COMPARATIVE EFFECTIVENESS OF RELAXATION AND SYSTEMATIC DESENSITIZATION IN THE MANAGEMENT OF SPEECH ANXIETY

by

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DEDICATION

This work is dedicated to my father - Late Pa Samuel Olotu Adeola - whose life-time was so full of examples I am striving to emulate. May his soul rest in perfect peace.

ABSTRACT

An experiment was designed to find out which of relaxation and systematic desensitization was more effective in the management of speech anxiety in student teachers. A third measure of remediation - cognitive restructuring - was introduced as a control in this study to monitor the effect of cognition on speech anxiety. Its effectiveness was also compared with the other two management measures.

A 4 x 2 factorial design was used in this study. The samples were taken from a group of 100 students in the post-school certificate class of a teachers' college. Results indicated that the systematic desensitization and cognitive restructuring procedures proved very effective in significantly reducing speech anxiety in most of the variables used in this study. The variables are the stimulus response (SRI) inventory ($F = 6.10$, $df = {}^{3}/_{40}$, $P < .01$), check-list questionnaire ($= 8.08$, $df = {}^{3}/_{40}$, $P < .01$), the pulse rate differential ($F = 8.11$, $df = {}^{3}/_{40}$, $P < .01$ and speech rating ($F = 2.48$, $df = {}^{3}/_{40}$). The systematic desensitization procedure was however more effective than the cognitive restructuring procedure. T - Values recorded on two of the variables used in the study are 6.41 (SRI) at $df = 10$ and $P < .01$, and 2.75 (CLQ) at $df = 10$ and $P < .05$.

The relaxation measure was not as effective in managing speech anxiety as the earlier two measures. Though it reduced the anxiety level of the subjects, the relaxation measure was not significant even at the .05 probability level.

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CERTIFICATION

I certify that this work was carried out by Mr. Adetokunbo Oladoyin Adeola at the Department of Guidance and Counselling, Faculty of Education, University of Ibadan, Ibadan, Nigeria.

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CHAPTER ONE

THE BACKGROUND

INTRODUCTION TO THE PROBLEM

Anxiety is defined by Wallerstein, (1964) as a chronic and complex emotional state with apprehension or dread as its most prominent component. While the source of fear may be known, there is no direct threat involved in the case of the anxious patient. He is unnecessarily apprehensive and worried. This occurs in a speech-making situation for those who are speech anxious.

Several writers including McMahon (1976) Adeola (1979) and Sarason (1961) have noted that a mild anxiety can have a motivating effect. When it is excessive it is usually disorganizing.

Speech anxiety has been a subject for research for many years. Most speech anxious persons experience intense anxiety and worry when attending speech making sessions, watching others give speeches or when speaking before others. According to Paul and Shannon (1966), their anxiety makes them perform poorly in such situations.

In Africa, it is likely that the intensity of speech anxiety is very high. The African youth seems culturally

repressed in terms of boldness to speak before elders. Consequently, he needs to develop subtle ways of addressing himself to elders even when he wants to communicate important points. For example in the Yoruba culture, the plural 'we' is used for a singular elder. These repressions in speech during the youthful years is likely to have created a fear that a speech that is unacceptable to the elders in punishable. It is possible that many youths have seen their colleagues suffer as a result of such boldness. Such youths are therefore vicariously reinforced to fear speech making. These fears are strengthened cognitively thereby creating speech anxiety in later years. The idea that a speech has to be given may make one fear that the speech could be bad, unrewarding and therefore punishable. Many human behaviours seem to be manifested in ways that can avoid pain. Speech anxiety response may be any situation that would make it impossible for the speech to be given - dumbness, excessive perspiration, illness, shaky legs and hands, dry mouth etc. These are anxiety symptoms which are extremely disorganizing and therefore capable of affecting ones everyday living.

There is no doubt therefore that the ability to speak well and stay anxiety-free in class is very rewarding to trainees of the Teacher Training Colleges. It is possible that many of these students have failed teaching practices because of their anxiety in speech during such occasions. Of a total of 158 students of two teachers colleges in Ibadan who responded to questionnaire on speech anxiety (Adeola, 1984) 72 (46 percent) reported anxiety at speech making situations using the stimulus-response inventory. Also between 46 - 65 percent agreed on the check-list questionnaires that they get anxious if they have to talk to a large audience about their special project, on social matters or anytime they are called upon to handle impromptu speeches. The students reported that their hearts beat much faster at such occasions. There is, therefore, a clear indication that the target population in this study - trainees of the teachers training colleges - have problems of speech anxiety which need some management.

Anxiety reducing procedures are therefore very necessary in the management of speech anxiety. In most parts of the world, high values are placed on beautiful oratory as an asset in political and academic endeavours. Ability to be fluent at interviews is likely to enhance ones chances of finding a job.

It is, therefore, possible that anxiety prone individuals are less likely to do well in interviews, seminars, teaching, symposia and political endeavours compared with their colleagues who are less anxious.

Several methods are used in the remediation of speech anxiety. Paul and Shannon (1966) and Paul (1969) used desensitization in treating speech anxiety while Meichenbaum, et al (1971) used self instructional insight groups. Other methods include rational emotive therapy and muscle relaxation procedures. While some authors like Jacobson (1938) and Paul (1969) belief that relaxation alone treats anxiety effectively, others including Goldfried and Trier (1974); Cook, (1968) Davison (1968); Lang et al (1965) Lazarus (1971) and Rachman (1965 , 1968) have indicated that relaxation training is not very effective in reducing anxiety when used as a therapeutic procedure. There is, therefore, disagreement among researchers about the effectiveness of relaxation alone in the treatment of anxiety generally. Though some authors have used relaxation alone, most treatment measures use it as part of their overall procedure.

While there is agreement on the disorganising effect of excessive anxiety there is no agreement on the most effective and appropriate methods to manage it. There is also a clear

indication that anxiety management strategies are immediately necessary in teachers training colleges.

This research was therefore designed to find out which of three clinical measures - Relaxation skills (R), systematic desensitization (S) and cognitive restructuring (C) - is most effective in the remediation of speech anxiety in the post school certificate class of a teacher training college. The experiment is also aimed at finding out if R in itself can significantly reduce speech anxiety.

Preliminary survey by Adeola (1984) has shown that students of the teacher training college are prone to speech anxiety. According to Cohen and Garner (1971) students school practice is the most vital part of his professional training. If this part of the training is adversely affected, the product may be a substandard teacher. Such a teacher is not adequate for the school system. In view of the symptoms of speech anxiety, it is possible for the practice process of the teacher trainee to be ruined by such disorganizing anxiety. Management of speech anxiety is therefore very necessary for students of such colleges before they graduate as teachers. This will ensure that the intervening variable of speech anxiety is to some extent eliminated before the supervisor can decide on how well the student has performed in his or her

teaching practice.

The results of this experiment will establish the fact that some of the therapeutic programmes are effective in managing speech anxiety in the Nigerian situation. It will also point out which of them can be most effectively used with maximum results.

It is hoped that the results of this study will aid practising therapists in the detection and reduction of speech anxiety in clients who may come to them for support.

Theoretical Background

Issues in this study are examined from the behavioural view point. It assumes that maladaptive response patterns that produce discomfort to clients are learnt just like other behaviour, whether maladaptive or adaptive are also learnt.

Craighead et al (1976) provides a simplified example of the learning theory approach to anxiety development. Suppose one were holding a 4-year-old child on ones lap while two other 4-year-olds played on separate areas of the living room floor. Child one gently pets the dog while child two inserts a butter knife into an electric outlet. All present will learn from the experience of the children. Because it was directly associated with severe, unexpected pain and accompanying autonomic arousal, child two would learn to avoid using wall

sockets as knife holders and possibly, to stay away from electrical outlets altogether. Child one might learn, or at least begin to learn, to avoid the dog it was playing with or dogs in general. When child two suddenly screamed and cried, it startled child one, and since the occurence of any strong, sudden, unexpected, and novel stimulus produces autonomic arousal, the harmless dog was associated with a strong, unconditioned response to a stressful stimulus. Depending upon the focus of his or her attention at the time, the child on ones lap might later display avoidance of wall sockets (if he/she was watching child two), of dogs (if he or she was watching child one) or of the one lapping him.

This example illustrates four basic points:

1. Strong arousal in relation to specific stimuli or classes of stimuli are learnt.
2. Such learnt arousal can be associated with harmless stimuli in the same way as it can to those that are objectively dangerous.
3. An individual may acquire anxiety responses on the basis of observation of another persons behaviour and its consequences, thus underscoring the role of cognitive anxiety in the development and maintenance of such responses.

