ABSTRACT

THE EFFECTS OF GRADUATED EXPOSURE, FEEDBACK, AND GOAL SETTING ON PUBLIC SPEAKING ANXIETY

Anxiety disorders are extremely high in prevalence in our society today. One of the most common anxiety disorders is social anxiety disorder, more specifically glossophobia (fear of public speaking). In persons with public speaking anxiety, anxiety is experienced in situations that involve social interactions and speaking in front of an audience. Very few people seek treatment for their anxiety because of the social nature of the disorder, and the social interaction involved in many treatments impacting many aspects of their daily lives (National Institute of Mental Health, 2010). Though this disorder is highly prevalent among the general population, very few behavior analytic studies have been conducted investigating the treatment of them. The present study examined the effects of graduated exposure, goal setting, and either self or researcher feedback on the behavior of 3 participants with self-reported public speaking anxiety, verified by the Personal Report of Public Speaking Anxiety (PRPSA). After baseline measures were collected, an Alternating Treatments Design (ATD) was used to compare the effects of both conditions. Results do not show a consistent superiority of one type of feedback over the other; however, both seemed to be effective in reducing behaviors associated with glossophobia for all participants.

Victoria Jordan Forsythe
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THE EFFECTS OF GRADUATED EXPOSURE, FEEDBACK, AND GOAL SETTING ON PUBLIC SPEAKING ANXIETY

by

Victoria Jordan Forsythe

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For the Department of Psychology:

We, the undersigned, certify that the thesis of the following student meets the required standards of scholarship, format, and style of the university and the student's graduate degree program for the awarding of the master's degree.

Victoria Jordan Forsythe
Thesis Author

Marianne L. Jackson (Chair) Psychology

Amanda N. Adams Psychology

Jonpaul D. Moschella Psychology

For the University Graduate Committee:

____________________________________________________________________
Dean, Division of Graduate Studies
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CHAPTER 1: INTRODUCTION

Anxiety disorders are some of the most common disorders treated by professionals today. According to the National Institute of Mental Health (NIMH) 18% of American adults suffer from some form of anxiety (NIMH, 2010). Disorders such as post-traumatic stress disorder (PTSD), obsessive-compulsive disorder (OCD), specific phobias, panic disorder, and generalized anxiety disorder (GAD) are all categorized under the umbrella of anxiety disorders.

Social phobia, also referred to as social anxiety disorder, is one of the top ten phobias recognized by the Diagnostic and Statistical Manual of Mental Disorders. About 5.3 million Americans suffer from this disorder; that is, about 1 in every 51 American adults (NIMH, 2010). However, these numbers are only a reflection of those individuals who come forward to seek help. As stated by the DSM-IV, “the essential feature of Social Phobia is marked and persistent fear of social or performance situations in which embarrassment may occur” (DSM-IV-TR; American Psychiatric Association, 2000, p. 450). Many people do not seek help for this disorder due to its social nature and the social interaction often required in treatment.

The two most common forms of social phobias are agoraphobia, which is “anxiety about being in places or situations from which escape might be difficult (or embarrassing) or in which help may not be available in the event of having a panic attack” (DSM-IV-TR; American Psychiatric Association, 2000, p. 432) and glossophobia, which is the fear of public speaking and presenting to an audience. According to the National Institute of Mental Health (2010), glossophobia is defined as “an intense anxiety prior to, or simply at the thought of having to verbally communicate with any group, avoidance of events which focus the
group’s attention on individuals in attendance, and physical distress, nausea, or feelings of panic in such circumstances” (NIMH, 2010). About 75% of the world’s population suffers from some degree of glossophobia, although for many it may not impact their life in any significant way (NIMH, 2010). Public speaking is often an important skill for students and professionals to master in order to do well in their careers. For some, good public speaking skills may even be necessary in some fields of study. Moreover, social anxiety in general can have many negative consequences for an individual’s quality of life (NIMH, 2010).
CHAPTER 2: ANXIETY DISORDERS

Anxiety is a psychological and physiological state characterized by physiological, cognitive, and behavioral symptoms (NIMH, 2010). It is defined as “a state of prolonged fear or arousal in response to a threat that is ambiguous or unspecific” (NIMH, 2010). The Diagnostic and Statistics Manual of Mental Disorders lists 12 diagnoses of anxiety disorders. The most common of these twelve diagnoses include generalized anxiety disorder (GAD), obsessive-compulsive disorder, panic disorder, posttraumatic stress disorder (PTSD), and social anxiety disorder (social phobia), (DSM-IV-TR; American Psychiatric Association, 2000). According to a report by the surgeon general, the percentage of cases of anxiety disorders in a given year exceeds 16% of the adult population in the United States (U.S. Department of Health and Human Services, 2011).

Symptoms and Treatments of Anxiety Disorders

With such a high prevalence among the human population, appropriate and effective treatments for anxiety disorders are needed. Researchers of anxiety suggest it is composed of three components, physiological (e.g., increased heart rate), cognitive (e.g., concerned with how others view them), and behavioral (e.g., shaking) (Bodie, 2010). This view leads to a number of different symptoms and treatment options within each of these categories.

Physiological Symptoms and Treatments of Anxiety Disorder

The physiological system includes the circulatory system, respiratory system, and the nervous system all of which regulate the body and it’s response to stressors and anxiety. Most of the physiological research on anxiety involves cardiovascular responses, which include heart rate and blood pressure (e.g.,
Behnke & Carlile, 1971). Further, researchers have examined measures of electrical properties of the skin in regards to anxiety (e.g., Clements & Turpin, 1996). Though the findings of the studies conducted on the physiological symptoms of anxiety are important in understanding the issue and providing measurable variables, there is a lack of consensus on treatments and they typically involve cognitive and or behavioral components.

**Cognitive Symptoms and Treatments of Anxiety Disorder**

People with anxiety disorders display altered cognitive performance which include “cognitive biases toward negative stimuli, and increased cognitive rigidity” (Robinson, Letkiewicz, Overstreet, Ernst, & Grillon, 2011). Robinson et al. (2011) investigated the effects of threat of shock on cognitive processing in individuals who do not suffer from a clinically relevant anxiety disorders. All of the participants were classified as both physically and mentally healthy as measured by a physical examination and a psychological interview. In this study, 31 participants engaged in an affective Stroop task under one of two conditions: safe or threat-of-shock conditions. The Stroop activity included facial images (happy/fearful) with the word “happy” or “fear”. The words either matched the facial expression or did not (e.g., happy face to “happy” or happy face to “fear”). During the treatment condition participants were told they would receive between two and five shocks during the experiment, however they only received two shocks at the end of the condition to minimize habituation and predictability.

Results from this study indicate a bias toward the facial stimuli in the two different conditions. The outcomes state that “the threat of shock partially modeled the effects of generalized anxiety disorder and panic disorder on cognition by altering affective processing” (Robinson et al., 2011). The threat of
the shock was said to increase the aversive affective processing of the facial stimuli, which were similar to the effects of clinical anxiety on affective biases (Robinson et al., 2011). These findings, resulting from a healthy population who do not suffer from anxiety disorder, help explain what is found with those who do suffer from a disorder.

