnaire used to measure apprehension about others' evaluations, expectation of negative evaluation, avoidance of evaluative situations and distress related to negative evaluations. Two example items for the FNES are: "I am afraid that I may look ridiculous or make a fool of myself" and "I am afraid people will find fault with me." Each item that is endorsed as true receives one point. Higher scores on the FNES total are indicative of greater apprehension toward negative Evaluation. The FNES has demonstrated to have sound psychometric properties with acceptable internal consistency by mean biserial correlations ( $r = .72$ ), good test-retest reliability ( $rs = .78$ — $.94$ ) (Watson & Friend, 1969) and sensitivity to change with psychological treatment (c.f., Clark, Feske, Masia, Spaulding, Brown, Mammen, & Shear, 1997).

*Liebowitz Social Anxiety Scale-Self Report (LSAS-SR; Liebowitz, 1987).* The LSAS-SR is composed of 24-items that measure for fear and avoidance experienced in a range of social and performance situations. Both fear (0 = no fear; 3 = severe fear) and avoidance (0 = never avoid 0%; 3 = usually avoid 66%-100%) are rated on a four point scale. The items of the LSAS-SR can be summed into seven different scales: social-interaction fear, performance fear, social-interaction avoidance, performance avoidance, total fear, total avoidance and an LSAS-SR total scale. In the present study, LSAS-SR total scale was calculated to analyze the data regarding their degree of social anxiety. Higher scores on the LSAS-SR total scale are indicative of higher degrees of social anxiety. The psychometric properties of the LSAS-SR scales are excellent (Heimberg, Horner, Juster, Safren, Brown, Schneier, & Liebowitz, 1999). Recently, Safren, Heimberg, Horner, Juster, Schneier and Liebowitz (1999) proposed a four-factor model for the LSAS that included social interaction, public speaking, observation by others and eating and drinking in public. The reliability estimates of these subscales are good ranging from .94 (social interaction) to .75 (observation by others). Using the LSAS-SR, Oakman, Van Amerigen, Mancini and Farvolden (2003) found further support for these four subscales. The LSAS-SR has also shown adequate sensitivity to treatment change.

#### *State Measures on Public Speaking Outcomes Collected During the Speech Tasks*

*Appraisal of Social Concerns Scale (ASC; Telch, Lucas, Smits, Powers, Heimberg, & Hart, 2004)* The ASC is a self-report scale that instructs participants to rate their concern about visibility of anxiety symptoms, negative responses from

others in a social situation and impaired performance. The ASC is composed of 20-items and uses a 0 (not at all concerned) to 100 percent (extremely concerned) scale. In the present study, the total score of the ASC was calculated by summing participants' responses. Thus, higher scores were reflective of a greater degree of concern regarding their speech performance. The ASC has excellent internal consistency and test-retest reliability. The ASC has also shown good convergent and discriminant validity (Telch et al, 2004)

*Speech Evaluation Questionnaire (SEQ; Harvey et al., 2000).* The SEQ is a self-report questionnaire that was translated from its original Swedish language to English. Harvey et al. (2000) administered the SEQ to participants after they had given a speech and after they had watched their speech on video. The SEQ instructs the participant to rate “how worried you are about your performance during the speech” (worry about performance score), “overall how well you think that you came across” (coming across well score) and to rate a list of 25 specific performance indicators which constitutes the behavior composite score. The performance indicators consist of 12 positive descriptors (i.e., confident, clear voice) and 13 negative descriptors (i.e., stuttered, blushed). All ratings are made on a 0 (not at all) to 10 (extremely) scale. In the present study, the behavior composite score was used to analyze the data because it reflects their perceptions on their speech performance. Negative descriptors were scored reversed so that high scores indicated a better performance. The Swedish translation of the behavior composite score had a Cronbach alpha of .86.

*Subjective Units of Distress (SUDS).* Immediately following the speech task, participants were asked to rate their peak subjective anxiety on a 0 (no anxiety) to 100 (extreme anxiety) scale.

*Trait Measures Collected on Public Speaking Outcomes*

*Speech Anxiety Thoughts Inventory (SATI; Cho, Smits, & Telch, 2004).* The SATI is a 23-item scale that measures the cognitive thoughts associated with speech anxiety. The SATI is composed of two factors—predication of poor performance and fear of negative evaluation by the audience. Respondents rate the items using a five-point Likert-type scale from 1 (I do not believe the statement at all) to 5 (I completely believe the statement). Two examples of the SATI are: “If I make a mistake, the audience will think I’m stupid” and “My behavior will appear awkward to the audience.” In the present study, a total SATI score was calculated with higher scores indicating a greater degree of anxious thoughts associated with their public speaking performances. The SATI has demonstrated to have sound psychometric properties with high internal consistency for the Total scale ( $\alpha = 0.95$ ), good test-retest reliability ( $r = 0.71$ ) and sensitivity to change with psychological treatment (Cho et al., 2004). The SATI has also shown good convergent validity with other public speaking anxiety and social anxiety measures (Cho et al., 2004). In the present study, participants were asked to complete two SATIs. One SATI measured participants’ cognitive thoughts associated to their English speaking anxiety and the other, to their Spanish speaking anxiety.

*LSAS-SR Public Speaking Subscale (LSAS-PS; Liebowitz, 1987).* As indicated in the LSAS-SR description above, one of the subscales that can be calculated from this measure is the Public Speaking Subscale. The Public Speaking Subscale is composed of 10 items that measures the fear and avoidance of public speaking. The score may range from 0 to 30, with higher scores indicating more fear and avoidance behaviors related to public speaking. In the present study, this subscale was used as a trait measure of public speaking anxiety, meaning a general measure of public speaking anxiety that was not associated to any one speech performance.

#### *Treatment Expectancy Measure*

*Reaction to Treatment Questionnaire: (RTQ; Borkovec & Nau, 1972).* The RTQ measures participants' expectancy about the effectiveness of treatment. The RTQ is composed of five items each rated on a 10-point Likert scale. When the RTQ was designed, college students rated the credibility of two therapies and four control/placebo rationales for the treatment of public speaking anxiety. Results indicated that the rational given for the control/placebo conditions were less credible than the therapy conditions. Two examples items of the RTQ are "How logical does this type of treatment seem to you?" and "How confident would you be that this treatment would be successful in eliminating fear of speaking before a group?".

#### *Bilingual Proficiency Assessment*

*Woodcock-Munoz Language Survey (WMLS; Woodcock & Munoz, 2001a).* The WMLS is a language assessment tool that provides a broad sampling of

proficiency in the English and Spanish language. The WMLS has an English form (Woodcock & Munoz, 2001b) and a Spanish form (Woodcock & Munoz, 2001c). Each form is composed of four subtests that provide an overall measure of language competence (Broad English Ability or Broad Spanish Ability). In the present study, only the Picture Vocabulary subtest was administered to the participant in English and Spanish. The standard scores that the participants achieved on these two subtests were used to analyze the data in the present study. The WMLS has shown good split-half reliability for subtest measures (between .80 and .93).

#### *Cultural Characteristics Assessments*

*Acculturation Rating Scale for Mexican Americans-II (ARSMA-II; Cuellar, Arnold, & Maldonado, 1995).* The ARSMA-II is a 30-item scale that consists of two subscales, which measure a person's cultural orientation to the Mexican (17 items) and American cultures (13 items). The items address language usage, ethnic identity and classification, cultural heritage and behaviors and ethnic interaction. Respondents rate the items using a five-point Likert-type scale (1 = not at all to 5 = extremely often). A total acculturation score can be obtained by subtracting participants' mean responses on the Mexican cultural items from their mean responses on the American cultural items. These acculturation scores can vary from -4 to 4, with higher (positive) scores indicating a higher affiliation toward the American culture. The internal reliability for the scale is an alpha of .86 to .88. The ARSMA-II has a high Pearson coefficient ( $r = .89$ ) with the original scale.



*Family Attitude Scale-Revised (FAS-R).* The FAS-R (Carrasco, 1990) assesses individuals' degree of identification with traditional Mexican American values and some American mainstream middle class values. The FAS-R assesses different traditional values related to loyalty to the family, strictness in childrearing, respect for adults, separation of gender roles, male superiority and time orientation. Participants respond to each item on a five-point Likert-type scale ranging from Strongly Agree to Strongly Disagree. A mean score of all the FAS-R items will be calculated for each participant. A mean score closer to one indicates a higher degree of identification with traditional Mexican American values, while a mean score closer to five indicates a higher degree of identification with modern American values. The FAS-R has been used in cross-national studies for parents and adolescent children of Mexican, Mexican American and American-White descent (Rodriguez, Ramirez, Korman, 1999). Data collected from 564 participants in a cross-national study conducted in Mexico and the United States yielded an alpha coefficient of .75 for the entire sample (Rodriguez et al., 1999). The following are sample items from the FAS-R: "Parents always know what's best for a child" and "Girls should not be allowed to play with toys such as soldiers and footballs."

*Multidimensional Acculturative Stress Inventory (MASI: Rodriguez, Myers, Mira, Flores, & Garcia-Hernandez, 2002).* The MASI is a 36-item questionnaire used to measure acculturative stress among persons of Mexican origin living in the United States. Two example items for the MASI are: "I feel uncomfortable being around people who only Speak Spanish" and "It bothers me that I speak English with

an accent.” The MASI has demonstrated to have sound psychometric properties with acceptable reliability (Cronbach’s alpha ranged from 0.77 to 0.93) and good convergent validity with other similar constructs (Rodriguez et al., 2002).

### *Demographic Characteristics*

*Demographic Questionnaire.* A demographic questionnaire was administered to gather background information on all the participants, such as age, socioeconomic status, education, religious background and gender. In addition, participants were asked to indicate the age they began to learn English and Spanish.

### *Prescreening Phase*

At the prescreening phase, all participants were asked to (a) identify their ethnic background, (b) complete the packet of questionnaires (including state public speaking anxiety, social anxiety and cultural measures), (c) complete an English-Spanish proficiency assessment and (d) give separate three-minute baseline speeches in English and Spanish followed by completing the public speaking state measures in regard to each of these speeches. The speech task instructions are detailed below.

### *Speech Task Instructions*

Speech task instructions were clearly delineated for all participants. The speech instructions that participants were given remained the same throughout the study. Participants were informed that every speech they gave would be videotaped. They were made to believe that that their speech recordings would be evaluated by three psychologists who had different degrees of English-Spanish proficiency: a Spanish dominant, an English dominant and a balanced English-Spanish bilingual

psychologist. They were also misled to believe that the audience members and experimenter in the room would be evaluating their speeches. Furthermore, in order to ensure that the participants were aware of their audience's race/ethnicity, participants in the EVW and BVW conditions were told: *"Although we are all Anglo American/White we understand some Spanish, which you'll be asked to speak in."* On the other hand, participants in the EVL or BVL conditions were told: *"Because we are all Latinos, we understand some Spanish, which you'll be asked to speak in."*

Participants were asked to choose a speech topic from a list that was provided to them. The speech topics asked the participant to self-disclose something personal about themselves (i.e., Give a speech about the last time that you failed at something) (see Appendix A). It was believed that these speech topics would also further activate their fear structure.

Participants were given three minutes to prepare each speech. Before giving their speech, participants were asked to complete the ASC and to use the SUDS scale in order to predict the highest level of anxiety they thought they would experience while giving their speech. Once these measures were collected, participants were instructed to stand behind a podium facing the camera and audience members. Once positioned, they were asked to give their speech without any notes. At the end of their speech, they were then asked to complete the SEQ and rate the highest degree of anxiety they experienced while giving their speech by using the SUDS scale.

### *Procedural Steps in First Treatment Session*

#### *Rationale of Treatment*

Participants who agreed to participate in the study were first given the treatment rationale. Participants were informed that public speaking anxiety is likely to be maintained by distorted perceptions they endorse of their public speaking abilities. In addition, they were informed that speech exposures would allow them to (a) evaluate the accuracy of these perceptions, (b) practice a behavior that is often avoided and (c) habituate to the feared behavior. Following the treatment rationale, participants were asked to complete the RTQ in order to assess their expectancy about the effectiveness of the treatment.

#### *Speech Exposures*

In the first session, participants were asked to give four speech exposures following the speech instructions listed above. The language in which these speech exposures were given varied according to their condition. Participants in EVW and EVL conditions were instructed to give all four speeches in English and participants in BVW and BVL conditions were told to give either four consecutive speeches in Spanish or English. In addition, participants were informed that upon completion of their speeches, they would be viewing their performance via the video recording together with the audience members.

#### *Cognitive Preparation*

Following each speech exposure, participants were given a shortened version of the cognitive preparation protocol that was modeled after Harvey et al. (2000). The

cognitive preparation protocol asked participants to (a) review their speech ratings on the SEQ and develop a mental image of their performance based on their own ratings and (b) focus (while watching the video) on how they looked rather than on how they felt and to watch the video as if they were watching a stranger.

Participants who were in the BVW and BVL conditions were instructed to think about the cognitive preparation steps in Spanish following a speech exposure that had been conducted in Spanish.

#### *Video Feedback*

After the cognitive preparation, participants viewed their performance on video and were then instructed to evaluate their performance based on the video footage by completing the SEQ. These steps were all repeated for the remaining speech exposures. At the end of the first session, participants were asked to return in one week.