4. learned anxiety responses may be adaptive (rational) or maladaptive (irrational). This last distinction is very important in making clinical treatment decisions.

The clinician's focus is on inappropriate or maladaptive responses in clients. When these are discovered, intervention is reasonably suggested.

According to Craighead et al (1976) most of the anxiety - related problems dealt with by clinicians involve inappropriate reactions to or attempts to avoid or escape stimuli which are, by and large, harmless.

Treatment approaches used in the study are also based on the learning theory principles. Clients who have been conditioned to respond to specific stimuli in a tense manner are reconditioned to respond to such stimuli in a relaxed manner

The procedure of cognitive restructuring stems from Ellis (1962) who considers that through reason and logic a client could be taught to unlearn what he has learnt and adopt a rational approach to such problem situations. This procedure is highly active in that the therapist demonstrates to the client that his perception of his situation is the source of his emotional disturbance. Some authorities assert that this is an encounter process during which held ideas, opinions such as:

(a) misconceptions

(b) catastrophising and pessimism about life

(c) exaggerations

(d) inability to see all the positive sides to the issues one is involved in

(e) anticipations of evil and

(f) wrong meaning attached to issues are dispensed with.

The cognitive procedure further provides the opportunity to practice (over-learning) reasoning rationally.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

Symptoms of Anxiety

Anxiety is a type of neurosis which according to McMahon (1976), has been identified as the root of all neurotic difficulties. Persons who are phobic, i.e., who show unusual fears of certain things or places, or fear of examinations, fear of speech, of elevators or dogs, are always subjected to considerable anxiety attached to these fears. Anxiety can be distinguished from fear in that it has no specific stimulus effect. With fear, there is a specific threat to the person. That is why anxiety is difficult to define and also is one of the reasons why it is so hard to treat. The vagueness of its cause has led some therapists to refer to it as "free cloating", which means that it is not attached to anything specific which the person can identify. However, in some types of anxiety, its reaction is attached to some specific stimuli or situations e.g. examinations and speech situations, but even in such cases a large amount of free - floating anxiety still exists.

Pitts (1969) labelled the more typical physiological manifestations of anxiety as heart palpitation, choking, breathlessness, chest pains, dizziness, fainting, apprehension and

severe headaches. Endler, Hunt and Rosenstein (1962) extended the list to include the need to urinate frequently, a dry mouth, sweaty palms, a full feeling in the stomach, loose bowels, nausea and a general uneasy feeling.

All humans experience some anxiety at one time or other during their lives, but the difference between normal and abnormal anxiety lies in the extent and length of the attack. With severe attacks the individual hardly has time left for other things since the effects are so frightening and disorganising.

Anxiety is therefore psychologically, physiologically and phenomenonologically manifested. According to Steiner and Geber (1962) anxiety is a condition of the modern man, common to all humans and determined by a lot of developmental, economic, political, cultural and social conditions of modern life. Lacey and Lacey (1958) belief that anxiety being highly stressful could precipitate certain organic and other physiological disorders. They established the physiological mechanisms of some people who react to certain stressful situations and concluded that "excessive stress induces intensive affective states such as anger, anxiety, which are accompanied by an arousal of the autonomic nervous system. Depending on which physiological system is overly reactive, the emotional or autonomic manifestation may be reflected

by a disturbance of the gastro intestinal tract (duodenal ulcer), Skin (Neurodermatosis), bronchioles (asthma), or cardiovascular system (hypertension or paraxsymal tachycardia)". Following this assumption, Steinberg and Bearn (1969) insinuated that gastric and duodenal ulcers are associated with the A - B - O blood groups. Akinboye and Boroffice (1980) also attempted to conseptualise a relationship between ABO blood group, anxiety and ulcer. Their findings show that subjects with the O blood group manifested the highest severity of anxiety. The order of severity on the General Anxiety Scales (GAS) was O > A > B > AB blood groups. The conclusions of these authors corrobarated the observations of McConnell (1962) that the O blood group is associated with severe complicated duodenal ulcer. This, according to Akinboye and Boroffice (1980), is because the more anxious a person is, the higher the probability of abnormal visceral mechanisms including secretion of copious acids in the stomach walls and hence the high possibility of duodenal destruction.

Theories of Anxiety

The concept of anxiety is an age long one. It has been linked to the development of neurotic problems as far back as the 19th century. Five major theories of anxiety are recognisable.

They include those of Freud, Neo-Freudians, Existentialists, Humanists and Behavicurists.

Freud was one of the first psychologists to propound a theory of anxiety. In his earlier concept he tried to relate its physical manifestation with sexual involvement. According to Rychlak (1973) he based his theory on a daring analogy between the physical appearance of sexual copulation and the physical appearance of an anxiety attack. After noting that anxiety must lie in the physical sphere, Freud goes on to say that anxiety has arisen by transformation of accumulated sexual tension.

In his later life, Freud defined anxiety as a reaction to dangerous situations. Massive anxiety in this context represents a warning to the individual that unacceptable id-impulses generated in the unconscious mind are trying to free themselves. Biehler (1976) and McMahon (1976) emphasised that the symptoms that appear in people are expressive of two things - undesirable impulses and the channeling of the energy involved through the nervous system in a way that it is manifested in unusual physical mannerisms. This includes abnormal expressions, compulsive acts, physical pains, nervous symptoms etc. Freud, therefore explains that the underlying causes of anxiety were a conflict between the id, ego and supergo. Each of these sources

of influence has its own intentions.

Freud (1938) therefore, summed his views under three forms of anxiety:

(1) A realistic anxiety that is based on real expectations e.g. a young man knowing he is expected to go into battle the next day. Such a young man is alright for the night but what about the next day.

(2) An ego - id conflict which Freud called neurotic anxiety. A child who has not sufficiently resolved his oedipal complex introjects the super ego of his father and materials which had been threatening at youth(oedipal stage) might not need to threaten a come back at a later stage in life. This threat of a come back leads to abnormal behaviour as a means of checking it.

(3) The third form is the moral anxiety which results from castration anxiety. The super ego is formed as a result of fear of paternal or maternal retribution.

The child develops (a) an ego ideal which represents his dos and (b) the conscience which is the childs notion of what he ought not to do. Doing what he ought not to do or not doing what he ought to do creates a guilt feeling which may result in moral anxiety. Hence all of the moralistic teachings which are

introjected by the child can later serve as grounds for calling down the ego as sinful. Guilt, according to Rychlak (1973) is therefore a special case of anxiety.

The neo-Freudians rebelled against Freud's interpretation of the id as a contributory factor in anxiety. Instead they decided to emphasis the ego as that part of the personality that attempts to cope with reality and strikes a balance between the id and the super ego. The ego was now responsible for both good and bad in man. Neurotic behaviour (equivalent of Freuds ego id conflict anxiety) was construed as an attempt by the ego to defend a person's threatened integrity. In this protective process, the ego may distort reality to make it appear acceptable. McMahon (1976) asserted that this might help explain why it is so difficult to get a neurotic to see that many of his actions are actually increasing his difficulties rather than solving them. For instance, the neurotic may feel inferior because he thinks others look upon him that way. He has blotted out reality and creates his own problem: he bemoans the fact that people treat him harshly, a partially imaginary feeling, and his response to this treatment is to back away, thus perpetuating the withdrawal behaviour.

The Neo-Freudians accept that early childhood problems are the key root of anxiety neurosis but stress that the self or ego of the child in trying to attain some freedom for itself provokes

conflict - Oedipal conflict. In the neo-Freudian view, we all get defeated in this conflict and the degree of adjustment to the defeat dictates the measure of neurotic anxiety. Fromm (1944) concluded that the neurotic adjusts by loosing a major part of his individuality, and works for societal goals. For example, a person who has the potential to move into another and better job but sticks to his former job because it certifies societal demands is terrified of failure. This fear could result from frustration in earlier attempts to break away from his hamstrong condition originally produced by his parents. Anxiety wells up as a result of a little voice that seems to be crying out for the person to change while at the sametime, change threatens ego injury from failure.

Horney (1960) also thinks that anxiety results when there is a gap between fantasy and reality. The consequence is anxiety neurosis in which the individual meets with his expectations. He either admits defeat or faces up to the realization that his wishes are not been fulfilled.

Sullivan (1960) relates anxiety to parental rejection in infant years. The fear of rejection at adulthood calls to mind such primitive fears at youth and this is anxiety provoking. In other words, adult neurotic behvaiour results primarily from an inability to meet others in a proper way, on a proper level, or

under appropriate circumstances. Put briefly, one fears a reliving of early anxiety created at youth.