One distinguishing feature of cognitive based treatments for anxiety is that they typically target cognitive constructs and attitudes or unobservable behaviors as opposed to overt or observable behaviors (Rapee & Hayman, 1996). Furthermore, participants in many of the Cognitive Behavior Therapy studies are not exposed to situation where they contact the aversive or anxiety provoking stimulus directly. For example, visualization has been used extensively with individuals suffering from anxiety (e.g., Ayres and Hope, 1992). During this technique, individuals are asked to visualize a situation where they come into contact with their specific phobia and then imagine positive outcomes of the situation. Visualization has been used for various phobias including glossophobia, agoraphobia, and claustrophobia.

Following visualization research, the use of virtual reality (VR) became a focus for treating phobias. Bullinger, Roessler, and Mueller-Spahtn (1998) wrote a paper discussing the use of virtual reality environments for psychotherapy treatment of specific phobias. The researchers discuss the use of the VR equipment in treating both claustrophobia and acrophobia. In these treatments, participants are equipped with headgear that is connected to a computer in which allows them to have an experience close to a real anxiety provoking situation. However, the participants do not directly contact the situation, which evokes the anxiety and so generalization of treatment gains to the actual situation can be difficult.
Rothbaum et al. (1995) conducted a study on twenty college students diagnosed with acrophobia, a fear of heights. The participants were randomly assigned to the VR with graduated exposure therapy group or the control group who received no treatment. Those in the VR with graduated exposure group participated in 8 weeks of sessions. All participants were given measures of avoidance, attitudes, and anxiety related to their phobia of heights. Results indicated a significant improvement in all three measures for those who participated in the VR with graduated exposure treatment, as compared to those in the control group. Though these results indicate a reduction in the participants’ fear of the stimuli there is no data supporting generalization of these effects when the participants come into direct contact with the aversive stimulus or maintenance over time.

A lack of direct contact with the aversive stimulus may become problematic for purposes of generalization and maintenance of any effects achieved through treatment. There has been no research published that discusses long-term maintenance of virtual-reality treatments, nor indication of generalization to the actual aversive stimulus.

Behavioral Symptoms and Treatments of Anxiety Disorder

There are a number of behavioral symptoms of anxiety disorders. Symptoms often include behaviors such as fidgeting, rapid speech or even escape and avoidance of the anxiety provoking situation. It is likely that behavioral analytic treatments would be helpful for people with anxiety; however, there are few studies to date that focus on behavioral treatments. Friman, Hayes, and Wilson (1998) reviewed 6,254 studies published between 1993 and 1997 and found very few scientific studies on anxiety from the behavioral analytic
perspective. It has been suggested that this is due to a lack of understanding about anxiety in behavior analysis and a difficulty conceptualizing it within the assumptions of the field (Friman et al., 1998). Friman et al. (1998) explains one reason for this lack of understanding is the imprecision that comes with the term anxiety. They state behavior analysts “wish to maintain fidelity in their view of science” and that precision of definitions “is fundamental to behavior analysis” (p. 138). Furthermore, anxiety has become a category of many behaviors. Furthermore, the authors discuss that categories are not observable in experimental analyses and could be one reason anxiety is less likely to be a topic in behavior analytic research. One aspect that behavior analysts can focus on while studying anxiety is the condition that occasions anxiety as a categorical response and outcomes of the resulting behavior. Once the anxiety related behaviors are broken down into separate observable events, behavior analysts can begin to assess and treat them. The function of anxiety related behavior is often avoidance, and as a result the most common coping responses to the aversive stimulus or situation is to either avoid or escape from it. This is problematic because the individual never contacts the aversive stimulus and by avoiding or escaping these situations this behavior is negatively reinforced and more likely to continue to occur. However, it is important for the individual to come into direct contact with the aversive stimulus in order to maintain the gains made in treatment and to generalize the effects of treatment in the real world. Without direct contact with the aversive stimulus the participant’s anxious behaviors will not undergo extinction. Behavior analysis deals with these functions of behaviors directly and so anxiety may be a suitable area for behavior analysts to research.

The most common behavioral treatment employed with individuals who suffer from anxiety disorders is systematic desensitization. Systematic
desensitization is a type of behavioral treatment that utilizes classical and operant conditioning to help individuals overcome their fears and achieve positive behavior change (Wolpe, 1958). This technique requires the individual with anxiety to go through a series of exposure hierarchies of the feared stimulus or situations that evoke gradually increasing levels of anxiety and differentially reinforcing other (DRO) appropriate or incompatible behaviors. The individual is differentially reinforced for coming into contact with their feared stimulus. However, programmed reinforcement in a naturalistic setting may be difficult to fade and is hard to maintain. For the present study the DRO component was omitted but the graduated exposure component of systematic desensitization was used. As the name implies, the client is gradually exposed to increasing levels of the aversive stimulus.

Leitenberg, Argas, Thompson, and Wright (1968) were the first to publish a study on anxiety in a behavior analytic journal. Leitenberg et al. (1968) investigated the effects of feedback and positive reinforcement on the responses of an individual with claustrophobia. Feedback is defined as “information a person receives about a particular aspect of his or her behavior following its completion” (Cooper, Heron, & Heward, 2007). A stopwatch was used to provide participants feedback about the amount of time they were spending in the small space. Leitenberg et al. (1968) used a reversal design for this study. The results suggested that when the participant was aware of the amount of time they were spending in the small space the participant would stay longer than when they were unaware.

Jones and Friman (1999) conducted a study to investigate the effects of graduated exposure alone and graduated exposure plus programmed reinforcement for a young boy with entomophobia (the fear of insects). The study was a multi-
element design (i.e., A-B-BC-A-BC) consisting of three different phases; baseline, graduated exposure, and graduated exposure plus reinforcement. In the first assessment phase, a cricket was placed in the middle of the room while the participant completed academic worksheets. In the second assessment phase, there was no cricket in the room but the participant was told the bug was present and then instructed to complete his work. In the final assessment phase, there was no cricket and the participant was informed there was no bug while he completed his worksheets. In the first experimental phase only graduated exposure was used. During the second experimental phase, graduated exposure plus reinforcement portion of the experiment the participant was provided a programmed tangible reinforcer when he completed his academic tasks during the various phases. The results indicated no change in academic performance during the graduated exposure phase alone, but did show an increase in academic performance during the exposure plus reinforcement phase. The results suggest that the combination of these two behavioral techniques is effective and might be used to treat a variety of phobias.

Furthermore, Ricciardi, Luiselli, and Camare (2006) demonstrated the efficacy of the technique when they paired graduated exposure and differential reinforcement to reduce an eight-year-old boy’s phobia of animatronic toy (e.g., electronic Elmo toys). During the experiment, the participant was exposed to the toy in stages and reinforcement was provided when the participant complied with each phase in the exposure. During the first stage the participant was in the same room as the toy, and the toy was placed several feet away from him. By the last phase of exposure, the child was able to come into contact with the aversive toy without emitting escape behaviors.
Public Speaking Anxiety

One of the most common phobias related to anxiety is glossophobia, which is the fear of public speaking or of any event in which an audience attention will be focused on the individual. About 75% of the world’s population suffers from some degree of glossophobia. Public speaking is often an important skill that students and professionals should master in order to do well in their professions, and may even be necessary in other fields in order to advance (Johnson & Szczupakiewicz, 1987). Furthermore, social anxiety can have a variety of negative consequences for an individual’s general quality of life.