#### *Procedural Steps in Second Treatment Session*

At the second session, participants were asked to give four more speech exposures. The same procedure from the first session was followed, except that participants in the BVW and BVL conditions were administered their four speech exposures in the alternate language from their first session.

#### *Procedural Steps in Post-Assessment*

At the end of the second session, post-assessments measures were taken. Participants were asked to give one speech in English and one in Spanish without receiving cognitive preparation or video feedback. Before giving their speeches, the

ASC and predicted anxiety measures were collected. After giving each speech, participants were asked to give a SUDS rating and to complete the SEQ. Then, all of the participants were asked to complete all the social anxiety and trait public speaking outcome measures.

#### *Procedural Steps in Follow-up*

A two-week follow-up period was conducted with the participants. The same procedure from the post-assessment was followed, except participants were debriefed at the end of the session.

#### *Treatment Integrity*

In order to establish the highest level of treatment integrity, a treatment protocol was developed for the study (see Appendix B). Research assistants were trained thoroughly on the protocol and were not allowed to run any participants until they had demonstrated proficiency with the protocol. In addition, the PI held regular meetings with the research assistants to ensure that the treatment protocol was followed. Lastly, when the present study was completed, four research assistants were interviewed on their perceptions on how closely the treatment protocol had been followed and their experiences on working with the participants (see Appendix C).

## Statistical Analyses

### *Baseline Differences*

To examine whether the randomization procedure resulted in equivalent groups, baseline scores were subjected to two different types of analyses of variance. The type of analyses of variance used depended on whether the outcome measure was language specific or non-language specific. Language specific variables refer to the outcome variables that were collected in reference to a speech performance that was conducted in either English or Spanish including: English-SUDS, Spanish-SUDS, English-SEQ, Spanish-SEQ, English-ASC, Spanish-ASC, English-SATI and Spanish-SATI scores. When examining the language specific outcome measures, their baseline scores were subjected to a 2 (Treatment: Monolingual, Bilingual) x 2 (Audience: White, Latino) x 2 (Language: English, Spanish) repeated measures MANOVA, with Language entered as the repeated measure. On the other hand, when examining the non-Language specific outcome variables (LSAS-PS, LSAS-Total, FNES), their baseline measures were subjected to 2 (Treatment: Monolingual, Bilingual) x 2 (Audience: White, Latino) ANOVA.

### *Identifying Cultural Variables as Potential Covariates*

As part of the preliminary analyses, correlations between cultural variables and outcome variables were conducted in order to identify any potential covariates. The cultural variables that were examined as potential covariates were acculturative stress (MASI), cultural identity (ARSMA-II), Mexican American family values (FAS-R), English proficiency (WMLS-English) and Spanish (WMLS-Spanish)

proficiency. All of the potential covariates were regressed separately onto pre-treatment, post-treatment and follow-up scores of all of the outcome variables. If the results of the regression analyses revealed a substantial ( $r > .30$ ) and significant correlation ( $p < .05$ ) between the outcome scores (across the three different time points) and the variable being examined as a potential covariate, then it was decided that this variable would be entered in as a covariate into the treatment outcome analyses.

#### *General Treatment Outcome*

All outcome analyses were intent-to-treat. The intent-to-treat analyses were performed using the Last Observation Carried Forward method (Mazumdar, Liu, Houck, & Reynolds, 1999).

#### *Within-Group Differences on the Video Feedback Effects*

Within-group differences on the video feedback effects were examined with repeated MANOVAs. To examine within acute effects for each separate condition, pre- and post-treatment outcome measures were entered as the dependent variables and time as the within-group factor. Similarly, to examine the durability of within-group effects for each separate condition, pre-treatment and follow-up outcome measures were entered as the dependent variables and time as the within-group factor. Separate MANOVAs were conducted for English-SEQ, Spanish-SEQ, English-SUDS and Spanish-SUDS variables.



### *Between-Group Effects: Public Speaking Outcome Measures*

Two different types of analyses were conducted to examine between-group effects. First, in order to assess for differential degrees of improvement on *language specific* measures (SUDS, SEQ, ASC and SATI) from pre- to post-treatment and from pre-treatment to follow-up, separate 2 (Audience) x 2 (Treatment) x 2 (Language) MANCOVAs were conducted. In these analyses, Language was entered as the within-repeated factor and pre-treatment scores as the covariates. The second type of analyses subjected *non-Language* specific (LSAS-PS, LSAS-Total, FNES) outcome variables to separate 2 (Audience) x 2 (Treatment) ANCOVAs. The pre-treatment scores of these measures were also entered as covariates.

## Results

### *Sample Characteristics*

The sample characteristics are presented on Table 1. The sample consisted of more participants who were female than male  $\chi^2(1)=12.52, p < 0.001$ . Average age of participants was 21.9 years old and the mean number of years of education completed was 14.34 years. The cultural identity scores across the four conditions ranged from 0.07 to 0.60, indicating that participants tended to endorse a slightly oriented White European bicultural identity. Similarly, the range on their family value scores also indicated that they endorsed bicultural family values with a slight preference for White European values. Their cultural identity and family value scores did not differ significantly across the four conditions [  $(F(1, 42) = 1.64, p > .05)$ ,  $(F(1, 42) = 0.39, p > .05)$ , respectively]. Examination of language proficiency standard scores indicated that participants' degree of English proficiency fell within the average range, while their degree of Spanish proficiency fell within the borderline range. Thus, on average participants were more fluent in English than in Spanish,  $t(45) = 7.11, p < .001$ . However, participants' English [ $F(1, 42) = 0.11, p > .05$ ] and Spanish [ $F(1, 42) = 0.85, p > .05$ ] proficiency scores did not differ significantly across the four conditions. Participants on average reported that their family's household income ranged between \$35,000 to \$45,000 per year.

Table 1. Demographic Characteristics

Demographic Characteristics	BVW	BVL	EVW	EVL
<b>Gender</b>				
Male#	2	3	3	3
Female #	7	11	7	10
<b>Age</b>				
Mean	21.25	21.38	20.40	23.90
<b>Education</b>				
Mean	13.57	13.64	14.11	15.73
<b>Cultural Identity (-4 to 4)</b>				
Total Scores	0.07	0.30	0.60	0.10
<b>Family Values (1 to 5)</b>				
Total Scores	3.12	3.23	3.14	3.10
<b>English Language Proficiency</b>				
Standard Scores	90.16	94.05	91.50	93.38
<b>Spanish Language Proficiency</b>				
Standard Scores	69.25	69.14	69.90	78.54

*Note. BVW=Bilingual Video Feedback-White Audience; BVL=Bilingual Video Feedback-Latino Audience; EVW=English Video Feedback-White Audience; EVL=English Video Feedback-Latino Audience.*

#### *Drop Outs and Number of Session Attended*

Ten participants withdrew before the end of treatment (1 in EVW, 3 in EVL, 3 in BVW and 3 in BVL). Two additional participants failed to return for follow-up assessment (1 in BVW and 1 in BVL). For the participants that dropped out of the study, pre-treatment scores on their public speaking and social anxiety measures were carried forward for the analyses. Data analyses indicated that the number of drop outs did not vary across the conditions. In addition, there were no differences on the baseline measures between the completers and non-completers.

#### *Baseline Differences*

The repeated measures Treatment x Audience x Language MANOVA conducted to determine if the four conditions differed on any of the language specific

outcome measures at pre-treatment yielded the following results: (a) ASC: Audience x Language,  $F(1, 42) = 1.18, p > .05$ , partial  $\eta^2 = 0.03$ ; Treatment x Language  $F(1, 42) = 5.03, p > .05$ , partial  $\eta^2 = 0.11$ ; Audience x Treatment x Language  $F(1, 42) = 0.06, p > .05$ , partial  $\eta^2 = 0.06$ , (b) SUDS: Audience x Language,  $F(1, 42) = 0.35, p > .05$ , partial  $\eta^2 = 0.01$ ; Treatment x Language  $F(1, 42) = 1.67, p > .05$ , partial  $\eta^2 = 0.04$ ; Audience x Treatment x Language  $F(1, 42) = 0.00, p > .05$ , partial  $\eta^2 = 0.00$ , (c) SEQ Audience x Language,  $F(1, 42) = 0.16, p > .05$ , partial  $\eta^2 = 0.00$ ; Treatment x Language  $F(1, 42) = 13.55, p < .05$ , partial  $\eta^2 = 0.24$ ; Audience x Treatment x Language  $F(1, 42) = 1.06, p > .05$ , partial  $\eta^2 = 0.03$  and (d) SATI: Audience x Language,  $F(1, 42) = 0.02, p > .05$ , partial  $\eta^2 = 0.00$ ; Treatment x Language  $F(1, 42) = 0.81, p > .05$ , partial  $\eta^2 = 0.02$ ; Audience x Treatment x Language  $F(1, 42) = 1.10, p > .05$ , partial  $\eta^2 = 0.03$ . Follow-up univariate analyses conducted to interpret the significant Treatment x Language interaction on SEQ scores indicated that participants in the bilingual treatment conditions (BVW and BVL) evaluated their Spanish speech performance ( $M = 77.35$ ) more poorly on the SEQ measure than participants in the English-only ( $M = 104.00$ ) conditions,  $F(1, 44) = 6.57, p < .05$ , partial  $\eta^2 = 0.13$ . On the contrary, participants' SEQ-English scores did not differ significantly between the bilingual ( $M = 105.09$ ) and English-only ( $M = 98.83$ ) conditions,  $F(1, 44) = 0.23, p > .05$ , partial  $\eta^2 = 0.01$ . Since all treatment analyses were conducted by treating pre-treatment scores as covariates, the baseline difference on the SEQ measure would be adjusted.

The Audience x Treatment ANOVA results indicated that the four conditions did not differ on any of the non-language specific outcome measures at pre-treatment: (a) LSAS-PS: Audience x Language,  $F(1, 42) = 0.19, p > .05$ , partial  $\eta^2 = 0.00$ ; Treatment x Language  $F(1, 42) = 1.64, p > .05$ , partial  $\eta^2 = 0.04$ ; Audience x Treatment x Language  $F(1, 42) = 0.27, p > .05$ , partial  $\eta^2 = 0.01$ , (b) FNES: Audience x Language,  $F(1, 42) = 0.12, p > .05$ , partial  $\eta^2 = 0.00$ ; Treatment x Language  $F(1, 42) = 0.21, p > .05$ , partial  $\eta^2 = 0.01$ ; Audience x Treatment x Language  $F(1, 42) = 0.43, p > .05$ , partial  $\eta^2 = 0.01$  and (c) LSAS-Total: Audience x Language,  $F(1, 42) = 1.67, p > .05$ , partial  $\eta^2 = 0.04$ ; Treatment x Language  $F(1, 42) = 3.25, p > .05$ , partial  $\eta^2 = 0.07$ ; Audience x Treatment x Language  $F(1, 42) = 0.19, p > .05$ , partial  $\eta^2 = 0.00$ .

In addition, repeated measures Treatment x Audience x Language MANOVAs, were conducted to determine if there were any differences on pre-treatment scores between UT and SEU students on Language specific measures. In these analyses, Language was entered as the within-repeated measure. Results indicated that participants from UT and SEU did not differ significantly on any of the Language specific outcome measures at pre-treatment. All Audience x Language, Treatment x Language and Audience x Treatment x Language interactions did not reach significance ( $p > .05$ ) on SUDS, SEQ, ASC and SATI scores. In order to examine if there were any differences on pre-treatment scores between UT and SEU students on the non-Language specific outcomes variables, their pre-treatment scores on these variables were subjected to an Audience x

Treatment ANOVAs. Results indicated that participants from UT and SEU did not differ significantly on any of the non-Language specific outcome measures. All Audience, Treatment and Audience x Treatment interactions did not reach significance ( $p > .05$ ) on LSAS-PS, FNES and LSAS-Total scores.

An ANOVA confirmed that the mean credibility as well as expected level of improvement as measured by the RTQ (Borkovec & Nau, 1972), did not differ significantly across the four conditions  $F(3, 42) = .640, p > 0.05$ , indicating that participants did not vary in their degree of credibility they attributed to the treatment.

#### *Covariates*

Correlations were calculated (separately) between the cultural variables [i.e., acculturative stress (MASI), Mexican American family values (FAS-R), cultural identity (ARSMA-II), English-proficiency (WMLS-English), Spanish-proficiency (WMLS-Spanish)] and outcome scores at pre-treatment, post-treatment and follow-up. The findings indicated that none of correlations between the cultural variables and outcome variables were substantial ( $r > .30$ ) and significant across the three different time points (pre-treatment, post-treatment, follow-up). Thus, none of the cultural variables were included in the treatment outcome analyses as covariates.

#### *Language Specific Anxieties and Self-Performance Ratings*

In order to test Hypothesis 1, a paired-sample  $t$  test was conducted to compare participants' mean pre-treatment English-SUDS scores to their mean pre-treatment Spanish-SUDS scores. Results indicated that participants on average

reported higher SUDS levels when giving their pre-treatment speech in Spanish ( $M = 77.17$ ,  $SE = 2.41$ ) than English ( $M = 71.17$ ,  $SE = 2.38$ ),  $t(45) = -2.34$ ,  $p < .05$ .

Similarly, to test Hypothesis 2, another paired-sample  $t$  test was conducted to compare participants' mean pre-treatment English-SEQ scores to their mean pre-treatment Spanish-SEQ scores. Results indicated that participants rated their baseline Spanish speech performance more poorly ( $M = 90.67$ ,  $SE = 5.51$ ) than their English speech performance ( $M = 101.96$ ,  $SE = 6.13$ ),  $t(45) = 2.20$ ,  $p < .05$ .