The humanists belief that every human being has all the basic elements for a meaningful existence and we all are pushed toward a realization of a meaningful life experience. We may be at difficulty realising this goal because of environmental intervention. Neurotic anxiety could result if this intervention leads to pulsation of our desire toward growth and realization of our potential. According to Maslow (1967) a self-identity may result. Such a state of neurotic anxiety becomes inevitable once one looses the ability to read and detect those signs which guide one toward healthy development as they are sent out by those psychic forces embedded in us.[3]

For example, the obsessional person may think of sin so much that he can no longer recognise the signals which are trying to surface. The neurotic, on the other hand, may guide his life so much that, he prevents disruption from anxiety and the very positive aspects of growth. Like the phobic, the anxiety neurotic lives in a restricted environment thereby unable to enjoy the good things of life.

According to Maslow, our uncertainty that we can cope with considerable pressure may provoke anxiety when we find ourselves in such situations or the mere thought of them. This stems from our

fear of failure at our attempt at being successful in a field of endeavour. Most or all anxiety neurotics would stick to a less satisfying existence instead of finding themselves under considerable pressure. They behave this way both occupationally and emotionally. According to Maslow, (1967), they fear self-exposure even though it is rewarding.

Maslow has long propounded the theory of the hierarchy of needs based on the assumption that there is priority in our motivation. According to Guetzkow and Bowman (1946), physiological needs e.g. hunger, thirst and sex represent the lowest ladder of this hierarchy. Others include safety, love and belongingness, esteem and self-actualization. Maslow (1959) thinks that man progresses along this ladder, in such a way that he achieves good values, serenity, kindness, courage, knowledge, honesty, love and goodness. For these values to be achieved, one would have reached the esteem and belongingness stage. Maslow (1959) says that this stage is where the key root to anxiety lies. Because of earlier blocking of his potential, the neurotic is not in a position to share love with others; and because he is defficient here he lacks self-esteem. McMahon (1976) asserts that one who lacks self-esteem is so inwardly grown that he becomes a neurotic morass of confusion rather than an orderly creature working toward a worth-while end along with others.

The existential view point is similar to the Humanistic view point since it emphasises respect for man and a deep personal involvement with others. Maddi (1967) thinks that we increase our feeling of worth doing this. Those suffering from neurotic anxiety behave differently. They feel useless intellectually, bored and depressed emotionally and fail to get involved with others behaviourally. Anxiety neurotics waver from set goals usually, give room to defeatism hence tending to focus attention on the far future. Overwhelming fear of nothingness and helplessness develops resulting in anxiety reactions.

In our present day society, goal confusion and lack of general direction have commonly led to tremendous anxiety feelings. Unlabelled fear is capable of generating a continued state of anxiety. The thought that we are finite could lead to the prospect of nothingness which can trigger up "free floating" anxiety, in which one is not sure what is going to happen but has a continuously looming premonition that it will be something dreadful. The existentialists feel that normal people get over this feeling by facing reality and devoting themselves to something which is more lasting than themselves e.g. St. Augustine's devotion to God.

The behaviourists take the stance that anxiety is learnt by association. One may recall the experiments of John Watson with little Albert in which the later was conditioned to fear any white furry object using a white rat and an ear chattering clang anytime Albert moved close to the rat. According to McMahon (1976) the behaviourists have established emperically that emotional reactions can be conditioned. From their series of experiments, a clear principle has emanated that fear is a reaction to pain which motivates the individual or animal to avoid the offending stimulus.

Fear creates anxiety which results from anticipation or expectation of a fearful situation even if unspecified. Mowrer (1939) stipulates that once a fearful situation is similar to a previous one, there is a potential danger of threat and the anxiety created reflects a mobilization of the body to fight off danger, preventing the person from getting hurt. Basically, behaviourists assume that the events of early life bear relation with anxiety symptoms. Similar events of an earlier threatening occurance at youth could provoke fear hence anxiety. This according to Mowrer (1939, 1966) is a stimulus - response association and treatment should involve a process of counter - conditioning. This study assumes the behavioural view point.

All the theories of anxiety from Freudian to behaviourists - bear certain elements in common. According to McMahon (1976) these theories all agree that:

(1) there is some situation or class of situations that evoke anxiety - fear of death or pain, stress, fear of relating to others, or even Oedipal cases recreated.

(2) an association takes place between the situation and the psychological - physiological condition of anxiety.

(3) the person is in danger of over stimulation as the result of anxiety.

(4) the person takes some action usually inappropriate in the case of the neurotic to avoid or reduce the level of stimulation.

(5) Almost all theorists agree on the significance of psychological isolation and alienation; they all believe that anxiety is created from past social isolation.

Management of Anxiety

Several management strategies for anxiety exists but three major ones used in this study are discussed here. They include relaxation, systematic desensitization and cognitive restructuring.

Relaxation

An anxious person is usually tense and relaxation of the muscle fibres is seen as a physiological antedote again tension. It is therefore logical to assume that a relaxed person cannot be tense. In other words, if a tense person can be made to relax always, he can hardly be anxious. Relaxation, as remediation for anxiety evolved in two phases spanning a period of about fifty years (1908 - 1958). The first phase started with the efforts of Edmund Jacobson in 1934, who saw relaxation as a distinct physiological method for combating tension and anxiety while the second phase represents work by Wolpe who modified Jacobson's procedures and applied them in a systematic programme of treatment. Since Wolpe, however, several other persons further shortened the relaxation programme for treatment purposes.

Bernstein and Brokevec (1973) reported that Edmund Jacobson in his early investigations inferred that tension involved the shortening of muscle fibres. The resultant effect of tension is anxiety which could be removed by eliminating such tension. In his book, Jacobson (1938) explains that the process of systematically tensing and releasing various groups and learning to attend to and discriminate the resulting sensations of tension and relaxation may lead a tense person to almost completely eliminate this feeling and becoming very relaxed. By 1962, he had evolved a

basic relaxation procedure which involved fifteen muscle groups with each group occupying one to nine hour - long daily sessions. In all, the persons occupied fifty-six sessions of gradual training.

Wolpe (1958), explains the burden involved in Jacobson's sessions. From his research, he was able to modify the relaxation training. This change resulted in a training programme that could be completed in six 20 minute sessions with two 15 minutes daily home practice sessions between training sessions. Wolpe's procedures were similar to Jacobson's in achieving deep muscle relaxation. Wolpe's work reduced the amount of therapists time devoted to training and laid emphasis on the prevailing circumstances in the anxiety situation rather than the response itself.

Amongst several writers on relaxation as remediation for anxiety is Lazarus. In his book, Lazarus (1971) outlined methods for relaxing 16 muscle groups and this can be done in 20 minutes. The procedures for the muscle groups are as follows:

(a) Muscle of right hand and lower arm (make a fist);

(b) Right biceps (Push elbow against arm of chair);

(c) Left hand and lower arm (make a fist).

(d) Left bicep (Push elbow against arm of chair);

(e) Face (i) Forehead (lift eyebrows as high as you can (ii) Upper check and nose (Squint eyes tightly and wrinkle nose) (iii) Jaws and lower check (bite teeth together and pull corners of your mouth back);

(f) Neck (pull chin down your chest while trying to prevent it from touching your chest.

(g) Chest and shoulders and upper back (deep breath) hold it, at same time pull shoulder blades together;

(h) Abdomen (make stomach as hard as you can). Tense it up as through you were going to hit yourself in the stomach;

(i) Right upper leg and thigh (lift leg up slightly);

(j) Right calf and right lower leg (Pull the toes upward toward your head;

(k) Right foot (point toes, turn foot inwards and curl toes;

(l) Left upper leg (lift leg up slightly);

(m) Left lower leg(Pull the toes upward toward your head);

(n) Left foot (point toes, turn foot inwards and curl toes).

This method has proved successful for a lot of clients. Several other therapists use relaxation measures as a first step in treatment. Lots of these therapists use the method of cognitive restructuring, desensitization procedures and modification of these. It is, however, necessary to add that Lazarus noted that contrary to Jacobson (1938) relaxation is not always effective in decreasing anxiety. Lazarus (1971) argues that relaxation alone heightened anxiety on occasions.

Research trends by Wolpe (1958) and Paul and Shannon (1966) show that various methods or procedures for relaxation have marked physiological effects. These include decreased pulse-rate and blood pressure, lowering of skin conductance and respiration rate and performed greater decrease in subjective tension, heart rate, respiration rate, muscle tension.

Paul (1969a) undertook a study on the comparative effects of relaxation training which involved sixty female students exposed to two half - hour experimental sessions. One third of the subjects had progressive relaxation, another third received direct hypnotic suggestion while a third group was told to sit down and relax. His experiment showed that the progressive relaxation group produced greater heart rate and muscle tension decreases than did the other groups. In another experiment

Paul (1969b) tried to relate physiological response to stressful imagery with training in progressive relaxation. His conclusion was that relaxation produces inhibition of physiological response to stressful visualization.