Treatments for Public Speaking Anxiety

Physiological Treatments for Public Speaking Anxiety

Physiological symptoms play an important role when examining treatment options for public speaking anxiety. One of the most common measures of physiological symptoms in regards to public speaking anxiety is the measure of palm sweat through electro-dermal activity. Clements and Turpin (1996) measured 19 participants sweat gland activity while giving an oral presentation in front of an audience. The results indicated heightened levels of anxiety when performing their oral presentations. Furthermore, participants showed heightened levels of sweating before and during their presentation and decreased levels after their speech. Though the findings of studies such as Clements and Turpin (1996) are important to the understanding and are used as dependent measures for research on public speaking anxiety, they do not indicate what the best treatment for such symptoms would include.
Cognitive Treatments for Public Speaking Anxiety

As previously stated, many cognitive treatments for anxiety and related disorders typically target cognitive constructs and attitudes toward the anxiety evoking stimuli. A number of cognitive studies have reported that socially anxious individuals have negative attitudes about their public performances and that they rate their performances on social tasks less favorably than non-anxious individuals (e.g., Beidel, Turner, & Dancu, 1985; Dodge, Heimberg, Nyman, & O'Brien, 1987). Rapee and Lim (1992) investigated the discrepancy of self and observer ratings of performances for social phobic individuals. In cognitive research, it is thought that the possible maintainer of anxiety in social phobia is an unrealistic belief that an individual is unable to obtain a desirable evaluation of their performance. The study included a group of individuals diagnosed with social phobia and a group of individuals who had never been clinically diagnosed with any type of mental disorder. Each participant rated their own speech and rated the speech of others.

The results indicated that all participants rated their own speech performance lower than their observers, however there was a significantly greater difference for the socially anxious individuals. Furthermore, the most interesting finding of this study was that there was a higher discrepancy when individuals rated the overall impression of their performances versus the specific performance behaviors (e.g., eye contact and using a clear voice). Many studies in the cognitive literature, such as the present study, attribute the social anxiousness to self-perception and the processing of performance information.

One of the most common behaviors studied in clinical research on public speaking is the way the participant perceives him or herself. Much of the clinical research explains that one of the primary problems for those who suffer from
speech anxiety have negative attitudes of how they might appear to their audience (e.g., Harvey, Clark, & Rapee, 2000; Parr & Cartwright-Hatton, 2009; Rapee & Hayman, 1996). One technique that has been used in this area is video feedback where an individual has the opportunity to evaluate their own speech performance by viewing a video of their speech. In behavioral research video feedback is based on modeling the desired behavior rather than focusing on perceptions. A study by Quigley and Nyquist (1992) suggested that video feedback could be used as a useful tool for students in performance classes. The benefits they highlighted were 1) “the ability to focus on particular areas of skill or weakness, and 2) the ability to compare numerous performances” (p. 326).

Rapee and Hayman (1996) found that after viewing a video taped performance of their speech participants’ assessments of their performance matched the assessments of their observers. These ratings were shown to be more accurate in terms of observer ratings, than when they rated their performance without viewing video of their speech. Video feedback could be more useful in public speaking research because it may be more comfortable for the anxious individual than other types of feedback (e.g., researcher feedback).

There are some limitations of the past research on public speaking anxiety to guide clinical practice. The focus of many of these treatments is to recognize the anxiety evoking stimuli and learn to change the cognition about them. However, changing a person’s cognition may indirectly change their behavior, and thus may only have a moderate effect on behavioral outcome in the targeted anxious behavior. Furthermore, many clinicians in Cognitive Behavioral Therapy use various assessment tools in order to assess participant’s covert anxiety levels, rather than overt observable behaviors. Behavioral approaches mainly focuses directly on changing overt and measureable behaviors.
Another issue is that participants in much of the CBT literature are not typically exposed to real-life situations where they are speaking in front of large audiences like they may be doing in their personal or professional lives (i.e., Harris, Kemmerling, & North (2002). North, North, and Coble (1998) conducted a study to investigate the effects of virtual reality therapy (VRT) on public speaking anxiety. In their study they used two groups: VRT group and the comparison group which did not receive any treatment. The VRT group ranked five situations in which evoked anxiety to create their hierarchies. These hierarchies were used to create each participants virtual reality situations they were to encounter. The study lasted 5 weeks with participants in the VRT group receiving treatment once per week. Pre-test and post-test measures were taken by administering the Attitudes Towards Public Speaking (ATPS) questionnaire to both groups. No data were collected for their observable behaviors (e.g., sweating) though these behaviors were reported. Results indicated a significant decrease in public speaking anxiety for participants in the VRT group following treatment, and no decreases in anxiety were reported for the participants in the comparison group. Though there was a decrease for those that received the VRT treatment there was no indication of generalization or maintenance in a real life situation.

Behavioral Treatments for Public Speaking Anxiety

Behavioral treatments have also been shown to be effective in the treatment of public speaking anxiety. Fawcett and Miller (1975) investigated the effects of a treatment package including instructions, rehearsal, and feedback on public speaking anxiety to train appropriate public speaking skills. During the experiment, data were taken on eye contact, gestures (i.e., movement of one or
both hands), and speaking behaviors (i.e., position on stage, eye sweep of audience, topic introduction, and loudness). After the initial baseline speech the participant was given a public speaking manual that consisted of specifications of speaking behaviors, examples of speaking situation, and quizzes. The participant was given the written instructional material (i.e., useful presentation guidelines) and short answer quizzes for each of the three sections (eye contact, gestures, and speaking behaviors). He was required to review material until he was able to answer all questions correctly on each quiz.

Following passing the quizzes on the public speaking manual, the individual participated in rehearsal sessions, performing short speeches for the researchers. After each speech the participant received feedback on their behaviors during their presentation. A participant was “considered trained for a particular category when he or she had attained the predetermined training criterion for the particular behavioral category on two consecutive behavior rehearsal sessions” (Fawcett & Miller, 1975). The participant conducted a speech in front of an audience of 5-8 people for one pre-training and one post-training speaking session. Audience members rated the public-speaking performance for the participant using a speaker-rating sheet.

Results showed an increase in all three targets. The participant’s eye contact increased from 12% to 81% after the instructional package was introduced. Furthermore, gestures increased from 4% to 98% and speaking behaviors increased from 13% to 100% after training. The use of behavior specific instructional material and rehearsal were shown to be effective in increasing public speaking skills. Though these results indicate an increase in the variables measured in this study, the behavior change may not generalize to a larger audience, other settings, or over time. On the other hand, 5-8 people in an
audience may be too many people to begin with for some participants suffering from public speaking anxiety, which may lead to more avoidance and would not allow participants to contact success throughout treatment. Thus a more gradual approach may be more appropriate (e.g., systematic desensitization).

As previously mentioned, systematic desensitization has been used in CBT and behavioral interventions as a treatment focused on the elimination or decrease of the physiological symptoms related to anxiety. During treatments utilizing systematic desensitization, differential reinforcement is provided for other, more adaptable behavior, or behavior that is incompatible with anxiety. For example, a decrease in the physiological factors of anxiety, such as heart rate, while going through the hierarchical stages of the graduated exposure to anxiety provoking stimuli.