#### *Within-Group Differences on the Video Feedback Effects*

Hypothesis 3 was tested by conducting repeated measures MANOVAs for each group separately. To examine within-group effects at post-treatment for each condition, participants pre-treatment SUDS and post-treatment SUDS scores were entered as the dependent variables and time as the within-group factor. Results indicated that participants within all the conditions experienced a significant decline at post-treatment on their English-SUDS and Spanish-SUDS scores ( $ps < .05$ ).

In order to examine within-group effects at follow-up for each condition, pre-treatment and follow-up SUDS scores were entered as the dependent variables and time as the within-group factor. Results indicated that participants within all the conditions reported a significant decline in their English-SUDS and Spanish-SUDS scores at follow-up ( $ps < .05$ ).

Hypothesis 4 was also tested by conducting repeated measures MANOVAs for each group separately, where participants' pre-treatment SEQ and post-treatment scores were entered as the dependent variables and time as the within-group factor.

At post-treatment, results revealed that participants within all the conditions rated their English and Spanish speeches more positively than they had at pre-treatment ( $ps < .05$ ).

In order to examine within-group effects at follow-up on SEQ scores for each condition, pre-treatment and follow-up scores were entered as the dependent variables and time as the within-group factor. The results indicated that participants within all conditions continued to rate their English and Spanish speeches more positively at follow-up than they had at pre-treatment ( $ps < .05$ ).

#### *Between-Group Effects: Public Speaking Outcome Measures*

Exploratory Question 1 proposed to identify which combination of treatment-type and audience-race/ethnicity lead to the greatest degree of improvement on public speaking outcome measures at post-treatment and follow-up. The public speaking *state* measures that were examined included the ASC, SUDS and SEQ scores. The public speaking *trait* measures that were examined included the SATI and LSAS-PS scores. As stated above, in order to examine differential degrees of improvement between the four conditions on Language specific measures (ASC, SUDS, SEQ and SATI), 2 (Audience) x 2 (Treatment) x 2 (Language) repeated measures MANCOVAs were conducted. On the other hand, in order to examine differential degrees of improvement between the four conditions on the non-Language specific measure of LSAS-PS, these scores were subjected to a 2 (Audience) x 2 (Treatment) ANCOVA.



ASC. The *pre- to post-treatment* repeated measures MANCOVA results indicated that the Audience x Language effect,  $F(1, 40) = 0.19, p > .05$ , partial  $\eta^2 = 0.01$ ; Treatment x Language effect,  $F(1, 40) = 0.88, p > .05$ , partial  $\eta^2 = 0.02$ , and Audience x Treatment x Language effect,  $F(1, 40) = 0.05, p > .05$ , partial  $\eta^2 = 0.00$ , were not statistically significant.

The *pre-treatment to follow-up* repeated measures MANCOVA results indicated that the Audience x Language effect,  $F(1, 40) = 0.16, p > .05$ , partial  $\eta^2 = 0.00$ ; Treatment x Language effect,  $F(1, 40) = 1.16, p > .05$ , partial  $\eta^2 = 0.03$ , and Audience x Treatment x Language effect,  $F(1, 40) = 0.00, p > .05$ , partial  $\eta^2 = 0.00$  were not statistically significant. Table 2 displays the adjusted means for English-ASC and Spanish-ASC scores at post-treatment and follow-up.

*Table 2. Adjusted Means at Post-treatment and Follow-up for English-ASC and Spanish-ASC Scores across the Four Conditions*

Time	BVW		BVL		EVW		EVL	
	M	SE	M	SE	M	SE	M	SE
<b>English ASC (0-100)</b>								
Post-treatment	34.27	6.44	29.24	5.02	13.12	5.94	27.47	5.33
Follow-up	31.77	6.59	25.60	5.13	13.64	6.07	27.92	5.45
<b>Spanish ASC (0-100)</b>								
Post-treatment	39.67	6.74	32.60	5.25	14.79	6.21	28.42	5.58
Follow-up	34.07	6.60	29.22	5.14	12.92	6.08	28.15	5.46

*Note.* BVW=Bilingual Video Feedback-White Audience; BVL=Bilingual Video Feedback-Latino Audience; EVW=English Video Feedback-White Audience; EVL=English Video Feedback-Latino Audience; ASC=Appraisal of Social Concern Scale.

SUDS. The *pre- to post-treatment* repeated measures MANCOVA results indicated that the Audience x Language effect,  $F(1, 40) = 0.05, p > .05$ , partial  $\eta^2 =$

= 0.00; Treatment x Language effect,  $F(1, 40) = 0.60, p > .05$ , partial  $\eta^2 = 0.02$ , and Audience x Treatment x Language effect,  $F(1, 40) = 0.05, p > .05$ , partial  $\eta^2 = 0.00$ , were not statistically significant.

The *pre-treatment to follow-up* repeated measures MANCOVA results indicated that the Audience x Language effect,  $F(1, 40) = 1.60, p > .05$ , partial  $\eta^2 = 0.04$ ; Treatment x Language effect,  $F(1, 40) = 0.17, p > .05$ , partial  $\eta^2 = 0.00$ , and Audience x Treatment x Language effect,  $F(1, 40) = 0.12, p > .05$ , partial  $\eta^2 = 0.00$ , were not statistically significant. Table 3 displays the adjusted means for English-SUDS and Spanish-SUDS scores at post-treatment and follow-up.

*Table 3. Adjusted Means at Post-treatment and Follow-up for English-SUDS and Spanish-SUDS Scores across the Four Conditions*

Time	BVW		BVL		EVW		EVL	
	M	SE	M	SE	M	SE	M	SE
<b>English SUDS (0-100)</b>								
Post-treatment	55.62	6.95	44.87	5.64	24.16	6.65	47.58	5.80
Follow-up	55.55	7.57	48.40	6.15	27.53	7.25	48.70	6.32
<b>Spanish SUDS (0-100)</b>								
Post-treatment	62.65	7.74	53.99	6.29	28.47	7.42	51.97	6.47
Follow-up	58.87	7.75	60.00	6.30	30.49	7.43	56.41	6.48

*Note.* BVW=Bilingual Video Feedback-White Audience; BVL=Bilingual Video Feedback-Latino Audience; EVW=English Video Feedback-White Audience; EVL=English Video Feedback-Latino Audience; SUDS=Subjective Units of Distress

*SEQ.* The *pre- to post-treatment* repeated measures MANCOVA results indicated that the Audience x Language effect,  $F(1, 40) = 0.31, p > .05$ , partial  $\eta^2 = 0.01$ ; Treatment x Language effect,  $F(1, 40) = 0.24, p > .05$ , partial  $\eta^2 = 0.01$ ,

and Audience x Treatment x Language effect,  $F(1, 40) = 0.66, p > .05$ , partial  $\eta^2 = 0.02$ , were not statistically significant.

The pre-treatment to follow-up repeated measures MANCOVA results indicated that the Audience x Language effect,  $F(1, 40) = 0.66, p > .05$ , partial  $\eta^2 = 0.02$ ; Treatment x Language effect,  $F(1, 40) = 0.74, p > .05$ , partial  $\eta^2 = 0.02$ , and Audience x Treatment x Language effect,  $F(1, 40) = 1.68, p > .05$ , partial  $\eta^2 = 0.04$ , were not statistically significant. Table 4 displays the adjusted means for SEQ scores at post-treatment and follow-up.

*Table 4. Adjusted Means at Post-treatment and Follow-up for English-SEQ and Spanish-SEQ Scores across the Four Conditions*

Time	BVW		BVL		EVW		EVL	
	M	SE	M	SE	M	SE	M	SE
<b>English SEQ (0-250)</b>								
Post-treatment	140.45	16.37	169.04	13.49	177.02	16.03	142.40	13.41
Follow-up	142.97	16.66	171.81	13.73	159.87	16.31	124.33	13.64
<b>Spanish SEQ (0-250)</b>								
Post-treatment	114.51	14.92	139.69	12.30	147.75	14.61	131.32	12.22
Follow-up	131.04	15.67	139.80	12.92	145.03	15.34	114.16	12.83

*Note.* BVW=Bilingual Video Feedback-White Audience; BVL=Bilingual Video Feedback-Latino Audience; EVW=English Video Feedback-White Audience; EVL=English Video Feedback-Latino Audience; SEQ=Speech Evaluation Questionnaire

*SATI.* The pre- to post-treatment repeated measures MANCOVA results showed a significant effect of Audience x Language,  $F(1, 40) = 4.11, p < .05$ , partial  $\eta^2 = 0.09$ . The Treatment x Language effect,  $F(1, 40) = 0.08, p > .05$ , partial  $\eta^2 = 0.00$ , and Audience x Treatment x Language effect,  $F(1, 40) = 0.62, p > .05$ , partial  $\eta^2 = 0.02$ , were not statistically significant. Figure 1 depicts the significant

Audience x Language interaction. The follow-up univariate analyses that were conducted to interpret the Audience x Language interaction indicated that participants in the White audience conditions (BVW and EVW) showed a greater degree of improvement on SATI-Spanish scores (adjusted posttreatment  $M = 70.30$ ) than those in the Latino audience conditions (BVL and EVL: adjusted posttreatment  $M = 82.31$ ),  $F(1, 42) = 8.37, p < .01$ , partial  $\eta^2 = 0.17$ . On the contrary, participants' SATI-English scores did not differ significantly between the White (BVW and EVW: adjusted post-treatment  $M = 71.49$ ) and Latino (BVL and EVL: adjusted post-treatment  $M = 77.51$ ) audience conditions,  $F(1, 42) = 2.21, p > .05$ , partial  $\eta^2 = 0.05$ .

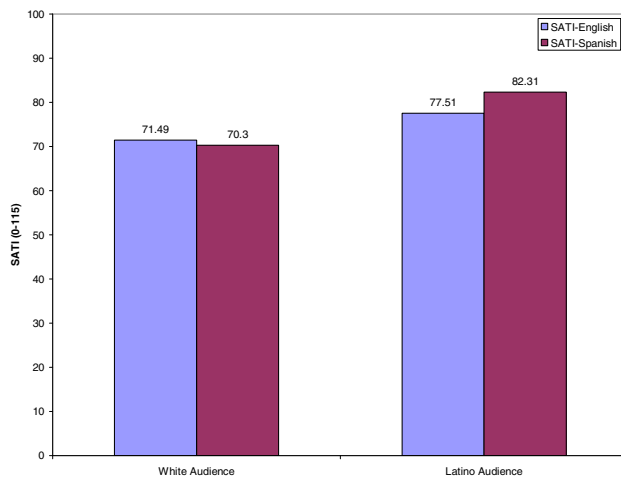


Figure 1. SATI-English and SATI-Spanish post-treatment means adjusted for pre-treatment scores.

The *pre-treatment to follow-up* repeated measures MANCOVA results indicated that the Audience x Language effect,  $F(1, 40) = 2.12, p > .05$ , partial  $\eta^2 = 0.05$ ; Treatment x Language effect,  $F(1, 40) = 0.04, p > .05$ , partial  $\eta^2 = 0.00$ , and Audience x Treatment x Language effect,  $F(1, 40) = 0.21, p > .05$ , partial  $\eta^2 =$

0.01, were not statistically significant. Table 5 displays the adjusted means for SATI scores at post-treatment and follow-up.

*Table 5. Adjusted Means at Post-treatment and Follow-up for English-SATI and Spanish-SATI Scores across the Four Conditions*

Time	BVW		BVL		EVW		EVL	
	M	SE	M	SE	M	SE	M	SE
<b>English SATI (0-115)</b>								
Post-treatment	76.50	4.52	75.03	3.51	67.30	4.10	79.93	3.69
Follow-up	72.93	5.22	75.11	4.05	58.31	4.73	77.08	4.25
<b>Spanish SATI (0-115)</b>								
Post-treatment	74.53	4.73	81.36	3.67	66.79	4.29	83.10	3.85
Follow-up	71.79	4.80	80.57	3.73	58.05	4.35	80.27	3.91

*Note.* BVW=Bilingual Video Feedback-White Audience; BVL=Bilingual Video Feedback-Latino Audience; EVW=English Video Feedback-White Audience; EVL=English Video Feedback-Latino Audience; SATI=Speech Anxious Thoughts Inventory

LSAS-PS. The *pre- to post-treatment* ANCOVA<sup>1</sup> results showed that the Audience effect,  $F(1, 41) = 3.96, p = .053$ , partial  $\eta^2 = 0.09$ , and Treatment effect,  $F(1, 41) = 3.50, p = .07$ , partial  $\eta^2 = 0.08$ , approached significance. The Audience x Treatment effect,  $F(1, 41) = 5.92, p < .05$ , partial  $\eta^2 = 0.13$ , was significant. Figure 2 represents the significant Audience x Treatment interaction. The follow-up univariate analyses that were conducted to interpret the Audience x Treatment interaction indicated that participants in the EVW condition (adjusted post-treatment  $M = 16.20$ ) showed a greater degree of improvement than those in the BVW condition (adjusted post-treatment  $M = 21.56$ ),  $F(1, 16) = 5.97, p < .05$ , partial  $\eta^2 = 0.27$ . On the contrary, LSAS-PS scores did not differ significantly between the EVL

<sup>1</sup>Recall that the LSAS-PS score was the only non-language specific public speaking outcome measure. Thus, in order to analyze this data, the LSAS-PS scores were subjected to a 2 (Audience) x 2 (Treatment) ANCOVA.