Weissberg, (1975) treated public speaking anxiety using anxiety inhibiting statements and progressive relaxation techniques. His subjects, showed marked improvement in anxiety after muscle relaxation. In a study by Paul and Trimble (1970), it was discovered that taped progressive relaxation was also effective in reducing heart rate, muscle tension and response to stressful imagery measures. In comparing this procedures with life progressive relaxation, the later was found to be more effective. On the basis of this result, Bernstein and Borkovec (1973) adviced that, for maximum results, life procedures should always be used.

In spite of Paul and Trimble's report (1970) some authors have suggested that the efficiency gain due to allowing clients to work on relaxation by listening to a cassette at home more than makes up for the fact that a counsellor's personal relaxation training is probably more potent than a recording.

The simple fact confronting counsellors in this crowded, over - extended world of ours is that they seldom can afford the luxury of doing individual relaxation training with each client.

It is, therefore, important that the therapist must assign home practice to hasten the process.

Investigations by Stranghan and Dufort (1969) into the effects of verbally induced relaxation on verbal learning and recall ability in low and high - anxiety subjects have shown that of the groups tested:

(1) Relaxation before learning trial

(2) Relaxation before recall trial

(3) Relaxation before both learning and recall trials.

(4) No relaxation at all - the relaxation groups produced faster responding in high - anxious subjects compared to non-relaxed subjects with same anxiety levels.

Graziano and Ken (1968) reported that relaxation - like procedure reduced frequency of tantrums in four autistic children. The method used involved having the children lie down while the investigators gently message their arms, legs, and neck, at the same time instructing them to breath easily and relax. Rewards were given for relaxed behaviours during these sessions. The investigators reported that over the 105 brief sessions, the children learned to become quiet and relaxed during the sessions and tantrums outside the sessions decreased to zero.

Kahn and Baker (1968) used relaxation measures to treat college students reporting chronic insomia. The procedure involved two half - hour group training sessions weekly for two weeks. Post training interviews revealed marked improvement in 11 of 13 subjects. An eleven month follow-up revealed that 11 of 12 subjects contacted could now go to sleep easily.

Further studies by Bernstein and Borkovec (1973) have added support to the effectiveness of relaxation therapy in the treatment of insomia.

Watson and Tharp (1977) recorded a test anxiety case which was treated by relaxation training only. Susan, an 18 years old displayed debilitating anxiety while sitting for tests. Her long hours of effective studies only gave her D's and E's on examinations though she could answer the questions quite well after leaving the hall. She consulted a therapist who put her through muscle relaxation training in four one - hour sessions. After the fifth session she was subjected to a number of course examinations. She used her relaxation training during the examination period and performed remarkably well. Her examination average was improved as a result of this.

All the studies mentioned above support the effectiveness of relaxation training within a therapeutic setting. Most methods present today only incorporate relaxation as part of the over all procedure rather than being used in and of itself. For example, Flaxman (1974) used an abrupt cessation strategy and an intensive package of self control techniques to aid people in regulating arousal and restructuring their lives without cigarettes. According to Craighead et al (1976) the self-control package used in this study involved several techniques oriented towards substituting new habits for smoking and practising muscle relaxation.

Lazarus (1971) and some other authors have indicated that relaxation training in and of itself may not cure anxiety. While their claims might seem difficult to disprove, it is possible that these authors see relaxation training as a cure all procedure.

According to Bernstein and Borkovec (1973) it is a technique which does have considerable value for the alleviation of a limited range of difficulties in a limited range of individuals.

This gives the impression that only certain specific individuals - high tension level individual - have uncomfortably high level tension responses which interefere with the performance of other behaviour.

The responses may include insomnia (caused by muscular tension and intrusive thoughts) tension headaches (which have not responded to prescribed medication), and less specific complaints of "general tenseness or "fight nerves" which seem to be more related to just being awake than to any particular stimulus situation. It is likely that Lazarus (1971) put this into consideration in thinking that relaxation training. in and of itself, is not always effective.

Goldfried and Davison (1976) listed a variety of ways by which relaxation can be applied. This implies that the effectiveness of the skill can only be felt immensely if used as part of specific procedures. Some of the ways enumerated include:

(a) "Systematic desensitization to specific anxiety demensions which is perhaps the most obvious purpose to which relaxation training can be put.

(b) Analogous to systematic desensitization is the way differential relaxation can be used in specifically programmed environmental situations. This is sometimes referred to as in vivo desensitization. The use of concrete charting of between-session assignments is strongly recommended. This kind of record-keeping can help clients focus on their homework, as well as assist

the therapist in monitoring treatment. In encouraging the client to relax in anxiety provoking situations (starting of course with the easiest), the therapist does well to emphasize the coping nature of this newly acquired response or skill. Whether subsequent anxiety reduction is a result of counter conditioning (response substitution) or the acquisition of a coping skill is yet to be determined.

(c) Newly acquired relaxation skills can help within therapy sessions by facilitating behaviour rehearsal if the request to engage in a particular kind of role playing elicits such levels of anxiety that the client is unable to attend to directions or to perform the overt role behaviour.

(d) The restructuring of cognitions is a relatively novel use for relaxation. Davison (1966) was able to use differential relaxation to get a paranoid patient to restructure certain bodily sensations in a more naturalistic nonparanoid way.

(e) In another application in the consulting room, relaxation can be used to reduce tensions to a low enough level so that the therapist can embark on a regime of rational restructuring.

(f) Clients with phobias and anxiety attacks are frequently "afraid of becoming anxious" perhaps because of the unpleasant feelings, the inability to function, and the likelihood that

other people will notice. With relaxation training, the person comes to construe himself as "someone who can control his tensions". The importance of a general change in self-concept should not be minimized in behaviour therapy, particularly an increase in the feeling that one is in control.

(g) Once the client has learned to relax, he can apply this newly acquired skill in a number of stressful situations that have not been dealt with in therapy, for example, going to the dentist. Again, emphasis is placed on the use of the skill for coping with a variety of anxiety - provoking situations.

Preparation for relaxation training

Goldfried and Davison (1976) stressed certain general procedural points considered necessary in most appraoches to relaxation training. As subjects tense and let go their muscles, they are told not to strain the muscles by tensing as hard as possible but rather to tense them only $\frac{3}{4}$ of the potential tension. It is important to sense some tension in the muscles prior to letting go and relaxing them; however, there is no need for clients to exhaust or strain themselves.

Usually, the therapist should demonstrate for the subject how the various muscle groups can be tensed. The therapist runs through the various exercises while the subject sits and watches him. Ambiguities are therefore eliminated. This helps to relieve any inhibitions about making peculiar faces or assuming bodily postures that might be embarrassing for some subjects. For demonstration purpose the therapist performs the exercises quickly, pointing out that this pace is deliberately faster than will be the case during the actual induction.

The clients are encouraged to ask questions so as to dispel ambiguities and to provide reassurance on any points that are troubling or unclear. It is important for therapist to check with the clients for broken knees or sore so that tension-relaxation inductions can bye pass areas of the body which should be left alone. Moreover clients should be asked if they can close their eyes for a lengthy period of time. This is particularly important for clients who wear contact lenses so that such lenses could be removed before the commencement of the exercise. The clients are encouraged to loosen all tight clothing and perhaps even to remove shoes if this will increase comfort. Tone of voice of the therapist must be low, soft, warm, melodic and somewhat hypnotic. The pace must be much slower than

conversational speech.

The consulting room where the exercise is to hold should be kept quiet i.e. the noise level should be as low as possible. Usually in most developed countries, therapists have found it useful to use a white noise generator to minimize the disruption of outside noises. This is important considering that in construction these days, walls are thin and flismy.

Lighting in the rooms are expected to be dim. Not too much light is allowed to fall on the eye lids of the clients. In our own environment hurricane lanterns are good for such purposes instead of electric light. Also, the clients must be sitting or reclining very comfortably such that all muscular tension is kept to the bearest minimum. The therapist should examine the sitting position of the client as much as possible. The old-mans reclining chair (Arm-chair) in Africa is very good for relaxation exercises. This can be used successfully by therapists in Nigeria.

According to Goldried and Davison (1976) the therapist should cover the following orientation points with the client:

1. The therapist tells the client that he is about to learn a skill, like driving a car or learning how to play a new sport. It is emphasized that people learn to be tense and anxious, and in an analogous fashion, can be taught to

relax. A corollary is the gradualness of the learning as well as the necessity for practice and for not expecting too much soon.