Lawn, Schwartz, Haulihan, and Cassisi (1994) investigated the effects of graduated exposure and peer feedback on speech anxiety. Participants in the experimental phase were gradually exposed to anxiety evoking public speaking situations and then the participant received feedback from the audience about their presentation. Audience members were instructed to provide positive comments on the participant’s presentations, as well as constructive suggestions for further presentations. Participants in the control group conducted the same type of presentations as the experimental group, but did not receive any form of feedback. In the first few sessions, participants conducted a short 3-5 minute presentation while sitting at a desk in front of the audience. The speaking situations gradually increased to the participant speaking up to 7 minutes while standing in front of the audience. All participants provided information for their levels of anxiety after each presentation using an Emotion Thermometer (ET) and the Degrees of Confidence scale (DCS). Results indicated a greater decrease in self-reported
anxiety as measured by the ET for the group that received graduated exposure and peer feedback. There were also significant reductions in DCS scores for the participants in the experimental group compared to the control group. Though these findings indicated a difference in confidence and emotion following the audience feedback, this could be particularly uncomfortable for some participants who already have a negative perception of how the audience will view their speech. Furthermore, this is also not an objective measure because the participants may just be responding as expected in order to end the sessions. This treatment package also has the possibility of increasing avoidance or escape from the speaking task. Thus a different form of feedback may be less aversive and more appropriate for this population.

Behavioral researchers use of video feedback differs from the way cognitive researchers utilize the treatment. As mentioned above, cognitive researchers focus on the individuals perception of their video taped performance, while behavioral researchers use video feedback as a modeling technique to model the appropriate behaviors. Parr and Cartwright-Hatton (2009) investigated the effects of video feedback in a study with adolescents suffering from social anxiety. Participants in this study were randomly assigned to two groups: video feedback or no video feedback (control). All participants were asked to complete three questionnaires prior to the first phase: the Predicted Performance Questionnaire, the Social Phobia and Anxiety Inventory, and the Nervousness Rating Scale. After completing the questionnaires, the participants were asked to conduct a 3-minute speech in front of a video camera. After their speeches, the participants in the video feedback group were instructed to watch the video of their speech and rate their performance. After rating themselves, participants in the intervention group did another 3-minute speech in front of the video camera to see if their
performance improved. The participants in the control group waited 10 minutes after their first speech and then conducted another 3-minute videotaped speech without video feedback. The results of the study indicated a greater improvement in self-ratings of performance and of public-speaking anxiety for those in the video-feedback group as compared to the control group. These results suggest that when a participant is able to pinpoint the areas he or she is lacking specific speaking skills in he or she is better able to adjust them accordingly or report having done so.

Another technique that has been found to be effective when used in conjunction with feedback is goal setting. A goal is defined as “a specific standard of proficiency on a task, usually within a specified time limit” (Locke, Shaw, Saari, & Latham, 1981). Locke et al., (1981) provided a list of guidelines for the use of goals. The list includes the recommendation that goals should be realistic, specific, and challenging (Locke et al., 1981). These types of goals have been shown to be more effective in changing behavior than no goals, easier goals, or less specific goals encouraging participants to do their best. Furthermore, a meta-analysis conducted by Neubert (1998) of 16 studies comparing the effects of goal setting plus feedback versus goal setting alone indicated that goal setting plus feedback resulted in greater improvement in behavior than goal setting alone, especially for more complex tasks. The addition of goal setting in the treatment of specific phobias may greatly enhance the effectiveness of techniques such as feedback.

**Summary**

The current literature review has discussed the variables involved in the treatment of anxiety disorders, and how behavior-analytic techniques can be used
to effectively treat these symptoms of anxiety. The literature has indicated that anxiety evokes avoidance responding, which becomes a problem when an individual must seek treatment for their anxiety thus creating difficulty in regards to treatment adherence. Though the social nature of this disorder makes it difficult for individuals to seek treatment, one key element is to practice their skills in front of a real live audience (e.g., Fawcett & Miller, 1975). Furthermore, the nature of behavior-analytic treatments is to focus on contacting the aversive stimulus directly, reducing avoidance and increasing the likelihood of generalization and maintenance. Direct contact with the aversive stimulus allows for broader generalization and maintenance of the gains made in treatment to the participant’s real life situations of public speaking.

The purpose of the current study is to extend the literature related to anxiety within behavioral research by investigating the effects of graduated exposure, goal setting, and two types of feedback (self and researcher) on public speaking anxiety. Public speaking anxiety is a socially valid problem that can hinder both students and professionals in their careers; therefore it should be of importance for behavior analytic research and clinicians.

Research Question

The research question is: Will there be a difference in public speaking performance when using observer feedback, goal setting, and graduated exposure when compared with self-observed video feedback, goal setting, and graduated exposure?
CHAPTER 3: METHODS

Participants

This study included three female participants between 22 and 25 years old and all of which are graduate level college students. To qualify for the study, individuals had to score in the moderate to high range (at least 110 out of a total possible score of 170) on the Personal Report of Public Speaking Anxiety (PRPSA). A second type of participant was the audience members who were recruited from a pool of undergraduate psychology students. This was a sample of convenience.

Instruments

Each participant signed a consent form before beginning his or her involvement in the study (see Appendix A and Appendix B). In addition, participants completed a Self-report of Anxiety Rating Scale (see Appendix C), and the Personal Report of Public Speaking Anxiety (see Appendix D), prior to the beginning of the study. The PRPSA is a highly reliable (alpha estimates >.90) measure for public speaking anxiety (McCroskey, 1970). The study also utilized the OB318 fingertip pulse oximeter in order to quantify a participant’s heart rate. A video camera was used to videotape all speeches conducted during this study. When the participants were in the self-feedback phase of the study they reviewed their own speeches and evaluated them using a behavior checklist (Appendix E).

Setting

The study was conducted on campus at California State University, Fresno. The rooms used varied to control for novelty or familiarity of any specific rooms on campus and to accommodate different sized audiences. The settings ranged
from small conference room seating up to 10 audience members, to a standard sized classroom that holds up to 45 students. Each room was equipped with a projector and projector screen on which the participant’s presentation was displayed.

**Independent Variables**

The two main independent variables were self-feedback and researcher feedback. An additional component of the treatment in both conditions was graduated exposure. The graduated exposure included a hierarchy of situations that evoked increasing levels of anxiety to public speaking tasks and the participants went through systematic hierarchical sessions that differ in the level of anxiety provoking the situations (i.e., number of people in the audience). The treatment package also included researcher or self-generated goal setting; with self-generated goal setting obtained by the participant in the self-feedback condition and researcher goals researcher feedback condition

**Dependent Variables**

The dependent variables, consistent across all participants, were the number of speeches or sessions successfully completed, and their heart rate. Participants wore a wireless pulse oximeter was worn by the participant to track their heart rate throughout all sessions. Following baseline measures, the researcher selected variables that were observed during the participant’s initial session to be targeted during treatment sessions. The variables included were eye contact and unnecessary repetitive or stereotypical behaviors (e.g., fidgeting or stuttering, long pauses, rapid speech rate, etc.). Eye contact was defined as the participant being oriented and looking in the general direction of audience members. This was defined before each session, depending on the size of the room and span of the
audience. During the presentations an observer used a 5-second partial interval recording to collect data on the occurrence or nonoccurrence of eye contact. Data were calculated as the percentage of intervals where the participant made general eye contact with the audience during their speech. Other dependent variables were calculated as the average and range of heartbeats per minute, the average words spoken per minute and the rate of repetitive stereotyped behaviors per session (i.e., “umms”). After each stage of the hierarchy was completed, each participant was either informed of their scores for their specific variables and given goals for their next session, or they viewed their own video taped speech and collected data themselves on all relevant dependent variables and set their own goals for their next session.