(adjusted post-treatment  $M = 21.67$ ) and BVL conditions (adjusted post-treatment  $M = 21.01$ ),  $F(1, 24) = 0.35$ ,  $p > .05$ , partial  $\eta^2 = 0.01$ ).

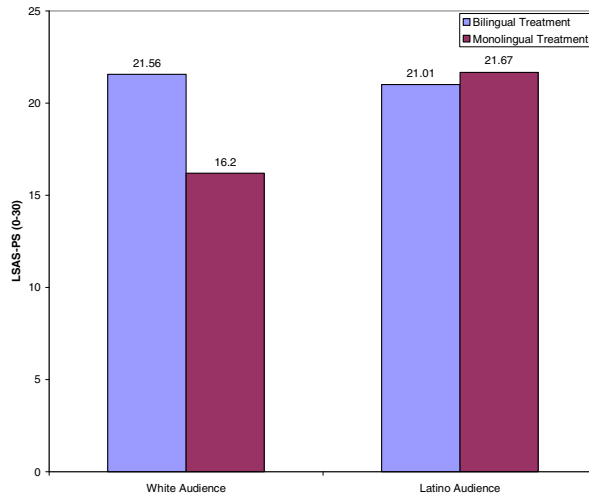


Figure 2. *LSAS-PS post-treatment means adjusted for pre-treatment scores.*

The *pre-treatment to follow-up* ANCOVA results showed that the Audience effect,  $F(1, 41) = 2.52$ ,  $p > .05$ , partial  $\eta^2 = 0.06$ , and Treatment effect,  $F(1, 41) = 1.10$ ,  $p > .05$ , partial  $\eta^2 = 0.03$ , and Audience x Treatment effect,  $F(1, 41) = 4.00$ ,  $p > .05$ , partial  $\eta^2 = 0.09$ , were not significant. Table 6 displays the adjusted means for LSAS-PS scores at post-treatment and follow-up.

Table 6. Adjusted Means at Post-treatment and Follow-up for LSAS-PS Scores across the Four Conditions

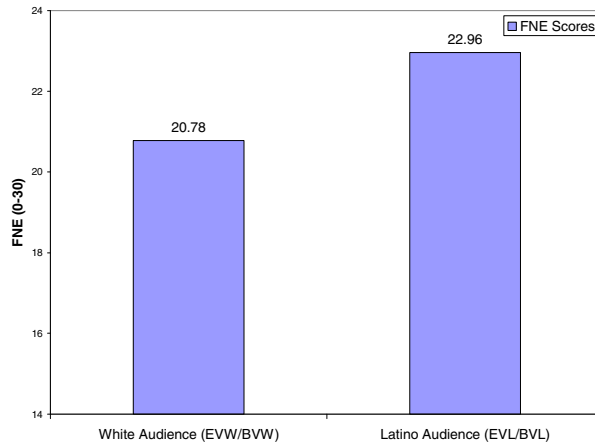
Time	BVW		BVL		EVW		EVL	
	M	SE	M	SE	M	SE	M	SE
<b>LSAS Public Speaking Subscale (0-30)</b>								
Post-treatment	21.56	1.39	21.01	1.10	16.20	1.31	21.67	1.15
Follow-up	20.70	1.70	20.07	1.35	16.05	1.61	21.48	1.40

Note. BVW=Bilingual Video Feedback-White Audience; BVL=Bilingual Video Feedback-Latino Audience; EVW=English Video Feedback-White Audience; EVL=English Video Feedback-Latino Audience; LSAS=Liebowitz Social Anxiety Scale.

#### Between-Group Effects: Social Anxiety Measures

Exploratory Question 2 sought to identify the combination of treatment-type and audience-race/ethnicity that would show the greatest degree of improvement on social anxiety outcome measures on FNES and LSAS-Total scores. As described above, in order to examine differential degrees of improvement between the four conditions on these outcome variables, the scores of these variables were subjected to 2 (Audience) x 2 (Treatment) ANCOVAs.

*FNES.* The *pre- to post-treatment* ANCOVA results showed that the Audience effect,  $F(1, 41) = 4.42, p < .05$ , partial  $\eta^2 = 0.10$ , was significant. The Treatment effect,  $F(1, 41) = 1.14, p > .05$ , partial  $\eta^2 = 0.03$  and Audience x Treatment effect,  $F(1, 41) = 2.93, p > .05$ , partial  $\eta^2 = 0.07$ , were not significant. As shown in Figure 3, examination of the adjusted means for the significant Audience effect revealed that participants assigned to White audience conditions (BVW and EVW: adjusted post-treatment  $M = 20.78$ ) showed a greater degree of improvement on FNES scores than those assigned to the Latino audience conditions (BVL and EVL: adjusted post-treatment  $M = 22.96$ ).



*Figure 3. FNES post-treatment means adjusted for pre-treatment scores across the White and Latino audience groups.*

The *pre-treatment to follow-up* ANCOVA results showed that the Audience effect,  $F(1, 41) = 4.33, p < .05$ , partial  $\eta^2 = 0.10$ , was significant. The Treatment effect,  $F(1, 41) = 1.13, p > .05$ , partial  $\eta^2 = 0.03$  and Audience x Treatment effect,  $F(1, 41) = 3.43, p > .05$ , partial  $\eta^2 = 0.08$  were not significant. As shown in Figure 4, examination of the adjusted means of the significant Audience effect revealed that participants assigned to White audience conditions (BVW and EVW: adjusted follow-up  $M = 19.34$ ) showed a greater degree of improvement on FNES scores than those assigned to the Latino audience conditions (BVL and EVL: adjusted follow-up  $M = 22.34$ ). Table 7 displays the adjusted means for FNES scores at post-treatment and follow-up.



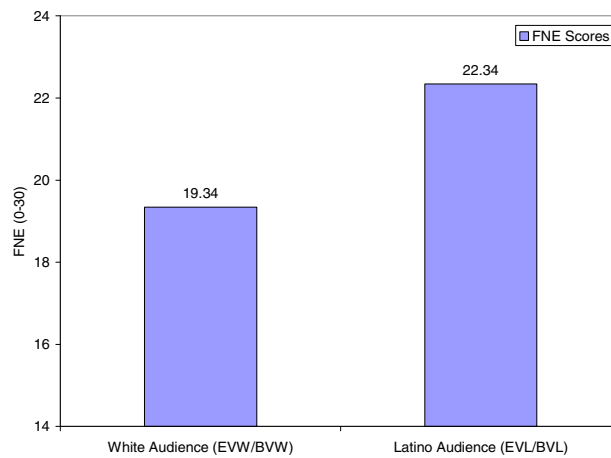


Figure 4. FNES follow-up means adjusted for pre-treatment scores across the White and Latino audience groups.

Table 7. Adjusted Means at Post-treatment and Follow-up for FNES Scores across the Four Conditions

Time	BVW		BVL		EVW		EVL	
	M	SE	M	SE	M	SE	M	SE
FNES (0-30)								
Post-treatment	22.23	1.16	22.63	0.93	19.33	1.10	23.30	0.96
Follow-up	21.45	1.60	21.76	1.29	17.23	1.52	22.92	1.34

Note. BVW=Bilingual Video Feedback-White Audience; BVL=Bilingual Video Feedback-Latino Audience; EVW=English Video Feedback-White Audience; EVL=English Video Feedback-Latino Audience; FNES=Fear of Negative Evaluation Scale..

*LSAS-Total.* The pre- to post-treatment ANCOVA results showed that the Audience effect,  $F(1, 41) = 3.48, p > .05$ , partial  $\eta^2 = 0.08$  was not significant. The Treatment effect,  $F(1, 41) = 5.67, p < .05$ , partial  $\eta^2 = 0.12$ , and the Audience x Treatment effect,  $F(1, 41) = 4.44, p < .05$ , partial  $\eta^2 = 0.10$ , were significant. As shown in Figure 5, follow-up univariate analyses conducted to interpret significant Audience x Treatment interaction indicated that participants in the EVW condition showed a greater degree of improvement on LSAS-Total scores (adjusted post-

treatment  $M = 50.46$ ) than participants in the BVW condition (adjusted post-treatment  $M = 72.89$ ),  $F(1, 16) = 5.28$ ,  $p < .05$ , partial  $\eta^2 = 0.25$ . On the contrary, follow-up univariate analyses did not reveal a significant difference between participants assigned to the EVL (adjusted post-treatment  $M = 70.10$ ) and BVL (adjusted post-treatment  $M = 71.86$ ) conditions on LSAS total scores,  $F(1, 24) = 0.05$ ,  $p > .05$ , partial  $\eta^2 = 0.00$ .

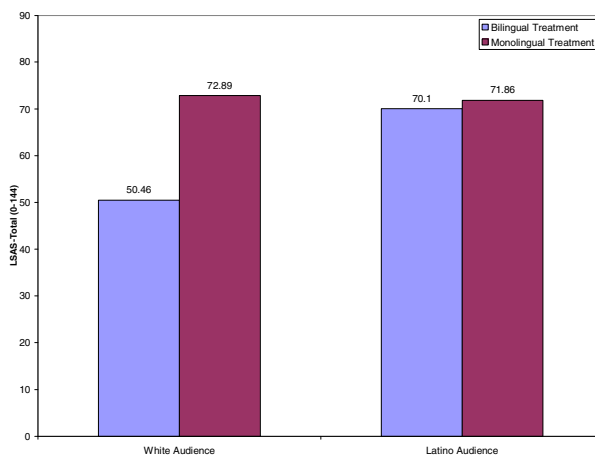


Figure 5. LSAS-Total post-treatment means adjusted for pre-treatment scores.

The *pre-treatment to follow-up* ANCOVA results showed that the Audience effect,  $F(1, 41) = 2.50$ ,  $p > .05$ , partial  $\eta^2 = 0.06$ , was not significant. The Treatment effect,  $F(1, 41) = 6.97$ ,  $p < .05$ , partial  $\eta^2 = 0.15$  and the Audience x Treatment interaction effect,  $F(1, 41) = 6.04$ ,  $p < .05$ , partial  $\eta^2 = 0.13$ , were significant. As shown in Figure 6, follow-up univariate analyses conducted to interpret the significant Audience x Treatment effect indicated that participants in the EVW condition showed a greater degree of improvement on LSAS-Total scores (adjusted follow-up  $M = 44.93$ ) than participants in the BVW condition (adjusted

follow-up  $M = 73.43$ ),  $F(1, 16) = 6.52$ ,  $p < .05$ , partial  $\eta^2 = 0.29$ . On the contrary, follow-up univariate analyses did not reveal a significant difference between participants assigned to the EVL (adjusted follow-up  $M = 67.25$ ) and BVL (adjusted follow-up  $M = 68.76$ ) conditions on LSAS total scores,  $F(1, 24) = 0.07$ ,  $p > .05$ , partial  $\eta^2 = 0.00$ . Table 8 displays the adjusted means for LSAS-Total scores at post-treatment and follow-up.

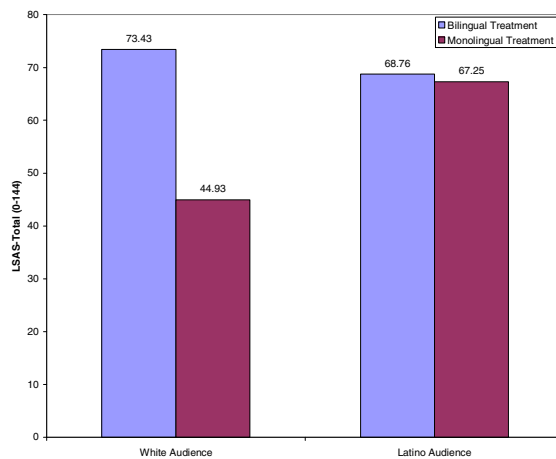


Figure 6. LSAS-Total follow-up means adjusted for pre-treatment scores.

Table 8. Adjusted Means at Post-treatment and Follow-up for LSAS-Total Scores across the Four Conditions

Time	BVW		BVL		EVW		EVL	
	M	SE	M	SE	M	SE	M	SE
<b>LSAS Total (0-144)</b>								
Post-treatment	72.89	5.62	71.86	4.36	50.46	5.17	70.10	4.62
Follow-up	73.43	6.30	68.76	4.89	44.93	5.79	67.25	5.17

Note. BVW=Bilingual Video Feedback-White Audience; BVL=Bilingual Video Feedback-Latino Audience; EVW=English Video Feedback-White Audience; EVL=English Video Feedback-Latino Audience; LSAS=Liebowitz Social Anxiety Scale.

### *Post-hoc Analyses*

Based on the results of the analyses, additional post-hoc analyses were conducted with the public speaking *state* measures that had been collected for each of the eight exposure speeches. Analyses were conducted to determine if scores on these measures varied over time across the four conditions. Thus, the scores on these measures were entered separately into repeated measures 2 (Treatment) x 2 (Audience) x 8 (Time) MANOVAs, with time as the within-repeated variable. Results of separate MANOVAs did not reveal a significant Audience x Treatment interaction on ASC ( $F(7, 36) = 1.08, p > .05$ ), SUDS ( $F(7, 36) = 1.84, p > .05$ ) and SEQ ( $F(7, 36) = 1.32, p > .05$ ) scores. These results suggest that participants did not vary across the four conditions on these public speaking measures.