2. The client is told that he may have unusual feelings, like tingling in the fingers or a floating sensation. Whatever the client experiences as different should be interpreted by him as signs that the muscles are beginning to loosen. This is important, for it is not uncommon for clients to react to the beginnings of relaxation in a fearful way because they are concerned that something bad is happening to them. On the contrary, such different sensations seem to be signposts of incipient relaxation.

3. It is suggested to the client that he adopt the set of "going with" the process, just letting things happen. If a client enjoys drinking now and then, reference can be made to the enjoyment one can have in relaxing with alcohol. Particularly with younger clients, passing reference can be made to previous drug experiences, where the phrase "Go with it" makes sense.

4. A very common pitfall is the sense of lossing control. The clients whom one is likely to use relaxation with may well have fears of losing control. Periodic probes are therefore advisable, for example, "How do you feel about that?"

With a client who might habour such fears, one should present only a few minutes of relaxation induction at the first session, and not provide a tape to take home until the fears have bec allayed.

5. It is emphasized to the client that he remains in utimate control. The client can and should stop the proceedings any time they become aversive or uncomfortable. The therapist presents himself as a guide and teacher, but the client's own body remains his own to be in control of and to work with.

6. The therapist introduces the paradox that one learns to gain control over onself by letting go. A typical response of clients when they feel impending panic or tension is to tighten the reins of control rather than loosen them. An analogy of riding a horse may be mentioned to some clients. That is, by letting go of muscles and conscious control over the body, one is able gradually to learn to achieve a greater degree of more important and basic control over feelings and tensions. Furthermore, letting go and relaxing can facilitate a planful thinking and attending to important activities.

Indeed, the client can be told that relaxing one's muscles is a very active affair in a physiological sense. According to Davison (1966), it is known that to relax a striate muscle, one sends particular kinds of different messages that inhibit the tension of specific muscles. An analogy that can be used is floating in water; in order to float effectively a person must let go and allow the natural bouyancy of the body to interact with the specific gravity of the water.

7. It is occasionally necessary to allow clients to keep their eyes open for the initial sessions, especially when they seem concerned about what is in store for them. Clients have to build up trust in the therapist; by keeping the eyes open they can hold on to waking reality for as long as they feel is necessary. At the same time, one should point out that it is desirable utimately to have the eyes closed so that visual distractions can be eliminated and more attention paid to the comfort of relaxing. This consideration seems particularly important with clients of the opposite sex, for it occasionally happens that people perceive this situation as sexually seductive.

8. The therapist structures all relaxation sessions in a low achievement fashion. That is, the client is told that he is about to begin to practice some exercises, and that usually people feel little difference the first few times, although some react very strongly the first time. Especially with clients who are concerned about how they are doing, it is important to point out that this is not a testing situation and not something that they have to work at in a dogged, grim fashion.

9. The client is told that his mind may wander during the induction, and is urged not to worry about this though he is asked to bring his thoughts back to the induction when he can. As an example, the therapist can allude to every day conversation, where it is not unusual for an individual's mind to wander for a moment or two but be easily brought back to the topic at hand.

10. The client is told that he is free to move around in the chair as much as he would like to maintain comfort. At the same time, he is encouraged not to engage in onnversations with the therapist or to move around unnecessarily. Above all, it is important that the client not feel that he is in a strait jacket while relaxing in the chair.

11. A final, hopefully obvious point. The client should have a clear understanding of why he is about to learn relaxation. Unfortunately novice therapists confident with their own assessment of a client's difficulties as being anxiety-related, may plung ahead without appreciating the client's need to share the therapists views of the problem(s) and to agree that relaxation training is necessary.

Systematic Desensitization

Patterson (1973) described systematic desensitization as the breaking down of neurotic anxiety response habits step by step. Usually, relaxation is induced while the patient is exposed to a weak anxiety - arousing stimulus. The stimuli are strengthened gradually as weaker ones are accommodated until the highest in the anxiety hierarchy is reached. The principle followed by Wolpe (1958) is that one cannot be relaxed and at same time tense. According to Wolpe (1958), if a response anatagonistic to anxiety can be made to occur in the presence of anxiety - evoking stimuli so that it is accompanied by a complete or partial suppression of the anxiety responses, the bond between these stimuli and the anxiety response will be weakened.

This means that a stimulus which was once evoking an anxiety response could occur without emitting this response once the bond between them has been broken or the frequency of occurence of the anxiety response would be lessened if the bond between it and the stimulus is weakened.

Craighead et al (1976) claimed that while sexual arousal, eating or assertion are incompatible with anxiety responses, the method usually used as an anxkety inhibiting response or state is deep muscle relaxation.

It is, therefore, important that a patient who is to be desensitized is first given training in relaxation following Jacobson (1938). According to Patterson (1973), such training could be spread within six interviews while patients are also encouraged to practice at home daily for two fifteen - minutes sessions. While this is going on, the patient is encouraged to build a tension ladder or anxiety hierarchy involving the least to the highest anxiety evoking situation. He is made to react to this ladder in the presence of a therapist while muscularly relaxed.

Since Wolpe's findings labelled psychotherapy by reciprocal inbibition several variants of systematic desensitization had been employed in the treatment of anxiety.

Some of these methods only need the presence of the therapist in the early sessions after which mechanical aids are used. Other methods of desensitization employed include group desensitization, external inhibition involving mild electric shocks, desensitization based on inhibition of anxiety by conditioned motor responses, emotive imagery and in vivo desensitization. Results of some of these methods have pointed to the success of systematic desensitization in the modification of anxiety. Patterson (1973) reported that in the case of thirty-nine patients randomly selected from the files, systematic desensitization was judged effective in thirty-five patients, or 90 percent with the median number of session per patient being ten.

Since Wolpe's days, several researchers have worked on this method as a therapeutic process. Paul and Shannon (1966) had treated anxiety in therapy groups using systematic desensitization. Their research sought to compare group desensitization with controlled desensitization. They discovered that the group method produced significant improvements thereby proving that this method of desensitization was an effective and efficient treatment for "social evaluative anxiety". According to Paul and Shannon, subjects saw desensitization procedure as an active mastery

technique which they could acquire and use themselves. Reports of clients indicated that desensitization measures were used as strategy for coping with stress in general.

Salter (1949) treated a claustrophobic surgeon of his claustrophobia by making him recall this situation while hynotically relaxed. According to Salter "I told him to practice turning his feeling of claustrophobia on and off, and conditioning relaxation to it. I also told him to take care not to make his claustrophobia stronger than his feelings of well-being or the conditioning would increase his discomfort". By the fifth session he had reported that his claustrophobia had completely disappeared.

Using public speaking situation as a prototypic stress condition, Paul (1969) found that systematic desensitization was significantly effective in reducing maladaptive anxiety. Most observable behavioural measures of anxiety under stress were greatly reduced. Subjects in the modified desensitization group did better than equated groups who received insight oriented pshychotherapy or attention - placebo as treatment.

Goldfried (1971) agrees that desensitization probably represents the most frequently used and empirically well founded techniques currently used by the behaviourally oriented clinicians.

Experimental evidence abound from experiments by Cooke, (1968), Davison (1968), and Lang (1969).

Goldfried (1973) used multiple dimensional hierarchy to treat a case of generalized anxiety. This involved the use of multi-dimensional hierarchy where the client practiced "relaxing away" his anxiety during consultation session with direction to employ the system anytime she was tense in real life. It is to be noted that Goldfried (1971) has recorded some studies to the effect that the transfer of desensitization procedure into real life is not complete. It is no wonder that he has not used the system in real life situation to achieve success in this treatment.

Meichenbaum, Gilmore and Fedoravicius (1971) used systematic desensitization in reducing speech anxiety. They compared this method with another method - insight therapy. Though results indicated that the insight therapy was a effective as desensitization therapy, there were indications that both groups showed significant changes over the control group. Also the desensitization group treatment appeared to be significantly more effective than the insight treatment with subjects for whom speech anxiety was confined to formal speech situations.

According to Bandura (1969) Lang has devised a self-directed desensitization procedure that makes it possible to manage counter-conditioning variables more reliably and permits greater experimental control over extraneous processes. Graduated sequences of threatening situations and relaxation instructions are pre-recorded on magnetic tapes that are controlled by the person undergoing the treatment. After relaxation instructions have been played an anxiety-arousing item is automatically presented. Whenever subjects signal distress they are instructed to stop visualizing the scene, relaxation is reinduced, and then the item is repeated. If subjects signify an increase in anxiety during re-exposure to the same aversive scene they are returned to the preceding item in the hierarchy. As long as subjects signal decreasing arousal to successive exposures to a given scene, it is repeatedly presented until it ceases to elicit emotional responses. In this way, subjects manage their own desensitization treatment throughout the graduated series.