Design

An alternating treatments design was used for this study. Baseline measures were taken of the participants’ heart rate, words spoken per minute, unnecessary repetitive behaviors (“umms”), and eye contact, during a speech in front of an audience size of 25 people. Following baseline, each participant was randomly assigned to the order of independent variables they would be exposed to during the upcoming conditions (e.g., A-B-C-B-C or A-C-B-C-B). The length of each treatment phase was one session. Furthermore, a different room and data collector was used in each condition throughout the study.

Procedures

Prior to beginning the study, participants were asked to explain how their public speaking anxiety affects some aspect of their life (i.e., work, school, personal, etc.), and provide some information about what aspects of public speaking causes their anxiety (see Appendix F). In addition, each participant was
given the Personal Report of Public Speaking Anxiety (McCrosky, 1970) and those who were determined to have public speaking anxiety according to this measure (i.e., scoring 110 out of 170) were selected to participate in this study. After participants were selected, each was randomly assigned to the order of treatment.

**Baseline Procedures**

During the baseline session, each participant conducted a PowerPoint presentation on the topic of applying to graduate school in front of a classroom containing an audience of 25 undergraduate psychology students. Each participant was given a PowerPoint presentation prepared by the researcher 3 days prior to his or her baseline sessions and was instructed to edit it if they wished to do so. Prior to presenting, each participant was instructed to present the PowerPoint to the best of their abilities. During the participant’s first presentation, data were taken on the participant’s heart rate, percentage of eye contact, rate of repetitive speech, and average words spoken per minute. After this, a fear hierarchy of anxiety-evoking situations was created with each participant individually. The specific stages in the hierarchy depended on what each participant stated to be their biggest fear during presenting. For all 3 participants, audience size was the main determinant of their level of fear and anxiety (i.e., range from publicly speaking in front of one individual to conducting a speech in front of a room of 30 individuals). The experimenter reviewed data collected during the baseline session to determine the individualized dependent variables that were targeted for each participant throughout the remainder of the study.
Intervention

During intervention phases, each participant performed a presentation in each of their hierarchy stages, working progressively through more anxiety provoking situations each time. Three days prior to a session each participant was given information about the size of audience to which they will be presenting. All participants were also given a PowerPoint presentation prepared by the researcher on a topic relating to their college experience (e.g., What they will do with their degree, advice for Psychology 10 students, etc.). The participant’s were given the choice to edit the PowerPoints if they wished to do so.

Participants were asked to give a self-report of how much anxiety they were experiencing before and after each presentation on a 7-point Likert-type scale, from “Completely Calm” to “Strongly Anxious” (see Appendix D). All sessions were video taped. During the researcher feedback phase, the researcher or research assistants viewed the videotape, collected data, and provided verbal feedback to each participant on their data for that session. Following feedback the researcher or research assistant provided goals on their specific behavior for the participants to target for their next session. During the self-feedback phase, participants obtained feedback by reviewing their own video taped session and collecting data. They were instructed to watch the video and take data on the same variables as the research assistant did using the behavior checklist as a guide (see Appendix C). Following their collection of data, participants were asked to set their own specific goals on their target behaviors for their next session. When setting goals, the participants were instructed to make their goals realistic and specific. Participants alternated between each treatment phase after each session. Two weeks after each participant’s last treatment session a maintenance check and
probe for generalization was conducted. The setting in this session was similar to those in the baseline phase.

**Data Collection and Interobserver Agreement**

Researcher assistants were trained to collect data prior to the study by watching videos of public speeches and recording dependent variables on the checklist provided by the researcher. Observers were trained to a 90-100% agreement level. The observers collected data during each speech with a datasheet and pencil. Furthermore, all sessions were video recorded in order to measure interobserver agreement and treatment integrity. Two research assistants coded 33% of the sessions to obtain interobserver agreement (IOA), and these were distributed across participants and phases. IOA was calculated for a given dependent variable by dividing the number of agreements, by the number of agreements plus disagreements, and multiplying the total by 100.

**Treatment Integrity**

To ensure that the researcher maintained the integrity of the administration of the independent variables, a checklist of tasks were completed by each researcher or research assistant. Of these checklists, 33% were randomly chosen for treatment integrity (TI) assessment. Independent variables were operationally defined, and the research assistant served as the TI assessor. TI was calculated for 33% of each participant’s treatment sessions by dividing the number of correctly completed tasks, by the total number of tasks, and multiplying the total by 100.

**Social Validity**

Following data collection, a social validity questionnaire was given to each participant to evaluate her opinion of the importance of treating public speaking
anxiety and on the experimental procedures, and the effects of the treatment (Appendix G).
CHAPTER 4: RESULTS

Data Analysis

PRPSA Scores

All 3 participants showed reductions in their personal report of public speaking anxiety scores from their initial interview to the final interview. Participant 1 scored 120 out of 170 on the pre-PRPSA questionnaire, and scored 98 on the post-PRPSA questionnaire. Participant 2 scored 137 out of 170 on the pre-PRPSA questionnaire, and scored 105 on the post-PRPSA questionnaire. Participant 3 scored 116 out of 170 on the pre-PRPSA questionnaire and scored 103 on the post-PRPSA questionnaire (see Table 1).

Table 1

<table>
<thead>
<tr>
<th>Initial and Final Dependent Variable Scores for All Participants</th>
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<tr>
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<td>P(#)</td>
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<td>P1</td>
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<td>P2</td>
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<td>P3</td>
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</tbody>
</table>

Note. P(#) = Participant; PRPSA = Personal Report of Public Speaking Anxiety scale; HR = heart rate; WPM = words per minute.

Heart Rate

Overall, all 3 participant’s heart rates decreased below baseline levels (see Table 1). Participant 1 reduced their heart rate by an average of 8 beats per minute. During their initial speech, average heart rate for participant 1 was 127 beats per minute. Across sessions, average heart rates for participant 1 (see Figure 1), in the
graduated exposure plus researcher feedback and goal setting, were 125, 122, 121, and 120; and in the graduated exposure plus self feedback and goal setting, were 126, 119, 121, and 119 respectively.

![Figure 1](image)

**Figure 1.** Average heart rate scores for participant 1

Participant 2 reduced their heart rate by an average of 2 beats per minute. During their initial speech, the average heart rate for participant 2 was 104 beats per minute. Across sessions, average heart rates for participant 2 (see Figure 2), in the graduated exposure plus researcher feedback and goal setting, were 105, 106, and 102 respectively; and in the graduated exposure plus self feedback and goal setting, were 102, 103, 105, and 102

Participant 3 reduced their heart rate by an average of 5 beats per minute. During their initial speech, the average heart rate for participant 3 was 121 beats per minute. Across sessions, average heart rates for participant 3 (see Figure 3), in the graduated exposure plus researcher feedback and goal setting, were 121 and 119; and in the graduated exposure plus self feedback and goal setting, were 115 and 116 respectively.
Figure 2. Average heart rate scores for participant 2

Figure 3. Average heart rate scores for participant 3
Individualized Target Behaviors

All 3 participants decreased their targeted excesses and increased their target deficits from their baseline levels (see Table 1). The target behaviors for participant 1 were decreasing the average words spoken per minute and decreasing the frequency of saying “umm” or “ugh” during a presentation. Participant 1 spoke an average of 165 words per minute (see Figure 4) during their baseline speech. During the researcher feedback treatment phase, participant 1 spoke an average of 138, 145, 136, and 135 words per minute respectively and did not meet any of the goals set for them in these sessions. During the self-feedback and goal setting treatment phase, participant 1 spoke an average of 150, 129, 127, and 130 words per minute respectively and met their goals 75% of those sessions.