Another set of post-hoc analyses were conducted with participants' orientation to Mexican American family values (FAS-R) and cultural identities (ARSMA-II). Regression analyses were conducted to determine if participants' family values and cultural identity orientations (entered into separate analyses) were predictive of participants' change scores at post-treatment and follow-up on the public speaking and social anxiety outcome measures. None of the regression models were significant ( $p > .05$ ), indicating that degree of identification with Mexican American family values and cultural identity type were not predictive of treatment outcome.

## Discussion

The primary objective of the current study was to examine the effects of treatment-type (bilingual-video feedback vs. monolingual- video feedback) and of audience composition with regards to race/ethnicity (Latino vs. White) on the reduction of public speaking anxiety and social anxiety outcome measures in a bilingual speech anxious population. Thus, bilingual speech anxious participants of Mexican descent were randomly assigned to one of four conditions: (a) Bilingual Video Feedback-White Audience (BVW), (b) Bilingual Video Feedback-Latino Audience (BVL), (c) English Video Feedback-White Audience (EVW) or (d) English Video Feedback-Latino Audience (EVL).

### *Summary of Findings*

#### *Language Specific Anxieties and Self-Performance Ratings*

As predicted, participants tended to report language specific anxieties (Hypothesis 1) and performance ratings (Hypothesis 2) at pre-treatment. Specifically, participants on average reported higher levels of anxiety when giving their pre-treatment speech in Spanish than in English. Similarly, they rated their Spanish speech performance more poorly than their English speech performance. These findings were not surprising, and arguably expected, given that most of the participants were less proficient in Spanish than English. Thus, the present study replicates Stein et al.'s (1998) findings indicating the bilinguals tend to experience higher degrees of anxiety when required to speak in their less dominant language. These findings also support previous literature on the presence of culture-specific

social phobic symptoms (Dinnel, et al., & 2002; Heinrichs, et al., 2006; Kleinknecht, et al., 1997). Specifically, findings of the present study suggest that bilinguals may experience culture-specific socially anxious symptoms depending on the language they are speaking.

#### *Within-Group Differences on the Video Feedback Effects*

Hypothesis 3 was partially supported. As predicted, participants in all the four conditions (BVW, BVL, EVW, EVL) experienced a significant reduction on their *English*-related state measures of public speaking anxiety (SEQ) at post-treatment and follow-up. However, contrary to the prediction, not only did the participants in the bilingual conditions (BVW and BVL) experience a significant reduction on their *Spanish*-related state measures of public speaking anxiety, but those in the English-only conditions did as well at pre-treatment and follow-up.

Hypothesis 4 was also partially supported in a similar fashion. As predicted, participants in all the four conditions (BVW, BVL, EVW, EVL) rated their English behavioral speech performances (SEQ) more positively at post-treatment and follow-up than they had at pre-treatment. However, contrary to the hypothesis, not only did the participants in the bilingual conditions (BVW and BVL) rate their Spanish behavioral speech performances more positively, but those participants in the English-only conditions did as well at post-treatment and follow-up.

These within-group differences reflect some of previous findings on the effects of the video feedback procedure. Consistent with the literature on the video feedback procedure, participants in the present study experienced a reduction on

anxiety levels (Clark et al., 2003; Kim et al., 2002) and tended to rate their speeches more positively following the intervention (Rapee & Hayman, 1996). The present study, however, goes beyond the previous findings by showing that the effects of video feedback appear to generalize across both languages, even when the procedure is only administered in one language. Thus, although bilingual participants in the present study appeared to endorse culture-specific social phobic symptoms (i.e., language specific anxieties and self-performance ratings), treatment in their dominant language appeared to generalize to their second language.

*Between-Group Effects: Public Speaking Outcome Measures*

In regards to Exploratory Question 1, results revealed that none of the conditions clearly showed a beneficial advantage at improving participants' scores on their public speaking *state* measures (ASC, SUDS, SEQ) at post-treatment or follow-up. On the contrary, some of the public speaking *trait* measures (SATI, LSAS-PS) did differ between the groups. In particular, the combination of a White audience with monolingual treatment (EVW) lead to a short-term beneficial improvement on a general measure of public speaking anxiety (LSAS-PS). In addition, regardless of treatment-type, participants in the White audience conditions (EVW and BVW) showed a greater degree of improvement on maladaptive cognitions associated to their Spanish speaking performances at post-treatment than those in the Latino audience conditions. This finding, however, does not apply to their maladaptive cognitions associated to their English speeches. Interestingly, the public speaking *trait* measure findings were not maintained at follow-up, indicating

that the effects of these conditions accelerated improvement on these measures, but that they were not maintained in the long-term.

*Between-Group Effects: Social Anxiety Outcome Measures*

In reference to Exploratory Question 2, results revealed that some conditions were more efficacious at improving social anxiety-related symptoms than others. Specifically, participants presenting in front of a White audience while receiving monolingual treatment (EVW) showed a greater degree of improvement on a general social anxiety measure (LSAS-Total) compared to those who presented in front of a White audience but received *bilingual* treatment (BVW). In addition, results indicated that regardless of treatment-type, participants in White audience conditions (EVW and BVW) showed a greater degree of improvement on their fear of being negatively evaluated than those who had been assigned to the Latino audience conditions.

*General Interpretation of All Findings*

Bilingual treatment, regardless of the ethnic composition of the audience, did not appear to show any advantageous gain above and beyond the English-only treatment. As stated above, results of the within-group analyses indicated that although participants in the English-only conditions had not received treatment in Spanish, they experienced a similar reduction on their Spanish performance outcome measures compared to those who had received the bilingual treatment. In addition, results of between-group analyses did not show that the bilingual treatment conditions were more effective than the English-only conditions.



These findings are somewhat perplexing given that participants reported language specific anxieties and self-performance ratings. So the question remains, why does bilingual treatment not show any advantageous gains, although, it addresses the language specific symptoms of the participants? The video feedback theory may provide a possible explanation. According to the video feedback theory, individuals experience an improvement in their anxiety and self-rating scores when they correct their inaccurate perceptions of their social performance. Although participants self-rated their baseline Spanish speaking performance more poorly than their baseline English performance, it is unknown whether their degree of *inaccurately* rating themselves also differed between the languages. Given that the video feedback effect generalized to both languages, it is possible that participants' inaccurate perceptions of their public speaking skills may have applied to both of their languages (i.e., I blush when speaking in English, I blush when speaking in Spanish). Consequently, the correction of an inaccurate perception that takes place while presenting in one language, may generalize to their perceptions when speaking in their second language (i.e., If I don't blush while speaking an English, I also must not blush while speaking in Spanish). Although this explanation is purely speculative, it is noteworthy to mention, that a possible reason that participants may not have endorsed language specific inaccurate perceptions is because they lack experience in giving public speaking performances in Spanish. Given that the participants in the present study are attending universities where English is the dominant language spoken and their Spanish proficiency scores are limited, it is

likely that they are not given the opportunity or that they are not seeking opportunities (due to their low proficiency scores) to give public presentations in Spanish. Hence, these participants may not have had any pre-determined perceptions of their Spanish public speaking abilities when they began the study. Consequently, they may have relied on their English public speaking experiences to construe their perceptions of their speaking abilities when presenting in Spanish. If the study had included participants attending universities where bilingual education is encouraged and in which the general social context is more supportive of Spanish speaking ability in public (i.e., University of Texas at El Paso, University of Texas-Pan American, University of Texas at Brownsville), perhaps participants may have had delineated perceptions toward their English and Spanish speaking abilities at the beginning of the study. Future studies should consider collecting objective data in order to determine whether or not bilinguals endorse language specific inaccurate perceptions.

The ethnic composition of the audience contributed substantially to some of the findings. Specifically, exposure to the White audience conditions, regardless of treatment type, contributed to a significant improvement in the anxious thoughts of participants related to their Spanish performances and their fear of negative evaluation. Likewise, when treatment type had a combined effect on the ethnicity of the audience (Treatment x Audience interaction), it was the *White* audience condition combined with English-only treatment that lead to greater improvements on the trait measure of public speaking anxiety (LSAS-PS) and social anxiety (LSAS-Total)

scores. The two explanations that are offered to interpret these findings are derived from the literature on stereotype threat and exposure task characteristics.

First, it is possible that individuals in the White audience conditions may have benefited from stereotype threat. Consistent with the stereotype threat findings (Bosson et al., 2004; Osborne, 2001; Stone et al., 1999), participants in these conditions may have experienced a greater degree of anxiety because they were challenged to perform in front of an audience who was thinking stereotypically of them. Within this context, it can be argued that when the video feedback intervention provides evidence that disconfirms participants' inaccurate perceptions, this information is more salient to them. For example, participants may have thought when viewing their taped performance, "If I am not blushing in front of a group of people who are thinking stereotypically of me, then I must not blush in front of all audiences." However, examination of the data reveals that it is questionable whether or not stereotype threat was activated in the White audience conditions.

According to the participants' baseline ratings, stereotype threat did not appear to be activated. Specifically, at baseline, participants in the White audience conditions did not report poorer state anxiety and self-performance ratings compared to those in the Latino audience conditions; therefore, suggesting that stereotype threat was not activated. It is possible, however, that consistent with previous stereotype threat studies, participants of this study could have been self-reporting lower anxiety or better performance scores in order to appear invulnerable to stereotype threat (Bosson et al., 2004). Yet without clear data indicating that

stereotype threat was activated, it is impossible to conclude that stereotype threat, alone, had an additive affect on treatment outcome of public speaking anxiety and social anxiety.

The second factor, however, that appears to give a better explanation of the influence that audience-race/ethnicity had on treatment outcome, is how similar the exposure task reflected the cultural reality of minority students attending predominantly White institutions. In general, it is agreed that the more realistic the exposure task is made to reflect the feared situation, the greater degree of fear reduction the person will experience (Foa & Kozak, 1986; Dyckman & Cowan, 1978). In the present study, given that participants were attending universities that were predominately composed of a White student population, participants have a higher likelihood of presenting in front of an audience composed predominantly of White than Latino students. Therefore, the White audience conditions, perhaps, more realistically reflected their fear structure, making it a more relevant and/or a potent exposure task.

Within this context, it is argued that the EVW condition might have shown better treatment outcomes than the other conditions because it more closely resembles the reality of when *these* participants give a public presentation at their respective predominantly White institutions. As stated earlier, for example, participants in the present study are not likely to be presented with the situation in which they are expected to make a public speaking presentation in Spanish as often as they are in English. Hence, the Spanish speech exposure tasks in the BVW and

BVL conditions may not have reflected their public speaking fear structure as closely as the English-only treatment conditions. The EVL condition, although more plausible, may still be less representative of the reality of these participants' social world. As stated earlier, because these students are attending predominantly White institutions, the likelihood of presenting in front of an all Latino audience is slim. Thus, the EVW condition that requires participants to conduct speech exposures in English in front of a White audience appears to most closely resemble the cultural context of their current environment at their respective universities. Subsequently, the exposure tasks of this condition most likely represent participants' actual fear structure therefore making it the most effective condition.

#### *Limitations and Future Directions*

The present study had several limitations. First, the present study is underpowered because of the modest cell sizes. Consequently, it was probable that our statistical analyses missed meaningful effects. It is likely that with a sufficient sample size, some of the findings of this study may have been strengthened. Future studies should re-examine these findings with a sufficient sample size.

Second, the generalizability of the findings is limited because of the convenient sample that was recruited. The findings may be generalizable to bilingual college students who are attending predominantly White institutions. On the other hand, as stated above, Latino students recruited from more ethnically and linguistically diverse institutions may yield different results. Future studies should

replicate this study in other institutions, where Latino students are the majority and bilingual education is encouraged.

Third, the range of family values and cultural identities was restricted. Participants tended to endorse bicultural family values that had a slight orientation toward White European values. Similarly, they also tended to endorse, White European oriented bicultural identities. Not surprisingly, the language proficiency of the sample was also restricted with the majority of participants endorsing greater proficiency levels in English than Spanish. Hence, it is uncertain how the treatment outcome results may have been impacted with a larger group of participants endorsing more Mexican oriented family values/identities as well as greater proficiency levels in Spanish than English. Future studies should attempt to recruit groups of participants that have a larger range in family values, cultural identity types and levels of English-Spanish proficiency.

Lastly, the current results are also limited because participants were not asked at the end of the study to expressed how it felt to present in front of an audience composed of White or Latino students. Specifically, it would have been beneficial to interview participants on how they felt the racial/ethnic composition of the audience members affected their outcomes. Interviews conducted with a group of research assistants (see Appendix C) revealed that participants assigned to the Latino audience conditions would sometimes spontaneously report that the speech exposure tasks were less anxiety provoking because they were presenting to an audience composed solely of Latinos. However, participants assigned to the White audience

conditions never made any verbal statements that acknowledged the racial/ethnic difference between themselves and the audience members. Thus, the interviews may have clarified if participants were consciously aware of the racial/ethnic composition of their audience members and how this may have influenced their performance.