The above procedure was primarily designed for research purposes, but a case report by Migler and Wolpe (1967) suggests that it may have clinical application as well. A male client who was unable to participate in staff meetings because of severe

public speaking anxieties successfully desensitized himself at home through the use of a modified tape recording that contained pre-recorded relaxation instructions and scenes of increasingly threatening public speaking situations. These preliminary clinical data are corroborated by results from comparative studies by Melamed and Lang (1967) and Donner (1967), who found that self-administered desensitization produced the same amount of reduction in avoidance behaviour as the standard, socially administered form. Lang has also successfully employed the semi-automated procedure to investigate changes in autonomic indicants of emotional arousal through the course of desensitization process.

In an overview of Wolpe's reciprocal inhibition (a variant of systematic desensitization) Patterson (1973) noted that many, if not most of the cases described as successful use of this method presented rather minor or limited problems. Also Wolpe and users of systematic desensitization only approach symptoms and forget the underlying neurosis.

It does appear that many of the clients treated by Wolpe presented rather circumscribed symptoms. On the other hand, it also appears that more general changes occured than symptom disappearance, including general improvement in functioning, increased confidence, and development of a more favourable

self-concept. Patterson went further to say that Wolpe's method is no more than counter-conditioning and in it attitudes or feelings are changed by first changing behaviour. He concluded by noting that:

> "When confronted by people intent on self-destruction, turn asunder by conflicting loyalties, cripplied by too high a level of aspiration, unhappily married because of false romantic ideals, or beset by feelings of guilt and inferiority on the basis of complex theological beliefs, I fail to appreciate the clinical significance of Wolpe's neurotic cats and sometimes wish that life were really as simple as he would have us believe".

Whatever the criticism of Patterson the procedures of systematic desensitization have seemed to work very well. So many cases have been successfully treated and lots without relapses.

Cognitive restructuring

This involves the use of rational restucturing to cope with anxiety. The attitude or set of an individual may have profound effect on his or her behaviour and emotional reaction. Such attitudes are not unconnected with earlier social learning experiences.

Ellis (1962) has described how it is possible to incorporate a cognitive approach as a therapeutic intervention therapy. Ellis in doing this assumes that man is uniquely rational but may also be irrational. Any time he is irrational he may become unhappy, ineffective and incompetent. According to him, "Emotional or psychological disturbances - neurotic behaviour - is a result of irrational and illogical thinking. Because it is accompanied by emotion, it becomes biased, prejudiced, highly personalized irrational thinking. Early illogical learning leads to irrational thinking which is verbalised or behaviourably displayed in ones life time. According to Paterson (1973) Ellis pustulated that negative and self-defeating thoughts and emotion must be attacked by reorganising perceptions and thinking so that thinking becomes logical and rational rather than illogical and irrational.

According to Godfried (1971), the field of learning theory in general has moved more and more toward a cognitive orientation hence to characterise behaviour theory solely in terms of classical and operant conditioning would be very short sighted in an attempt at clinical effectiveness.

One of the basic assumptions in this cognitive orientation is that the way an individual labels or evaluates a

situation can differentially determine emotional reactions to such situations. Several studies have confirmed this basic premise demonstrating that various types of self-statements emitted by individuals can have different emotional impacts.

In a study by Silversi■ki and Goldfried (appendix II) the relationship between irrational beliefs and emotional arousal was demonstrate. In this study they found significant positive relationships between the tendency to hold various irrational beliefs and a number of paper and pencil measures of interpersonal anxiety, test anxiety and speech anxiety. Stages involved in cognitive restructuring include:

(1) getting the clients to accept the assumption that self statements mediate emotional arousal;

(2) attempting to get the client to see that certain beliefs are irrational and unreasonable;

(3) getting the clients to acknowledge that their own anxiety may at times be mediated by unrealistic self statements and

(4) getting the clients to modify their unrealistic self statements, in hierarchically arranged situations.

In this forth step, the clients use their learnt ability to rationalize, re-evaluate events and apply this skill as a coping procedure when in a

situation where they actually are experiencing anxiety. In doing all these the relaxation technique must be taught as a first step through.

Amongst the writers who have used the cognitive approach is Meichebaum (1972) who applied the procedure in the treatment of test anxiety. He focused on the worry components in the test anxious subjects. In this approach, he used a "coping imagery procedure" for each of the proposed imagery scenes so that a subject can visualize himself becoming anxious and tense and visualize himself handling and coping with this anxiety by means of slow deep breathing and self instructions to attend to the task. His result showed that subjects who used this coping imagery procedure were more effective in reducing test anxiety than those who used the systematic desensitization procedure.

Jacks (1972) had also demonstrated that the self control modification procedure which involves cognitive set was superior to the systematic desensitization procedure. In this experiment subjects were made to maintain anxiety producing images while attempting to cope.

In a study by Goldfried and Trier (1974) relaxation was used as a cognitive set (coping skills or self control skill).

Results showed that the self control group improved consistently compared with other groups in the experiment. A follow up in this experiment indicated a stricking difference in favour of individuals in the self-control condition.

Also Adeola (1978) used relaxation as a cognitive set in reducing test anxiety in a group of College students. The study showed that the coping skill group reduced their anxiety to about the base level of the non-test-anxious group at the end of the experiment. Their performance was significantly different from those of the other groups.

These studies cited above are a few of the studies which justify the use of cognitive restructuring as a means of reducing anxiety.

Support for automated procedures

Automated methods of treatment for cases of anxiety or fear are in wide use by therapists and clinical psychologists. Lazarus (1971) recommended its use in relaxation training while many tapes and records of the process published by eminent psychologists are sold in the market today. This procedure has helped in many instances to do away with frequent sessions with therapists. Though Bernstein and Borkovec (1973) are not strongly

in support of taped instructions as a substitute for interpersonal contact between therapist and client, the research they quoted to support their argument was not conclusive.

Support for automated procedures comes from Goldfried and Trier (1974), Suinn and Richardson (1971) and Lang, Melamed and Hart (1970). Goldfried and Trier (1974) used it as an aid in treating speech anxiety in some college students. In their experiment, both the standard and self-control relaxation group were required to practice relaxation skills twice a week between sessions with tape-recorded instructions. Suinn and Richardson (1971) prepared and used tapes on anxiety management training in their treatment of some subjects for mathematics anxiety. The first step in this procedure involved a half-hour training in deep muscle relaxation (identical to Jacobson's (1938) procedures), through tape-recorded instructions. Results of the two studies indicated a reduction in speech and mathematics anxiety for the experimental groups.

Lang, Melamed and Hart (1970) used an automated procedure in their psychophysiological analysis of fear modification. In their experiments, the automated apparatus was as effective as a live therapist in reducing phobic behaviour. The results

of this study are consistent with those of Goldfried and Trier (1974) and Suinn and Richardson (1971).