![Figure 4. Average words spoken per minute for participant 1](image)

Participant 1 had a rate of 3.67 of repetitive speech (i.e., umm) during their baseline speech (see Figure 5). During the researcher feedback and goal setting treatment phases, participant 1 had repetitive speech rates of 1.50, 3.75, 1.93, and
0.57 respectively and met the goals set for them 25% of these sessions. During the self-feedback and goal setting treatment phases, participant 1 had repetitive speech rates of 2.58, 0.67, 0.66, and 0.53 respectively and met their goals 75% of these sessions.

The target behaviors for participant 2 were increasing their percentage of eye contact and decreasing their repetitive speech (i.e., saying, “Umm”) during presentations. Participant 2 had 27% eye contact (see Figure 6) during their baseline speech. During the researcher feedback and goal setting phases, participant 2 had 88%, 94%, and 95% eye contact respectively and met 100% of the goals set for them. During the self-feedback and goal setting phases, participant 2 had 43%, 94%, 96%, and 94% eye contact respectively and met 100% of the goals they set for themselves.

Figure 5. Repetitive speech rate for participant 1.
Participant 2 had a rate of 1.15 of repetitive speech (i.e., umm) during their baseline speech (see Figure 7). During the researcher feedback and goal setting phases, participant 2 had rates of 1.88, 0.37, and 0.19 of repetitive speech but did not reach any of their goals set for them by the researcher for this target behavior. During the self-feedback and goal setting phases, participant 2 had a rate of 1.42, 1.23, 0.33, and 0.24 of repetitive speech, and met 50% of the goals they set for themselves.

The target behavior participant 3 was to decrease their rate of repetitive speech (i.e., umm). During baseline participant 3 had a repetitive speech rate of 5.33 (see Figure 8). During the researcher feedback phases, participant 2 had rates of 3.57 and 0.65 of repetitive speech and met 100% of the goals set for them by the researcher. During the self-feedback and goal setting phases, participant 2 had rates of 1.86 and 0.53 of repetitive speech and met 100% of the goals they set for themselves.

Figure 6. Average percentage of eye contact for participant 2
Goal Setting

Participants 1 and 2 achieved a higher percentage of self-goals when compared to researcher set goals, while participant 3 achieved 100% of all goals she set for herself and those set by the researcher. Participant 1 achieved their overall self-goals of decreasing their speaking rate to an average of 140 words per
minute and decreasing their repetitive speech rate to .30 (i.e., speaking 3 “umms” in a 10-minute presentation). With both variables the self-feedback and goal setting phases appeared to have more effects on the participant’s behaviors.

Participant 2 achieved their overall self-goals of decreasing their repetitive speech rate to .20 (i.e., speaking 2 “umms” in a 10-minute presentation) and increasing their eye contact to 90%. Furthermore, similar to the results for participant 1, the self-feedback and goal setting treatment seemed slightly more effective than the researcher-feedback and goal setting treatment.

Participant 3 reached their overall self-goal of decreasing their repetitive speech rate to .50 (i.e., speaking 5 “umms” in a 10-minute presentation). The repetitive speech behavior for participant 3 was already showing a decrease from baseline levels when the self-feedback and goal setting treatment was implemented, so it is unclear which treatment was more effective.

**Self-Report of Anxiety Rating Scale**

All participants also rated their anxiety level before and after each speech using the SRARS. Though the overall public speaking anxiety as measured by the PRPSA decreased to the mild anxiety range for all 3 participants, there was no substantial difference between their baseline and final ratings on the SPARS.

During their initial speech participant 1 rated their anxiety level as a 6 out of 7 on the pre-SRARS and a 6 out of 7 on the post-SRARS (see Figure 9). In the graduated exposure plus researcher feedback and goal setting phases, participant 1 rated their anxiety level on the pre-SRARS 5, 5, 6, and 5 respectively and 5, 3, 5, and 5 respectively on the post-SRARS; In the graduated exposure plus self feedback and goal setting phases, participant 1 rated their level on the pre-SRARS 6, 5, 6, and 6 respectively and 5, 5, 3, and 5 respectively on the post-SRARS.
During their initial speech participant 2 rated their anxiety level as a 7 out of 7 on both the pre SRARS and the post-SRARS (see Figure 10). In the graduated exposure plus researcher feedback and goal setting phases, participant 2 rated their anxiety level as a 7 out of 7 on all pre-SRARS and 5, 5, and 6 respectively on the post-SRARS; In the graduated exposure plus self feedback and goal setting phases, participant 2 rated their level on the pre-SRARS 6, 6, 7, and 7 respectively and 5, 5, 6, and 5 respectively on the post-SRARS.

During their initial speech participant 3 rated their anxiety level as a 5 out of 7 on the pre Self-Report of Anxiety Rating Scale (SRARS) and a 3 out of 7 on the post-SRARS (see Figure 11). In the graduated exposure plus researcher feedback and goal setting phases, participant 3 rated their anxiety level on the pre-SRARS 5 and 3 respectively and 3 and 2 respectively on the post-SRARS; In the graduated exposure plus self feedback and goal setting phases, participant 3 rated their level on both pre-SRARS 3 our of 7 and 2 and 3 respectively on the post-SRARS.
Figure 10. Pre- and post- self-ratings of level of anxiety for participant 2

Figure 11. Pre- and post- self-ratings of level of anxiety for participant 3
IOA and TI

Interobserver Agreement (IOA) and treatment integrity (TI) checks of the administration of the independent variables were conducted for 33% of experimental sessions for each participant (see Table 2). For participant 1, TI ranged from 97% to 100%. For participant 2, TI ranged from 99% to 100%. For participant 3, TI ranged from 99% to 100%.

Table 2

Interobserver Agreement (IOA) Measures for All Participants

<table>
<thead>
<tr>
<th>P(#)</th>
<th>HR IOA</th>
<th>Repetitive Speech IOA</th>
<th>WPM IOA</th>
<th>Eye Contact IOA</th>
<th>Overall IOA</th>
</tr>
</thead>
<tbody>
<tr>
<td>P1</td>
<td>100%</td>
<td>96%</td>
<td>95%</td>
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</tr>
<tr>
<td>P2</td>
<td>100%</td>
<td>97%</td>
<td>_</td>
<td>100%</td>
<td>99%</td>
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<tr>
<td>P3</td>
<td>100%</td>
<td>98%</td>
<td>_</td>
<td>_</td>
<td>99%</td>
</tr>
</tbody>
</table>

Note. P(#) = Participant; HR = heart rate; WPM = words per minute; IOA = interobserver agreement.