### *Clinical Implications*

The findings of the present study highlight some of the important cultural and linguistic factors to consider when administering treatment components to bilingual minority populations. Consistent with the recommendations purposed by the American Psychological Association's (APA) Multicultural Psychotherapy Guidelines (APA, 2002), the findings of this study emphasize the importance of focusing on the client within his or her cultural context. This point is particularly important when working with clients, such as the participants in the present study, who are endorsing bicultural values and identities. As Ramirez (1999) argues in his Cognitive and Cultural Flex Theory, individuals who identify with more than one culture have the potential to "flex" culturally and cognitively in order to adjust to their cultural environments. Thus, it is important for clinicians to consider how applicable their therapeutic interventions are to the cultural contexts to which their clients are being exposed. In the present study, for example, when participants' cultural context is neglected, bilingual treatment paired with a Latino audience appears logically to be more culturally sensitive and effective. Yet, according to the findings, this combination was not the most efficacious at improving participants' anxieties. On the other hand, the combination that most closely resembled the

cultural factors of the participants' present environment was most successful at improving their public speaking and social anxiety-related outcomes (EVW). Thus, when working with minority populations, especially with those that endorse bicultural values and identities, it is important for clinicians to consider how the cultural contexts and environmental demands imposed on the clients could shape treatment interventions. By taking these factors into account, clinicians can administer more effective, and ultimately, culturally sensitive interventions that reflect the needs of their clients.

The findings of the present study also address another recommendation made by APA's Multicultural Psychotherapy Guidelines (APA, 2002): identifying culture-specific strategies for interventions. Particularly, the present study identified some culture-specific strategies to consider when administering video feedback to speech anxious bilinguals. The findings suggest that it is important to determine if bilingual clients have language specific inaccurate perceptions. If clients do not, then treatment in their dominant language is likely to generalize to situations requiring them to speak in their second language. On the other hand, if bilingual clients endorse language specific inaccurate perceptions, it may be worthwhile to consider the bilingual video feedback intervention. The findings also suggest that it is important to determine if clients' degree of public speaking anxiety varies according to the racial/ethnic composition of the audience. If their anxiety does vary, then an effort should be taken to expose clients to the racial/ethnic audience members that would make the treatment more effective. Thus, by considering these culturally



specific strategies, speech exposures task can be structured in the most realistic and culturally sensitive fashion in order to optimize treatment effects for speech anxious bilingual clients.

## APPENDIX A. SPEECH TOPICS

1. Give a speech on a specific time you have felt you were discriminated against because of your ethnicity, gender, religious beliefs or sexual orientation.
2. Give a speech on whether religion plays an important part in your life.
3. Give a speech about a specific personal or world event that has had a profound effect on you.
4. Give a speech about a recent argument you may have had and explain why you were right or wrong.
5. Give a speech on how you feel that others generally perceive you.
6. Give a speech on whether you consider yourself to be an emotional or an unemotional person.
7. Give a speech on your fears or phobias.
8. Give a speech on a time when someone broke up with you.
9. Give a speech about a personal embarrassing moment.
10. Give a speech on how you look when you feel nervous.
11. Give a speech about something that you feel self-conscious about or uncomfortable with.
12. Give a speech on your positive and negative physical characteristics.
13. Give a speech on your positive and negative personality characteristics.
14. Give a speech about the one thing that you would change about yourself.
15. Give a speech on how you feel when you get nervous.
16. Give a speech on how you would describe yourself in a personal add.
17. Give a speech about the last time that you failed at something.
18. Give a speech about a time that you felt like you were a bad friend.

19. Give a speech about a time that you felt like you were a bad son/daughter.
20. Give a speech on how your gender representations of the media affects your self-image and self-esteem.
21. Give a speech about how it feels to be a minority student at UT/SEU.
22. Give a speech about a time when you felt pressured to change your values.
23. Give a speech about a time when you felt like you did not fit in.
24. Give a speech about a time when you felt like you did not live up to your parents' expectations.

## APPENDIX B: TREATMENT PROTOCOL

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## **PRE-SCREENING SESSION FOR ALL THE CONDITIONS**

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### **PRE-SCREENING**

- I. Preparation
  - a. Arrive 10 minutes early to set up the room:
    - i. Make sure you have a:
      - 1. Stop Watch
      - 2. Video camera and tapes
      - 3. Participant Folder (check board for condition of the day)
      - 4. Woodcock-Muñoz
      - 5. Red binder
    - ii. Make sure you know the speech order of the day (Spanish-English or English-Spanish)
  - b. Set up the camera so that it is facing the podium and place your chairs next to the camera in front of the podium
  - c. The camera person should attach the participant number and pre-screening symbol to the podium
- II. When participant arrives:
  - a. Be polite but serious
  - b. Avoid small talk
  - c. If they ask you something that you do not know, refer them to Magdalena Perez at 471-2179.

### **Greet:**

State: *Hello, my name is \_\_\_\_\_. Thank you for coming to today's session. Let me get some information from you.* Write down participant's UTEID and e-mail address. Also write down their age, birth date, and gender.

### **Check criteria:**

*Before we begin, please read over these three criteria for the study and let me know if all three qualities apply to you.* (Show them criteria sheet in red binder)

### **Give participant the consent form**

State: *Before we go any further, I would like for you to read this consent form, which briefly tells you about today's session and issues concerning confidentiality. If you have any questions please ask me. If you agree with what the form states, please sign*

*the bottom.* Make sure you have them sign two consent forms (they should keep a copy). Also make sure that YOU sign both forms as well.

### **Give participant the overview of today's session**

*State: Today's session is divided into several parts. The overall goal is to get an accurate assessment of your anxiety when speaking in public. In addition, we also want to get an accurate assessment of your Spanish-English degree of fluency. So in order to do this, we will be asking you to do several things.*

- (1). First, we will give you a brief task to determine your degree of Spanish-English fluency*
- (2). Then, we will give you a small packet of questionnaires to fill out. We will also be giving you another small packet of questionnaires later.*
- (3) Finally, we will be asking you to give two brief 3-minute speeches.*

*You will not be forced to give these speeches but we encourage you try to completed them in order to obtain an accurate rate of your anxiety when speaking in public. We just ask that you try your best.*

### **Establish Degree of English-Spanish proficiency**

*State: Now, we're going to try to determine how fluent you are in Spanish and English. So, I will be asking you to name the pictures I show you in these booklets.*



Administer WMLS "Picture Vocabulary"

### **Give participant P.S. Questionnaire Packet**

*Give participant Pre-screening packet 1 (begins with FNES). Set aside packet 2 ("Demographic questionnaire") for later.*

*State: Here is the packet of questionnaires that I mentioned to you earlier. Although you are not required to answer every question, we encourage that you try your best to do so. All the pages are double sided so make sure you don't skip any pages.*

## 1) Explain Speech Procedure

State: *Now we're going to change gears. I am going to ask you to give a three minute speech in **English/Spanish** (look at the board to determine order). As I stated before, we can't force you to do this, but we do encourage that you try your best. We will give you a total of 3 minutes to choose a speech topic from this list and organize it. You may use this paper to plan your speech, but you may not use these notes while giving the speech. While you are planning your speech, we will step out of the room. We will come in when the time is up and we will ask you to give the speech behind this podium facing us and the camera. We will be recording your speeches because three psychologists who are all bilingual, will be evaluating your performances. These psychologist have different levels of English and Spanish proficiencies. One of them is more English dominant, another is more Spanish dominant, and the third is a bilingual balance. In addition, the audience in this room will also be evaluating your performance at the end of today's session.*

### (MODIFY FOR CONDITION)!!:

- *Although we are all **Anglo American/White** we understand **some** Spanish (which you'll be asked to speak in) and obviously we all understand and speak English well.*

*or*

- *Because we are all **Latinos**, we understand **some** Spanish (which you'll be asked to speak in) and obviously we all speak English well.*

*We will not only be evaluating your speech content but also your non-verbal behavior. Unfortunately, we are not allowed to share our evaluations of your performance with you. Do you have any questions?*

└─▶ **Begin Timer!**

## 2) Ask them to complete ASC and give expected anxiety level. Then ask them to give the speech.

- When time is up give ASC: *Okay, time is up. Please fill out this questionnaire indicating your concerns about the speech you are about to give.*
- Get their highest level of expected anxiety rating: *Looking at this scale (show them SUDS scale found in red binder), please tell me, What is the highest level of anxiety you expect to have while giving this speech? You may choose any number from 1 to 100. (Write this number down on the record form.)*

- Speech: *Before you begin, please tell me which speech topic you have chosen.* (Write this down on the record form). *Please stand behind the podium and we will let you know when to start. Don't worry about the time; we will let you know when to stop. Be sure to address your audience including the camera. Go ahead and begin.*



Begin Timer!

- If the participant is worried that they didn't have enough time to finish, etc. just tell them to try their best. Once camera is recording tell the participant to begin.

### 3) Get Time.

- Stop them when the 3 minutes are up. If the participant stops before the 3 minute mark, indicate the exact time when they stop talking. Also indicate "3 minutes" if you had to stop them. **DO NOT** state their time out loud.

### 4) Get SUDS Rating

- Turning to the SUDS scale state: *Now according to this same scale, what was the highest level of anxiety you experienced while giving this speech?*
- Record this number down.

### 5) Get SEQ

State: *Please fill out this questionnaire according to the speech performance you just gave.*

### **Repeat Speech Task**

Cross off the participant's first speech topic. Repeat the speech task a second time. Inform the participant that he or she may choose from any speech topic other than the one that he or she has already chosen (which you have crossed out). Make sure the participant gives his/her speech in the opposite language. Obtain the same ratings from the participant. Don't forget to get the speech topic BEFORE he or she gives the speech.



### **Determine if person is eligible**

*State: Okay, for the next part we have to step out of the room for a couple of minutes to prepare some more materials. What we want you to do is simply wait. We won't be long. Thanks!*

Determine if the person qualifies. In order to qualify they must:

1. Be of Mexican origin (The degree of "Mexicanness" is not being taken into account. For example, they can be half White and Mexican and still qualify for the study.)
2. Report a total score of  $\geq 8$  on the LSAS-SR Public Speaking Subscale (in FNES)
3. English SUDS  $\geq 50$  (not anticipatory)  
Spanish SUDS  $\geq 50$

### **NOT ELIGIBLE**

*State: Thank you for participating in our study. Your assessment results indicate that you do have some anxiety when giving speeches, however, your level of anxiety does not meet eligibility for you to join our second part of the study. Ask participant to fill out pre-screening packet number 2 ("Demographic questionnaire") NOW. You will receive one hour of credit for today's session. Once downstairs, place file in Did not qualify folder and write "Did not qualify" next to the person's name in the date book. Be sure to erase all other scheduled sessions for this participant.*

### **ELIGIBLE**

*State: From today's results, we would like to invite you to continue with our study. The next couple of parts of the study involve having you give additional speeches which are used to help people overcome some of their fear of public speaking. We expect that you will benefit significantly from continuing with our study, but we can't guarantee it. For 301: If you chose to continue you will get total of 3.5 credit hours plus \$5.00 at the total completion of the study. For non-301: If you chose to continue you will get total of \$30. You will be given \$10 for today's session, \$5 at the second session, and \$15 at the final session. I'm going to ask you to take home this packet of questionnaires and bring it back at the next session. (Give participant Pre-screening packet 2 "Demographic Questionnaire") to take home.*

- If yes, then go on to phase two immediately. Participants should be prepared to attend a 2-hour experimental session.

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**FIRST SESSION FOR THE FOLLOWING CONDITIONS:**

**English Video Feedback-White Audience (EVW)  
&  
English Video Feedback-Latino Audience (EVL)**

---

**Obtain consent form for the second part of the study**

State: *First we're going to ask you to read another consent form that will tell you a little more about the next two sessions. If you agree, as before sign the bottom of these two copies. You will keep one and we will keep the other.*

**Give overview**

State: *This next part of the study has several components. First, we'll read to you the rationale of the treatment procedures you'll be doing. Please read along as I read the rationale aloud (place "Rationale of Treatment" document found in red binder in front of them). After we read the rationale, I will then ask you to give four, three minute speeches, **ALL IN ENGLISH**. The procedure is pretty similar to what you've already done, except you will be viewing some of your speech performances on video. Do you have any questions?*



Go to Rationale  
of Treatment &  
have them  
complete RTQ.

**Treatment Speeches 1-4**

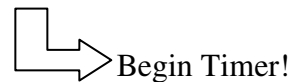
State: *State: Now we're going to ask you to give a three minute speech in **ENGLISH**. As before, we will give you a total of 3 minutes to choose a speech topic **and** organize it. You may choose any topic from the list that is not crossed off. We will step out of the room again while you prepare your speech. Then, we will come in when the time is up and we will ask you to give the speech behind this podium facing us and the camera which will be recording you. As before, all the speeches that you give will later be evaluated by three psychologists, all of whom are bilingual, according to certain criteria. One of the psychologists is more Spanish dominant, another is more English dominant, and the third is a balanced bilingual. In addition, the audience in this room will also be evaluating your performance at the end of today's session. **(MODIFY FOR CONDITION!!):***

- *Although we are all Anglo American/White we understand some Spanish (which you'll be asked to speak in) and obviously we all understand and speak English well.*

**or**

- *Because we are all Latinos, we understand some Spanish (which you'll be asked to speak in) and obviously, we all speak English well.*

*However, we will not only be evaluating your speech content but also your non-verbal behavior. Unfortunately, we are not allowed to share our evaluations of your performance with you. Do you have any questions?*



### **Speech Task**

- When time is up give them the ASC: *Okay, time is up. Please fill out this questionnaire indicating your concerns about the speech you are about to give.*
- Ask for expected highest level of anxiety (show SUDS scale once again).
- Speech: Get speech topic number. Then: *Please stand behind the podium and we will let you know when to start. Don't worry about the time, we will let you know when to stop. Be sure to address your audience including the camera. Go ahead and begin.*



- If the participant is worried that they didn't have enough time to finish, etc...just tell them to try their best. Once the camera is recording, tell the participant to begin.