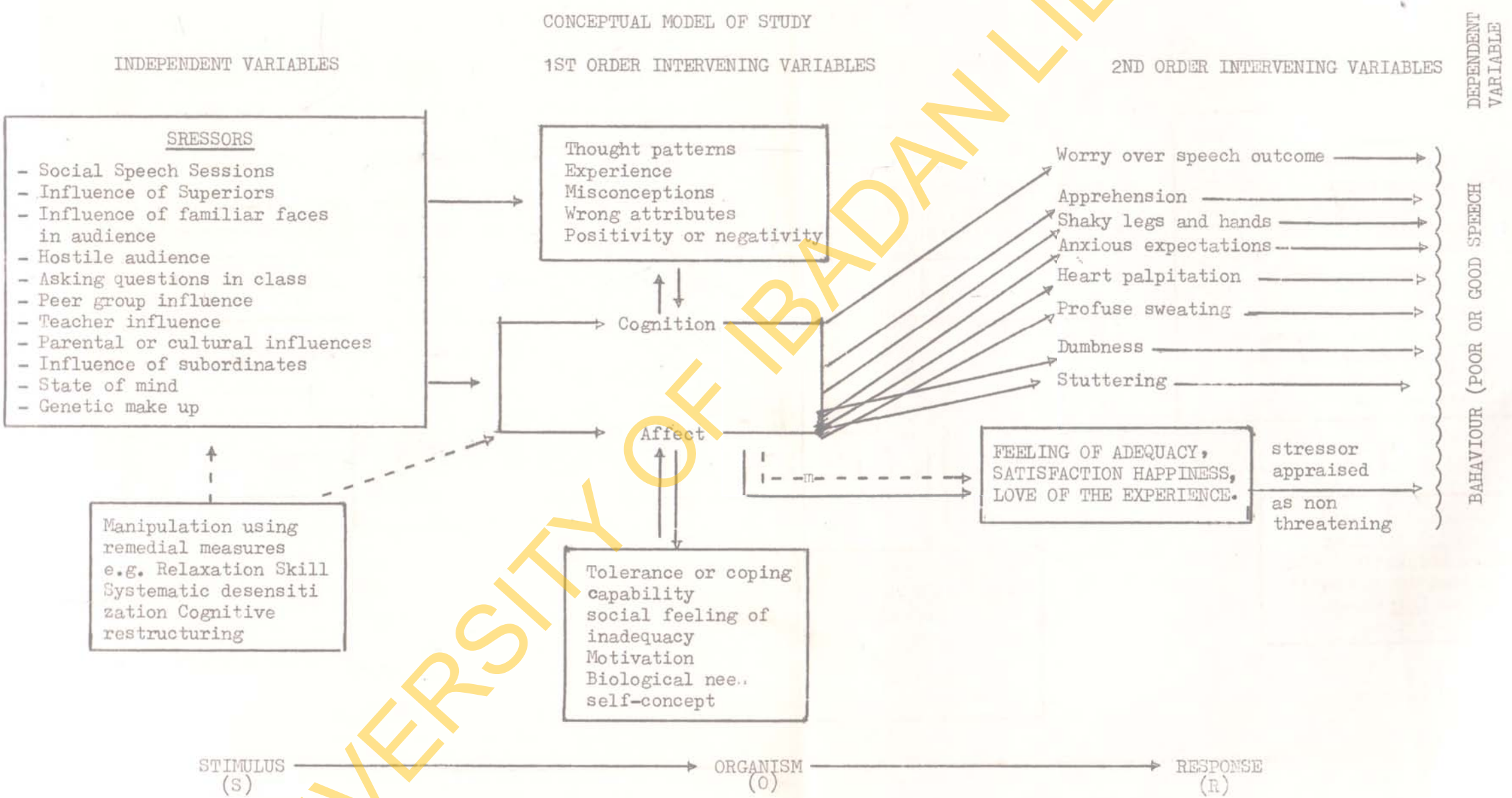
MacCallum (1976) used an automated procedure as first step in his use of covert sensitization in modifying smoking behaviour of high school students. The taped procedure presented in hypnotic monotone, instructed the co-operating subject to "tense" and relax each muscle as mentioned by the therapist. Such words as calm, warm, feeling very relaxed, and comfortable were used often to induce relaxation in the tape. The author however, mentioned that the recording, which was presented at each of the six sessions, was primarily used to create a conducive atmosphere, relatively free from situational tenseness for the presentation of the covert sensitization scenes. In the present study taped instructions were used as an aid to interpersonal contact with the therapist. Moreover, the experimenter has been convinced of its effectiveness by its successful use in the various studies cited.

Conceptual model

The conceptual framework of this study is as presented in Figure I. The independent variables are represented by stressors which must necessarily occur in the environment e.g. social speech making sessions, speaking in class, cultural influences

FIGURE I

CONCEPTUAL MODEL OF STUDY



in speech etc. Also included is the genetic make up of the individual which may predispose him to anxiety.

Ordinarily, the speech situations should not call for any anxieties. However, as the independent variables are presented they are subjected to cognitive and affective processes. As a result, subjective feelings of apprehension, worry, anxious expectations and some physiological manifestations become aroused. Eventually, a poor speech (behaviour) is emitted.

Remediation measures act, in spite of the independent variable, in order to effect changes in the cognition and affect. The individual, as a result of these measures, may develop positive thought patterns, right attribution, better social feeling of adequacy, better motivation and self-concept. These changes lead to a change in beliefs, feelings and orientations. The effect is the emittion of positive (adaptive) responses which favour the making of a good speech. This is a stimulus-organism-response type of framework.

Hypotheses to be tested

This study seeks to test the following hypotheses:

1. There will be no significant differences in the mean scores of the low and high speech anxious subjects who received

each of the remediation measures.

(a) There will be no significant differences in the mean scores of the low and high speech anxious subjects who received the relaxation treatment.

(b) There will be no significant differences in the mean scores of the low and high speech anxious subjects who received the systematic desensitization treatment.

(c) There will be no significant differences in the mean scores of the low and high speech anxious subjects who received the cognitive restructuring treatment.

(d) There will be no significant differences in the mean scores of the low and high speech anxious subjects who did not receive any treatments (control).

2. There will be no significant differences in the mean scores of the high anxious relaxation and the high anxious control groups.

3. There will be no significant differences in the mean scores of the high anxious systematic desensitization and high anxious control groups.

4. There will be no significant differences in the mean scores of the high anxious cognitive restructuring and the high anxious control groups.

5. There will be no significant differences in the mean scores of high anxiety groups of the three measures of remediation.

   (a) high anxious relaxation and high anxious systematic desensitization groups.

   (b) high anxious relaxation and high anxious cognitive restructuring groups.

   (c) high anxious systematic desensitization and high anxious cognitive restructuring groups.

CHAPTER THREE

METHODOLOGY

Design

The research design is a 4 x 2 factorial type in which there are eight main treatment groups. The groups are low anxious relaxation group (LAR); low anxious systematic desensitization group (LAS); low anxious cognitive restructuring group (LACR); low anxious control group (LACN); high anxious relaxation group (HAR); high anxious systematic desensitization group (HAS); high anxious cognitive restructuring group (HACR) and the high anxious control group (HACN).

All the groups had been randomly assigned to the various treatment and control groups. They were pre-tested before the application of the treatment variables. At the completion of the experiment they were also post-tested.

TABLE 1

TABULAR PRESENTATION OF THE 4 x 2 FACTORIAL EXPERIMENTAL DESIGN

Treatment	Low anxious subjects (LA)	High anxious subjects (HA)
Relaxation (R)	LAR	HAR
Systematic desensitization (S)	LAS	HAS
Cognitive restructuring (CR)	LACR	HACR
Control (CN)	LACN	HACN

The sample

The subjects were drawn from a population of 100 students in a teacher training college. The students had earlier been administered with the Stimulus Response Inventory (SRI) and the Checklist Questionnaire (CLQ). Based on their scores, the 100 students were sorted into high and low-test anxious subjects. Of those who volunteered to take part in the experiment 12 male and 12 female subjects were selected from the high anxious group; 12 male and 12 female subjects were also selected from the low anxious group. These were randomly distributed by ballot into the eight groups identified on table 1 such that each group had six subjects (Table 2).

The subjects (24 males and 24 females) fell within the age range of 17 to 30 years with a large majority of them at the 17 - 25 age groups.

TABLE 2

SUBJECT DISTRIBUTION INTO TREATMENT AND CONTROL GROUPS

Treatment	Low anxious subjects	High anxious subjects
Relaxation	6	6
Systematic desensitization	6	6
Cognitive restructuring	6	6
Control	6	6

Total = 48

Instruments

The following instruments were used to collect data for this study.

Stimulus-Response Inventory (SRI)

This is a test of 14 items reacted to by the subject on a scale of 1 - 5 (appendix 5). Since its publication (Endler et al, 1962) it has been used in several studies. The inventory samples perception of physiological responses which are experimentally felt or observable. In two experiments carried out by Endler, Hunt and Rosenstein (1962), a reliability score of 0.95 was obtained using coefficient alpha. An attempt was made to validate this instrument for use in Nigeria by Adeola (1984). Results obtained indicated that it has a very highly significant validity. It showed a split half correlation of 0.71 compared with a table value of 0.16 at $P < .01$.

In this study, any subject who scored 33 and above was considered high anxious.

Check-list Questionnaire (CLQ)

This questionnaire (appendix 4) has 28 items which subjects check if such items are applicable to them. It was recently designed and this will be its second use. Adeola (1984) used it to survey speech anxiety in some Teachers' colleges in Nigeria.

In his study, he compared the CLQ with SRI using percentage scores obtained by each candidate in the two questionnaires. A correlation of 0.69 was obtained compared with an observed value of 0.42 at $P < .01$. This indicates that the scores on the CLQ are highly correlated with those of the SRI.

This is an indication that it is a highly valid instrument. In this study subjects who ticked seven or more situations in which they were anxious were considered high anxious.

Stetoscope

This is an instrument for monitoring heart beat in human beings. This measure served as a means of correlating the Pulse Rate Differential (PRD) in the speech situation with the self report inventories above. This instrument is a certified medically accepted standard for monitoring heart beats in humans. It was administered by a senior nurse tutor in this experiment.

Speech Making

Each subject was put through a speech making session and assessed by the experimenter and an experienced senior nurse tutor. This instrument confirms the anxiety level of the subject during speech sessions. It provided scores for speech rating (SRI).