Social Validity

A social validity questionnaire (see Appendix F) was given to each participant following completion of data collection. This questionnaire measured the participants’ opinions of the validity of the experimental procedures used for treating public speaking anxiety. The total possible score was 25, indicating high validity. Participant 1’s score was 23, participant 2’s score was 24, and participant 3’s score was 21, meaning that they all rated the procedures highly valid.
CHAPTER 5: DISCUSSION

All 3 participants reported a reduction in their level of anxiety of public speaking, from the beginning to the end of the study, as measured by the pre- and post-PRPSA questionnaires. Furthermore, all participants’ heart rates decreased below their baseline levels. These results suggest that the graduated exposure plus feedback and goal setting are effective techniques for reducing anxiety for people with public speaking anxiety. However, although all 3 participants reached their overall goals of improving their speaking skills, there was no clear difference between the researcher-feedback and the self-feedback for these participants. This is consistent with other studies evaluating self versus other feedback (e.g., Williams & Gallinat, 2011). In addition, it should be noted that the role or necessity of the goal-setting component is unclear.

The behaviors in the self-feedback and goal setting phases for all 3 participants were slightly lower than those in the researcher-feedback and goal setting treatment phases; however, it is unclear whether the behavior change was due to one component of the intervention or a combination of graduated exposure, feedback and goal setting. It is also worth noting that all 3 participants demonstrated improvement in physiological measures, their excess and deficit behaviors, and their self-reports of public speaking anxiety as measured by the pre- and post-PRPSA. Additionally, these improvements were achieved in a short number of sessions and it is likely, given the relatively equal effectiveness of self and other’s feedback that individuals may benefit from group therapy sessions where they could get feedback and give feedback to other group members. Small group therapy sessions have been shown to be more cost-effective than individual treatments (McCrone et al., 2005).
Interpretation and Implications of Findings

The current results are in agreement with the existing literature suggesting that feedback is an effective component in treatment for public speaking anxiety and correcting specific speaking behaviors (Lawn et al., 1994; Parr & Cartwright-Hatton, 2009). Based on the current results, however, it seems that either self-monitoring or feedback from another person may be equally effective in improving speaking behaviors in individuals who suffer from public speaking anxiety. Furthermore, self-feedback, in the form of watching their own video taped speech may be more feasible for individuals who find it aversive to have someone else collect data on their behaviors. Additionally, self-feedback may be a better option for those who are considered clinically socially phobic, and who have anxiety that stems from the belief that they will not obtain a desirable evaluation of their performance (Rapee & Lim, 1992). Given the present results, which suggest that neither researcher- nor self-feedback is more effective, the treatment preference could be left to the individual in treatment.

Neubert (1998) indicated that goal setting plus feedback resulted in greater improvement in behaviors than goal setting alone. In the present study 2 of the 3 participants met a significantly greater percentage of the goals they set for themselves in the self-feedback and goal setting phases as compared to those set by the researcher. The third participant met all goals regardless if they were set by themselves or by the researcher. This supports finding by Neubert suggesting that goal setting may be more effective when the individual participant is involved in their own goal setting process. We can only speculate on the role of graduated exposure but it should be noted that social validity scores were consistently high and all participants were advanced college students and, as such, had previously had some degree of exposure to public speaking. As this had not been effective in
significantly reducing their public speaking anxiety, it is likely that either the graduated nature of the exposures was critical, or that the graduated exposure was not a necessary part of the intervention. It should be noted that generalization probes were not conducted as the experimental environment is very close to a natural environment for the participants. The graduate exposure component may be critical to generalization of the behavior change.

Overall, it seems that both conditions were effective packages in reducing public speaking anxiety, although not differentially so. The role of each component of the intervention is unclear and would require a component analysis for further information.

Limitations and Future Research

As previously mentioned, there was no clear differentiation between the treatments components used in this study. Therefore, a further investigation in the effectiveness of the individual components would be useful. In addition, carryover effects or multiple-treatment interference may have obscured any differences between the effectiveness of each condition. In addition, some of the behavior change may involve learning that was irreversible and generalized across procedures. The effectiveness of one treatment over consecutive sessions is unknown, although it is likely that it will be effective, but unclear if one would be more effective than the other. Future research may look at implementing one condition for an extended period of time.

Another limitation concerns the graduated exposure aspect of the study. The audiences for the participants’ presentations were recruited from the Psychology 10 student pool. Although a set number of students signed up for each experimental session, some did not show up. This was problematic as it created
some variation from the planned steps of the hierarchy for graduated exposure. Thus, controlling for this with a set amount of audience members may provide a more consistent gradual exposure, and perhaps more information on the importance of this aspect of the procedures.

Finally, in the present study we did not formally assess the generalization of participants’ skills to different settings, audiences, topics of presentation, or type of public speaking (other than presentation). However, all participants anecdotally reported that generalization to presentations in their classes and other academic work may have occurred.

Future research should investigate these issues with participants who are considered clinically socially phobic and compare the use of researcher versus self-feedback in order to clarify if self-feedback is potentially less aversive for socially phobic individuals. They may even assess the effectiveness of a self-management package using the procedures of the self-feedback condition. This would not only address the feasibility of such an approach but also indicate something about the role of exposure in these interventions. This may also require specific programming for generalization.

As seen in this literature review there is presently a lack of research of the topic of reducing public speaking anxiety or treatments for improving speaking behaviors within the field of ABA. Behavior analytic treatments for public speaking may be effective based on the present results. Furthermore, these reductions were achieved without the use of specifically programmed reinforcers and, as a result, may be more sustainable, both financially and practically, and may be more socially acceptable to the general population. As suggested by Friman et al. (1998) there is a clear hesitation to study anxiety due to a lack of understanding of the topic and a difficulty conceptualizing it within our field’s
assumptions. In general, increased attention to mainstream issues such as these from the field of behavior analysis may improve the analysis of these problems from this perspective and increase development of socially acceptable and effective interventions.
REFERENCES
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APPENDIX A: INFORMED CONSENT
Informed Consent Form

Purpose

You are invited to participate in a study conducted by Jordan Forsythe, a graduate student at California State University, Fresno, under the supervision of Dr. Marianne Jackson. The purpose of the study is to examine the effects of graduate exposure paired with feedback and goal setting on public speaking anxiety. It is hoped that this examination will contribute to the further understanding of the treatment speech anxiety.

Procedures

If you decide to participate, you will be asked to take the Personal Report of Public Speaking Anxiety (PRPSA). You will then be exposed to graduated stages of anxiety provoking situations involving public speaking. You will then have the opportunity to either receive feedback given by a researcher assistant that will be present during your presentation or from viewing a videotape of your speech session. Furthermore, you will either receive goals from the research assistant that is present during your presentation of create your own goals for target behaviors in your next session. You may terminate a speech session at any given time. The estimated length of this study is 30 days. You may remove your consent and end your participation without consequences at any point in the study.

Benefits and Risks

The benefit of participating in this study is contributing to the extended research on public speaking anxiety. Additional potential benefits of participation may include, a decrease of distress and anxiety during public speaking activities. Potential risks, discomforts, inconveniences, or adverse effects may include increased distress and
anxiety. Your decision to participate in this study will have no effect on your future relations with California State University, Fresno.

Confidentiality

All information that is obtained and collected in this study and can be identified with you will be confidential. If you sign this document, only those involved in the study will have access to relevant information. Information will be placed in a locked cabinet in the office of Dr. Marianne Jackson, the committee chair of this thesis in order to prevent violation of confidentiality.