### **Treatment Speech Ratings 1-4:**

1. Have them complete the ASC.
2. Get expected highest level of anxiety.
3. Ask for topic number and jot it down.
4. Jot down their TIME.
5. Turning to the SUDS scale and state: *Now according to this scale, what was your peak anxiety while giving this speech?* Jot this number down
6. Have them complete the SEQ
7. Don't forget to cross off the speech topic.

8. Read cognitive preparation instructions.



Go to Cognitive  
Preparation

9. Have them complete the SEQ again based **on what they saw on the VIDEO!!!**

**\*\*Repeat the speech task three more times\*\***

**\*\*Briefly remind the participant of the cognitive preparation instructions\*\***

**At the end of the session**

- Remind participant he/she will return in one week at the same time (will be sent reminder e-mail).
- Remind participant to fill out Pre-screening packet 2 and bring it back to the next session.
- Once downstairs, write “showed” next to the person’s name in the date book.

---

**SECOND SESSION FOR THE FOLLOWING CONDITIONS:**

**English Video Feedback-White Audience (EVW)  
&  
English Video Feedback-Latino Audience (EVL)**

---

- I. Preparation
  - a. Arrive 10 minutes early to set up the room:
    - i. Make sure you have a:
      - 1. Stop Watch
      - 2. Video Tapes
      - 3. Post Assessment (P.A.) Questionnaire packet
  - b. Set up the camera so that it is facing the podium and place your chairs next to the camera.
  - c. Camera person should attach participant number to the podium
- II. When participant arrives:
  - a. Be polite but serious
  - b. Avoid small talk
  - c. If they ask you something that you do not know, refer them to Magdalena Perez at 471-2179.

**Give participant overview of today's session**

*State: Hello \_\_\_\_\_ thank you for coming to today's session. Today's session is divided up into several parts. First, we will have you give four speeches, **ALL IN ENGLISH**. As before, you'll be filling out questionnaires before and after you complete each speech task and view some of your performances via video. Then, I'm going to ask you to complete a small packet of questionnaires. Do you have any questions?*

**Treatment Speeches 5-8**

*State: Now we're going to ask you to give a three minute speech in **ENGLISH**. As before, we will give you a total of 3 minutes to choose a speech topic **and** organize it. You may choose any topic from the list that is not crossed off. We will step out of the room again while you prepare your speech. Then, we will come in when the time is up and we will ask you to give the speech behind this podium facing us and the*

camera which will be recording you. As before, all the speeches that you give will later be evaluated by three psychologists, all of whom are bilingual, according to certain criteria. One of the psychologists is more Spanish dominant, another is more English dominant, and the third is a balanced bilingual. In addition, the audience in this room will also be evaluating your performance at the end of today's session. **(MODIFY FOR CONDITION!!):**

- *Although we are **all Anglo American/White** we understand some Spanish (which you'll be asked to speak in) and obviously we all understand and speak English well.*  
**or**
- *Because we are **all Latinos**, we understand some Spanish (which you'll be asked to speak in) and obviously, we all speak English well.*

*However, we will not only be evaluating your speech content but also your non-verbal behavior. Unfortunately, we are not allowed to share our evaluations of your performance with you. Do you have any questions?*



Begin Timer!

### **Speech Task**

- When time is up give them the ASC: *Okay, time is up. Please fill out this questionnaire indicating your concerns about the speech you are about to give.*
- Ask them, *What is the highest level of anxiety you expect to experience while giving the speech?* (show SUDS scale to remind).
- Speech: *Please tell me which speech topic you have chosen. Please stand behind the podium and we will let you know when to start. Don't worry about the time, we will let you know when to stop. Be sure to address your audience including the camera. Go ahead and begin.*



Begin Timer!

- If the participant is worried that they didn't have enough time to finish, etc...just tell them to try their best. Once the camera is recording, tell the participant to begin.

### **Treatment Speech Ratings 5-8:**

1. Have them complete the ASC.
2. Get highest expected level of anxiety.
3. Get speech topic number.
4. Jot down their TIME.
5. Turning to the SUDS scale and state: *Now according to this scale, what was your peak anxiety while giving this speech?* Jot this number down
6. Have them complete the SEQ
7. Don't forget to cross off the speech topic they just gave a speech on.
8. Read cognitive preparation instructions.



Go to Cognitive  
Preparation

9. Have them complete the SEQ again based **on what they saw on the VIDEO!!!**

**\*\*Repeat this speech task three more times\*\***

**\*\*Briefly remind the participant of cognitive preparation instructions\*\***

After the participants has completed his/her 8<sup>th</sup> speech task, continue to the POST-ASSESSMENT INSTRUCTIONS.

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**FIRST SESSION FOR THE FOLLOWING CONDITIONS:**

:  
**Bilingual Video Feedback-White Audience (BVW)**  
&  
**Bilingual Video Feedback-Latino Audience (EVL)**

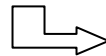
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**Obtain Consent form for the second part of the study**

State: *First we're going to ask you to read another consent form that will tell you little more about the next two sessions. If you agree, as before sign the bottom of these two copies. You will keep one and we will keep the other.*

**Give overview**

State: *This next part of the study has several components. First, we'll read to you the rationale of the treatment procedures you'll be doing. Please follow along as I read aloud the rationale (place "Rationale of Treatment" document found in red binder in front of them). After we read the rationale, I will then ask you to give four, three minute speeches, all of which will be in Spanish OR English (Make sure you know the language order of the day). The procedure is pretty similar to what you've already done, except you will be viewing some of your speech performances on video. Do you have any questions?*



Go to Rationale  
of Exposure  
Treatment &

**Treatment Speeches 1-4**

State: *Now we're going to ask you to give a three minute speech in English/Spanish. As before, we will give you a total of 3 minutes to choose a speech topic and organize it. You may choose any topic from the list that is not crossed off. We will step out of the room again while you prepare your speech. Then, we will come in when the time is up and we will ask you to give the speech behind this podium facing us and the camera which will be recording you. As before, all the speeches that you give will later be evaluated by three psychologists, all of whom are bilingual, according to certain criteria. One of the psychologists is more Spanish dominant, another is more English dominant, and the third is a balanced bilingual. In addition, the audience in this room will also be evaluating your performance at the end of today's session. (MODIFY FOR CONDITION!!):*

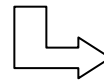


- *Although we are all Anglo American/White we understand some Spanish (which you'll be asked to speak in) and obviously we all understand and speak English well.*

*or*

- *Because we are all Latinos, we understand some Spanish (which you'll be asked to speak in) and obviously, we all speak English well.*

*However, we will not only be evaluating your speech content but also your non-verbal behavior. Unfortunately, we are not allowed to share our evaluations of your performance with you. Do you have any questions?*



Begin Timer!

### **Speech Task**

- When time is up give them the ASC: *Okay, time is up. Please fill out this questionnaire indicating your concerns about the speech you are about to give.*
- Ask for expected highest level of anxiety (show SUDS scale once again).
- Speech: *Please stand behind the podium and we will let you know when to start. Don't worry about the time; we will let you know when to stop. Be sure to address your audience including the camera. Go ahead and begin.*



Begin Timer!

- If the participant is worried that they didn't have enough time to finish, etc...just tell them to try their best. Once the camera is recording, tell the participant to begin.

### **Treatment Speech Ratings 1-4:**

1. Have them complete the ASC.
2. Get expected highest level of anxiety.
3. Ask for topic number and jot it down.
4. Jot down their TIME.
5. Turn to the SUDS scale and state: *Now according to this scale, what was your peak anxiety while giving this speech?* Jot this number down
6. Have them complete the SEQ
7. Don't forget to cross off the speech topic.

8. Read cognitive preparation instructions, asking them to think about their answer in Spanish following a Spanish speech task.



Go to Cognitive Preparation

9. Have them complete the SEQ again based **on what they saw on the VIDEO!!!**

**\*\*Repeat the speech task three more times\*\***

**\*\*Briefly remind them of the cognitive preparation instructions\*\***

**At the end of the session**

- Schedule their second session one week from today's date.
- Remind participant to fill out Pre-screening packet 2 and bring it back to the next session.
- Once downstairs, write "showed" next to their name in the date book.

---

**SECOND SESSION FOR THE FOLLOWING CONDITIONS:**

**Bilingual Video Feedback-White Audience (BVW)  
&  
Bilingual Video Feedback-Latino Audience (EVL)**

---

- I. Preparation
  - a. Arrive 10 minutes early to set up the room:
    - ii. Make sure you have a:
      - 1. Stop Watch
      - 2. Video Tapes
      - 3. Post Assessment (P.A.) Questionnaire packet
  - b. Set up the camera so that it is facing the podium and place your chairs next to the camera
  - c. Camera person should attach participant number to podium.
- II. When participant arrives:
  - a. Be polite but serious
  - b. Avoid small talk
  - c. If they ask you something that you do not know, refer them to Magdalena Perez at 471-2179.

**Give participant overview of today's session**

*State: Hello \_\_\_\_\_ thank you for coming to today's session. Today session is divided up into several parts. First, we're going to have you give four more speeches in **Spanish OR English (Make sure you know the language order of the day)**. As before, you'll be filling out questionnaires after you complete each speech task and view some your performances via video. Then, I'm going to ask you to complete a packet of questionnaires. Do you have any questions?*

**Treatment Speeches 5-8**

*State: Now we're going to ask you to give a three minute speech in Spanish. As before, we will give you a total of 3 minutes to choose a speech topic **and** organize it. You may choose any topic from the list that is not crossed off. We will step out of the room again while you prepare your speech. Then, we will come in when the time is up and we will ask you to give the speech behind this podium facing us and the camera which will be recording you. As before, all the speeches that you give will later be evaluated by three psychologists, all of whom are bilingual, according to certain criteria. One of the psychologists is more Spanish dominant, another is more*

*English dominant, and the third is a balanced bilingual. In addition, the audience in this room will also be evaluating your performance at the end of today's session.*

**(MODIFY FOR CONDITION!!):**

- *Although we are **all Anglo American/White** we understand some Spanish (which you'll be asked to speak in) and obviously we all understand and speak English well.*

**or**

- *Because we are **all Latinos**, we understand some Spanish (which you'll be asked to speak in) and obviously, we all speak English well.*

*However, we will not only be evaluating your speech content but also your non-verbal behavior. Unfortunately, we are not allowed to share our evaluations of your performance with you. Do you have any questions?*



### **Speech Task**

- When time is up give them the ASC: *Okay, time is up. Please fill out this questionnaire indicating your concerns about the speech you are about to give.*
- Ask for expected highest level of anxiety (show SUDS scale once again).
- Speech: Ask for speech topic number. Then, *Please stand behind the podium and we will let you know when to start. Don't worry about the time; we will let you know when to stop.* Be sure to address your audience including the camera. *Go ahead and begin.*



- If the participant is worried that they didn't have enough time to finish, etc...just tell them to try their best. Once the camera is recording, tell the participant to begin.

### **Treatment Speech Ratings 5-8:**

1. Have them complete the ASC.
2. Get expected highest level of anxiety.
3. Ask for topic number and jot it down.
4. Jot down their TIME.
5. Turning to the SUDS scale and state: *Now according to this scale, what was your peak anxiety while giving this speech?* Jot this number down.
6. Have them complete the SEQ.

7. Don't forget to cross off the speech topic.
8. Read cognitive preparation instructions, asking them to think about their answers in Spanish following a Spanish speech task.



Go Cognitive Preparation
-----------------------------

10. Have them complete the SEQ again based **on what they saw on the VIDEO!!!**

**\*\*Repeat the speech task three more times\*\***

**\*\*Briefly remind participants of cognitive preparation instructions\*\***

After the participants has completed his/her 8<sup>th</sup> speech task, continue to the POST-ASSESSMENT INSTRUCTIONS.

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## **POST-ASSESSMENT SESSION FOR ALL THE CONDITIONS**

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- Reminder to camera person: Attach participant number and post-assessment symbol to podium
- Instruct participants to give TWO more speeches. One speech should be conducted in English and the other in Spanish (look at the record form to determine what language order to follow). **Participants will not be viewing these speeches or going through the cognitive preparation protocol.**

### **Post-Assessment Speech Ratings 1:**

1. Complete ASC.
2. Ask for expected highest level of anxiety while giving speech.
3. Ask for speech topic number.
4. Jot down their TIME.
5. Turn to the SUDS scale and state: *Now according to this scale, what was your peak anxiety while giving this speech?* Jot this number down
6. Have them complete the SEQ
7. Don't forget to cross off the speech topic.

### **Post-Assessment Speech Ratings 2:**

1. Complete ASC.
  2. Ask for expected highest level of anxiety while giving speech.
  3. Ask for speech topic number.
  4. Jot down their TIME.
  5. Turn to the SUDS scale and state: *Now according to this scale, what was your peak anxiety while giving this speech?* Jot this number down.
  6. Have them complete the SEQ.
  7. Don't forget to cross off the speech topic.
- 
- Instruct them to fill out the Post-Assessment packet of questionnaires (starts with FNES, has PA in upper right hand corner).
  - Remind them they will be returning for their third session two weeks from today's date at the same time (will be sent reminder e-mail).

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## **FOLLOW-UP SESSION FOR ALL THE CONDITIONS**

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- Reminder to camera person: Attach participant number and post-assessment symbol to podium
- Instruct participants to give TWO more speeches. One speech should be conducted in English and the other in Spanish (look at the record form to determine what language order to follow). **Participants will not be viewing these speeches or going through the cognitive preparation protocol.**

### **Follow-Up Speech Ratings 1:**

1. Complete ASC.
2. Ask for expected highest level of anxiety while giving speech.
3. Ask for speech topic number.
4. Jot down their TIME.
5. Turn to the SUDS scale and state: *Now according to this scale, what was your peak anxiety while giving this speech?* Jot this number down
6. Have them complete the SEQ.
7. Don't forget to cross off the speech topic.

### **Follow-Up Speech Ratings 2:**

1. Complete ASC.
  2. Ask for expected highest level of anxiety while giving speech.
  3. Ask for speech topic number.
  4. Jot down their TIME.
  5. Turn to the SUDS scale and state: *Now according to this scale, what was your peak anxiety while giving this speech?* Jot this number down.
  6. Have them complete the SEQ.
  7. Don't forget to cross off the speech topic.
- 
- Instruct them to fill out the Follow-up packet of questionnaires (starts with FNES, has F.U. in upper right hand corner).
  - Give them the debriefing form.
  - Once downstairs, write "showed" next to their name in the date book. & place file in the "First-time Data" filing drawer.

**RECORD FORM: PRE-SCREENING SESSION FOR ALL CONDITIONS**

Condition\_\_\_\_

Tester\_\_\_\_

Date\_\_\_\_

- ف Tools:  
Camera Stop watch/video tapes/ folder
- ف Verify UTEID & email address
- ف \_\_\_\_\_ Age \_\_\_\_\_ Grade \_\_\_\_\_ Birthday \_\_\_\_\_
- ف Check criteria (red binder)
- ف Two Consent Forms (signature on both)
- ف Explain Purpose of Today's Session
- ف Give Woodcock Munoz Language Survey (Picture Vocabulary)
- English: RAW \_\_\_\_\_ AE \_\_\_\_\_ PR \_\_\_\_\_ SS \_\_\_\_\_ RPI \_\_\_\_\_
  - Spanish: RAW \_\_\_\_\_ AE \_\_\_\_\_ PR \_\_\_\_\_ SS \_\_\_\_\_ RPI \_\_\_\_\_
- ف Give Pre-screening packet 1 (starts with FNES) to complete NOW.
- ف Put aside Pre-screening packet 2 (labeled "Demographic Questionnaire") for later.
- ف Speech 1
- Language: \_\_\_\_\_
  - ASC
  - Expected highest level of anxiety \_\_\_\_\_
  - Topic # \_\_\_\_\_
  - Time \_\_\_\_\_
  - Suds \_\_\_\_\_
  - SEQ \_\_\_\_\_
- ف Speech 2
- Language: \_\_\_\_\_
  - ASC
  - Expected highest level of anxiety \_\_\_\_\_
  - Topic # \_\_\_\_\_
  - Time \_\_\_\_\_
  - Suds \_\_\_\_\_
- ف Establish if participant meets criteria (check those that apply)
- Descent \_\_\_\_\_
  - Speech 1 SUDS \_\_\_\_\_
  - Speech 2 SUDS \_\_\_\_\_
  - LSAS Public Speaking FEAR Subscale \_\_\_\_\_
- ف If participant DOES meet criteria:
- Give him or her the **Pre-screening packet 2 (labeled "Demographic Questionnaire")** to complete at home and bring BACK to the next session
- ف If participant DOES NOT meet criteria:  
Ask him or her to complete **Pre-screening packet 2 (labeled "Demographic Questionnaire")** NOW

**Remember:**  
-3 psychologists  
- We evaluate  
-White/Latino



**RECORD FORM: FIRST SESSION FOR ALL CONDITIONS**

Condition # \_\_\_\_\_

Tester \_\_\_\_\_

Date \_\_\_\_\_

- ف Tools:  
Camera/Stop watch/video tapes/ folder
- ف Two Consent Forms
- ف Explain Purpose of Session
- ف Read Rational of Speech Exposures
- Complete RTQ
- ف Speech 1
- Language \_\_\_\_\_
  - ASC
  - Expected highest level of anxiety \_\_\_\_\_
  - Topic # \_\_\_\_\_
  - Time \_\_\_\_\_
  - Suds \_\_\_\_\_
  - SEQ
  - Read Cognitive Preparation English
  - View video
  - SEQ
- ف Speech 2
- Language \_\_\_\_\_
  - ASC
  - Expected highest level of anxiety \_\_\_\_\_
  - Topic # \_\_\_\_\_
  - Time \_\_\_\_\_
  - Suds \_\_\_\_\_
  - SEQ
  - Prompt to do Cognitive Preparation again
  - View video
  - SEQ
- ف Speech 3
- Language \_\_\_\_\_
  - ASC
  - Expected highest level of anxiety \_\_\_\_\_
  - Topic # \_\_\_\_\_
  - Time \_\_\_\_\_
  - Suds \_\_\_\_\_
  - SEQ
  - Prompt to do Cognitive Preparation again
  - View video
  - SEQ
- ف Speech 4
- Language \_\_\_\_\_
  - ASC
  - Expected highest level of anxiety \_\_\_\_\_
  - Topic # \_\_\_\_\_
  - Time \_\_\_\_\_
  - Suds \_\_\_\_\_

<p>Remind: -3 psychologists - We evaluate -Anglo/Latino</p>
---

- SEQ
- Prompt to do Cognitive Preparation again
- View video
- SEQ

**RECORD FORM: SECOND SESSION FOR ALL CONDITIONS**

Condition # \_\_\_\_\_  
Tester \_\_\_\_\_  
Date \_\_\_\_\_

ف Tools:  
Camera/Stop watch/video tapes/folder

ف Explain Purpose of Today's Session

- ف Speech 5
- ASC
  - Expected highest level of anxiety \_\_\_\_\_
  - Language \_\_\_\_\_
  - Topic # \_\_\_\_\_
  - Time \_\_\_\_\_
  - Suds \_\_\_\_\_
  - SEQ
  - Read Cognitive Preparation English
  - View video
  - SEQ

**Remind:**  
-3 psychologists  
- We evaluate  
-Anglo/Latino

- ف Speech 6
- ASC
  - Expected highest level of anxiety \_\_\_\_\_
  - Language \_\_\_\_\_
  - Topic # \_\_\_\_\_
  - Time \_\_\_\_\_
  - Suds \_\_\_\_\_
  - SEQ
  - Prompt to do Cognitive Preparation again
  - View video
  - SEQ

- ف Speech 7
- ASC
  - Expected highest level of anxiety \_\_\_\_\_
  - Language \_\_\_\_\_
  - Topic # \_\_\_\_\_
  - Time \_\_\_\_\_
  - Suds \_\_\_\_\_
  - SEQ
  - Prompt to do Cognitive Preparation again
  - View video
  - SEQ

- ف Speech 8
- ASC
  - Expected highest level of anxiety \_\_\_\_\_
  - Language \_\_\_\_\_
  - Topic # \_\_\_\_\_
  - Time \_\_\_\_\_
  - Suds \_\_\_\_\_
  - SEQ
  - Prompt to do Cognitive Preparation again
  - View video
  - SEQ

**RECORD FORM: POST-ASSESSMENT SESSION FOR ALL CONDITIONS**

Condition # \_\_\_\_\_  
Tester \_\_\_\_\_  
Date \_\_\_\_\_

- ف Speech 1: Post-Assessment
- Language \_\_\_\_\_
  - ASC
  - Expected highest level of anxiety \_\_\_\_\_
  - Topic # \_\_\_\_\_
  - Time \_\_\_\_\_
  - Suds \_\_\_\_\_
  - SEQ

Remind:  
-3 psychologists  
- We evaluate  
-Anglo/Latino

- ف Speech 2: Post Assessment
- Language \_\_\_\_\_
  - ASC
  - Expected highest level of anxiety \_\_\_\_\_
  - Topic # \_\_\_\_\_
  - Time \_\_\_\_\_
  - Suds \_\_\_\_\_
  - SEQ

ف **Post-assessment** packet of questionnaires

ف **Remind** two weeks

**RECORD FORM: FOLLOW-UP SESSION FOR ALL CONDITIONS**

Condition # \_\_\_\_\_  
Tester \_\_\_\_\_  
Date \_\_\_\_\_  
\_\_\_\_\_

- ف Speech 1: Follow-up
- Language \_\_\_\_\_
  - ASC
  - Expected highest level of anxiety \_\_\_\_\_
  - Topic # \_\_\_\_\_
  - Time \_\_\_\_\_
  - Suds \_\_\_\_\_
  - SEQ

<p><b>Remind:</b> -3 psychologists - We evaluate -Anglo/Latino</p>
--

- ف Speech 2: Follow-up
- Language \_\_\_\_\_
  - ASC
  - Expected highest level of anxiety \_\_\_\_\_
  - Topic # \_\_\_\_\_
  - Time \_\_\_\_\_
  - Suds \_\_\_\_\_
  - SEQ

- ف **Follow-up** packet of questionnaires

- ف Debriefing Form

- ف Compensate
- Amount depends on whether participant is a 301 student or not
  - Make sure the participant signs the payment form (cover up names of other participants)
  - Make sure you write your name on the payment form

## APPENDIX C: INTERVIEW WITH RESEARCH ASSISTANTS

Four research assistants who had participated in the study were interviewed to establish their perceptions on how (a) closely the treatment protocol had been followed and (b) the participants had responded to the conditions. Two of the research assistants interviewed solely participated in the White audience conditions [English-Video Feedback White audience (EVW); Bilingual-Video Feedback White audience (BVW)]. The other two research assistants that were interviewed had White and Latino stereotypical phenotypes (i.e., light colored skin and medium dark brown hair). Thus, these research assistants were able to participate in both the White (EVW and BVW) and Latino audience conditions [English-Video Feedback Latino audience (EVL); Bilingual-Video Feedback Latino audience (BVL)].

The research assistants reported that the treatment protocol was followed approximately 85% of the time. The research assistants stated that there were two deviations that were commonly made from the treatment protocol. The most common deviation from the protocol was having the participant present in front of two audience members versus the three that the treatment protocol recommended. On a lesser extent, the second most common deviation from the treatment protocol was failing to remind participants to think about the cognitive preparation in Spanish following a Spanish speech exposure task.

According to the research assistants, participants' responses to the conditions were often moderated by the ethnic composition of the audience members. Research assistants who were solely in the White audience conditions reported that none of the

participants they ran ever made a verbal statement acknowledging the racial/ethnic difference between themselves and the audience members. The research assistants, who participated in both White and Latino audience conditions, also reported that while running the participants through the White audience conditions the participants did not make any statements to suggest that they were acknowledging the difference between themselves and the audience members. On the other hand, when these same research assistants ran participants through the Latino audience conditions, they observed various participants comment that they felt less anxious presenting in front of an audience that was solely composed of Latinos. In addition, they were also more likely to present on the following topic: “Give a speech about how it feels to be a minority student at UT/SEU”. Research assistants running the Latino audience conditions also noted various participants language-switch during their English presentations. Meaning, that they would often state a couple of words in Spanish while giving their English speeches. This behavior, however, was never noted with participants who were in the White audience conditions.

According to the research assistants, participants’ responses also sometimes varied according to the type of treatment they received (monolingual vs. bilingual). Various participants in the bilingual video feedback conditions were often surprised to learn that they would be conducting speeches in Spanish. In a few occasions, the participants would question the research assistants on why they were conducting speeches in Spanish. Yet, participants never questioned the research assistants on why they were conducting speeches in English. Research assistants also noted that

on average participants appeared more fluent in English than Spanish. Mainly participants were often noted having difficulty remembering how to say specific words in Spanish. The reverse of this pattern (having difficulty remembering words in English), however, was uncommon.

In sum, research assistants reported that the treatment protocol was on average closely followed. Research assistants also observed participants respond differently to the conditions. The research assistants who were solely in the White audience conditions agreed that participants did not make any verbal indications that they were aware of presenting in front of an audience composed of White experimenters. Similarly, the research assistants who were in both audience conditions, agreed that while they ran participants through the White audience conditions, the participants did not make any indications. However, these research assistants reported that participants in the Latino audience conditions were more likely to make statements indicating that they were aware of presenting in front of a Latino audience. Consistent with the ethnic match literature, perhaps these participants felt more comfortable openly talking to an audience that they perceived would be more understanding of their experiences (Maramba & Hall, 2002; Yeh, Eastman, & Cheung, 1994). Participants in the bilingual audience conditions often questioned why they were being asked to conduct speech exposures in Spanish. Interestingly, participants never asked why they had to conduct speech exposures in English. As it is argued in the Discussion section of this dissertation, it appears that Spanish speech exposures are not very realistic of their present cultural environment.



Since these participants are attending predominantly White universities where English is the official language that is spoken, giving a speech in Spanish is an unexpected behavior.

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