Question and Contact:

If you have any additional questions or concerns regarding this study, please contact either Dr. Marianne Jackson by phone (559) 278-2757; or email: majackson@csufresno.edu; or Jordan Forsythe by phone: (559) 448-6510; or email: jordanforsythe777@hotmail.com.

Statement of Consent

Your signature indicates that you have read the information provided above, and have agreed to participate.

Name of Participant: __________________________

Signature of Participant: __________________________ Date: ___________

Signature of Researcher: __________________________ Date: ___________
APPENDIX B: AUDIENCE MEMBER INFORMED CONSENT
Audience Member Informed Consent Form

Purpose

You are invited to participate in a study conducted by Jordan Forsythe, a graduate student at California State University, Fresno, under the supervision of Dr. Marianne Jackson. The purpose of the study is to examine the public speaking behaviors.

Procedures

If you decide to participate, you will be asked to be an audience member for a possible total of three brief speeches. Following each presentation you will be asked to rate the speaker on a rating scale provided for you. You may leave the presentations at any given time. The estimated length of the total session is 30 minutes. You may remove your consent and end your participation without consequences at any point in the study.

Benefits and Risks

The benefit of participating in this study is contributing to the extended research on public speaking behaviors. Your decision to participate in this study will have no effect on your future relations with California State University, Fresno.

Confidentiality

All information that is obtained and collected in this study and can be identified with you will be confidential. If you sign this document, only those involved in the study will have access to relevant information. Information will be placed in a locked cabinet in the office of Dr. Marianne Jackson, the committee chair of this thesis in order to prevent violation of confidentiality.

Question and Contact:
If you have any additional questions or concerns regarding this study, please contact either Dr. Marianne Jackson by phone (559) 278-2757; or email: majackson@csufresno.edu; or Jordan Forsythe by phone: (559) 448-6510; or email: jordanforsythe777@hotmail.com; or Dr. Constance Jones, Chair of the Committee of Protection of Human Subjects by phone: (559) 278-4468.

Statement of Consent

Your signature indicates that you have read the information provided above, and have agreed to participate.

Name of Participant: __________________________

Signature of Participant: __________________________ Date: ____________

Signature of Researcher: __________________________
APPENDIX C: SELF REPORT OF ANXIETY RATING SCALE
Directions: Circle the number next to the statement that best describes your current level of anxiety.

1. Feeling completely relaxed.
2. Feeling very calm and relaxed.
3. Feeling somewhat calm and relaxed.
5. Feeling somewhat anxious.
6. Feeling very anxious.
7. Feeling strongly anxious
APPENDIX D: PERSONAL REPORT OF PUBLIC SPEAKING ANXIETY (MCCROSKEY, 1970)
Directions: Below are 34 statements that people sometimes make about themselves. Please indicate whether or not you believe each statement applies to you by marking whether you:

**Strongly Disagree = 1; Disagree = 2; Neutral = 3; Agree = 4; Strongly Agree = 5.**

1. While preparing for giving a speech, I feel tense and nervous.
2. I feel tense when I see the words “speech” and “public speech” on a course outline when studying.
3. My thoughts become confused and jumbled when I am giving a speech.
4. Right after giving a speech I feel that I have had a pleasant experience.
5. I get anxious when I think about a speech coming up.
6. I have no fear of giving a speech.
7. Although I am nervous just before starting a speech, I soon settle down after starting and feel calm and comfortable.
8. I look forward to giving a speech.
9. When the instructor announces a speaking assignment in class, I can feel myself getting tense.
10. My hands tremble when I am giving a speech.
11. I feel relaxed while giving a speech.
12. I enjoy preparing for a speech.
13. I am in constant fear of forgetting what I prepared to say.
14. I get anxious if someone asks me something about my topic that I don’t know.
15. I face the prospect of giving a speech with confidence.
16. I feel that I am in complete possession of myself while giving a speech.
17. My mind is clear when giving a speech.
18. I do not dread giving a speech.
19. I perspire just before starting a speech.
20. My heart beats very fast just as I start a speech.
21. I experience considerable anxiety while sitting in the room just before my speech starts.
22. Certain parts of my body feel very tense and rigid while giving a speech.
23. Realizing that only a little time remains in a speech makes me very tense and anxious.
24. While giving a speech, I know I can control my feelings of tension and stress.
25. I breathe faster just before starting a speech.
26. I feel comfortable and relaxed in the hour or so just before giving a speech.
27. I do poorer on speeches because I am anxious.
28. I feel anxious when the teacher announces the date of a speaking assignment.
29. When I make a mistake while giving a speech, I find it hard to concentrate on the parts that follow.
30. During an important speech I experience a feeling of helplessness building up inside me.
31. I have trouble falling asleep the night before a speech.
32. My heart beats very fast while I present a speech.
33. I feel anxious while waiting to give my speech.
34. While giving a speech, I get so nervous I forget facts I really know.
**Scoring:** To determine your score on the PRPSA, complete the following steps:

**Step 1.** Add scores for items 1, 2, 3, 5, 9, 10, 13, 14, 19, 20, 21, 22, 23, 25, 27, 28, 29, 30, 31, 32, 33, and 34.

**Step 2.** Add the scores for items 4, 6, 7, 8, 11, 12, 15, 16, 17, 18, 24, and 26.

**Step 3.** Complete the following formula:

\[ \text{PRPSA} = 72 - \text{Total from Step 2} + \text{Total from Step 1} \]

Your score should be between 34 and 170. If your score is below 34 or above 170, you have made a mistake in computing the score.

High = > 131
Low = < 98
Moderate = 98-131
Mean = 114.6; SD = 17.2

APPENDIX E: BEHAVIOR CHECKLIST
Date: ____________
Participants: ____________

Behavior Checklist

Eye Contact: 10-Second partial time sampling:

Fidgeting: (Frequency) _______________________________________

Stuttering: (Frequency) _______________________________________

Other Behaviors:

_____________________ : (Frequency) _____________________________

_____________________ : (Frequency) _____________________________

_____________________ : (Frequency) _____________________________

_____________________ : (Frequency) _____________________________
APPENDIX F: INITIAL INTERVIEW
Please answer the following questions with as much detail as you feel needed

1. Describe what aspects of public speaking causes your anxiety (i.e., size of audience, length of speech, etc.).

2. What part(s) of your life does this anxiety impact (i.e., social, professional, etc).

3. What do you hope to get out of this study?
APPENDIX G: SOCIAL VALIDITY QUESTIONNAIRE
Directions: Rate how strongly you agree with the statement from weakest (1) to strongest (5).

I agree that the training phase of the procedures was important/effective.

1 2 3 4 5

I agree that the graduated exposure hierarchy exercise was important/effective.

1 2 3 4 5

I agree that the use of feedback and goal setting was important/effective.

1 2 3 4 5

I agree that the outcome of my involvement in this study was successful for me.

1 2 3 4 5

I agree that the outcome of this study will probably be successful with other individuals.

1 2 3 4 5

I agree it is important for participants to answer questionnaires that address social validity.

1 2 3 4 5

Additional comments: ________________________________

_________________________________________________________________

_________________________________________________________________

_________________________________________________________________
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**Victoria Jordan Forsythe**

Type full name as it appears on submission

- [ ] March 23, 2013

**Date**