Control of Extraneous Variables

Some extraneous variables likely to have intervened in this experiment include contamination, intelligence, socio-economic bakground, past experience, age, sex and interest.

Age and sex were controlled by ensuring that mostly people between the ages of 17 and 25 were selected while each group had equal number of males and females randomly allocated to it. Also only those who signified their interest to partake in the programme were selected to fostal lack of interest. Contamination was likely to be reduced in view of the special nature of each programme and the fact that an experienced therapist was needed to provide explanations for their use. All other variables were taken care of by the controls built into the design. These controls include the random selection of the subjects, their random assignment to groups and random assignment of groups to the treatment variables. The highly specialized nature of the factorial design helps in reducing unnecessary interference from extraneous variables.

Statistical Analysis of Data

Both pre and post-test were subjected to an analysis of co-variance with the pre-test mean as co-variates

and the post-test mean as criterion. A student t-test was used to differentiate between the means of the various groups (Ferguson, 1976).

Procedure followed during sessions

There were six weeks interval between pre and post-test. All pre-test were administered before application of the treatment variables. At the completion of the experiment, the groups were again retested. The procedures in the programme were as follows.

Relaxation Plus Application Training

This consisted of progressive relaxation of muscle (using tensing and relaxing) followed by application training.

Session one

Subjects were put through a 2 minute speech making session on topics randomly assigned to them (appendix 12). Before this, their heart beats (pulses) had been monitored as they came in for the session. Just before commencing the speech the pulse of each subject was again taken. The difference in pulse rate (PRD) was noted for each subject. The subject gave his speech which was rated (SRT) by the therapist and a very experienced senior nurse tutor who considered the composure of each subject, the number of mistakes made, stuttering and speechlessness.

The clients were then introduced to the programme generally (appendix 13). They were then told the importance of relaxation training following Goldfried and Davison (1966). They were told of the importance of relaxation and how it is capable of defeating tension and anxiety during speech making sessions. The procedure was then started with Hartman's relaxation instructions (Appendix 10) and and appropriate modelling and reinforcement for imitation of relaxation responses. The relaxation tape was played while the experimenter demonstrated tensing and releasing muscles. The subjects also did the same as the therapist after his demonstrations. They were reinforced for appropriately modelling the experimenter. Words like good, fine, were used for good performance. At the end of this session, which lasted for about $1\frac{1}{2}$ hours, the subjects were given a tape and encouraged to practice at least 15 minutes daily for one week. All sheets for recording practices outside sessions were also distributed to them (appendix 7).

Session two

The tape was played and subjects relaxed with the experimenter by tensing and relaxing their muscles. Practice started with muscles of the arms and proceeded to muscles of the neck, chests, back, abdomen, through the legs. The tape was

halted intermitently while the experimenter corrected mistakes made by subjects. Subjects were verbally reinforced for good imitation of the relaxation process. Words such as good, excellent, you are doing just fine, were used. Subjects who were not doing it well were called by name and corrected after the tape had been stopped. Subjects were encouraged to practice relaxation with the tape for at least a 15 minute session daily (morning or evening).

Session three

The tape was withdrawn and the subjects were made to relax along as the experimenter called out the various parts of the body to be relaxed. Tension and relaxation were still used at this session (see appendix 6 for the parts called out by the experimenter). Any bad modelling by any of the subjects caused the experimenter to halt the process and explain thoroughly again. Good models were again verbally reinforced by the experimenter with words like good, excellent performance, etc.

Subjects were now introduced into such words as relax, cool, calm as they released their muscles from tension. They were instructed to take mental note of the behaviour of their muscle to these cues during the relaxation process.

Each subject was provided with a copy of appendix 6, and encouraged to practice for at least 15 minutes daily in the next one week. They were also instructed to try and apply this procedure in real life during the week on occasions when they became anxious, not necessarily during speech making only.

Session four

This session was devoted to instructing clients in rapid relaxation. All tensing and releasing procedure of muscles had been stopped at this stage. The subjects were instructed to try and relax all muscles of the body at the same time by mentally using such cues as 'relax', 'cool', 'calm', and at the same time taking three deep breaths. The subjects indicated when they were tense and the procedure was started over again with tensing and relaxing and gradually "letting go" by use of the relaxation cues. Subjects were rewarded with praises for good performance. They were encouraged to seek real life situations for practices. Any time they felt tension developing in their muscle parts during the week, they were to mentally instruct such muscles to relax or calm down.

Session five

Each subject was called out to make a two-minute speech before his colleagues. Experimenter encouraged them to call in the relaxation skills already mastered. They were to make use of cues like 'relax', 'calm down', 'cool' during the speech session. Experimenter corrected errors where applicable. Subjects were reinforced for good performance.

Session six

Subjects were once more encouraged to use their relaxation cues always. The experimenter announced a speech making session and called the subjects out one by one to deliver speeches on randomly allocated subjects (appendix 12). Their pulses had been taken before the start of the session. Just before the speech commenced, their pulses were also taken and the difference recorded.

The speech was made by each subject while the experimenter and an experienced nurse tutor rated them on the basis of composture, number of mistakes made, stuttering and speechlessness. Each subject was also made to fill the SRI and CL4 questionnaire on speech anxiety.

Systematic desensitization

Session one

As in relaxation plus application training.

Session two

As in relaxation plus application training.

Session three

As in relaxation plus application training. Just before the session ended, a series of anxiety provoking situations were dictated by experimenter. An anxiety ladder was constructed which was the basis for systematic desensitization. The ladder agreed upon was as follows:

(1) Imagine yourself talking to your best friend, you are very relaxed and having a good time doing so.

(2) Imagine yourself waiting for a class to begin in a large classroom. You are talking with your friend in a relaxed, calm manner as you wait.

(3) You are sitting waiting for class to begin and a classmate who was absent from class in the last lesson asks you a question about an assignment. Several students listen as you answer in a calm and relaxed fashion.

(4) Imagine yourself in class waiting for the lecture to begin. You decide to ask your mathematics teacher about a recent assignment. Picture yourself asking this

information in a calm manner.

(5) Imagine yourself in a small discussion class in which you are expressing an opinion. See yourself doing this in a calm relaxed, and confident manner.

(6) Imagine yourself stating an opinion in class. Immediately someone follows with a strong counter opinion. Remaining relaxed and calm you defend what you originally said.

(7) You have just been called upon by your teacher to answer a question. Your mind suddenly goes blank. Imagine yourself being relaxed as you ask the teacher to restate the question.

(8) Imagine yourself involved in a panel discussion in which you are about to speak to a group about a topic which you you know very well. Being relaxed and confident you see yourself beginning to talk

(9) Imagine yourself standing in front of a small class giving a speech, the principal is writing down an assessment of the speech. You continue talking in a relaxed and calm fashion.

(10) Imagine yourself sitting in the assembly hall listening to another speaker. You realize that your turn will be next. Imagine yourself relaxed and calm as you wait for your turn.

(11) Imagine the speaker you have been listening to winding up his speech and it is now your turn to go to the rostrum to deliver your speech. See yourself relaxed and calm as you go on to the rostrum.

(12) Imagine students from four teachers colleges in Ibadan are gathered in your school assembly hall with all your teachers and Principal. Suddenly your principal calls on you to deliver a toast for the schools gathered. Imagine yourself calm and relaxed as you do so.

Session four

The clients are made to relax and the situations in the tension ladder in session three are presented one at a time to the client.

There was first a 15-minute relaxation exercise. This was followed by a presentation of the situations in the tension ladder one after the other until the situations were exhausted. If anyone felt anxious during the process, the programme was stopped and started again.

R —— S_1 —— R —— - S_2 ——— R —— S_3

Session five

As in session four

Session six

As in relaxation plus application.

Cognitive restructuring

Session one

Subjects were welcome to the session and the general programme was introduced to them (appendix 13). Each subject's heart beat (pulse) was monitored by an experienced nurse tutor. They were each subjected to a 2-minute speech making session on topics randomly assigned to them (appendix 12). Just before commencing the speech the pulse of each subject was again taken and recorded. The difference in pulse rate was noted for each subject.

The subject gave his speech which was rated by the therapist and a very experienced nurse tutor who considered the composture of each subject, the number of mistakes made, stuttering and speechlessness.

Session two

The session was focussed on getting the subjects to firmly accept the assumption that self-statements mediated emotional arousal.

(a) The therapist asked how they would feel if a gun were pointed at them. They all expressed a feeling of fear and apprehension.

(b) The therapist then asked what it was they feared in the gun. Was it the colour, size, shape or the nature of it? Responses from the students were noted.

(c) Suppose we stopped to think of it. Is it possible that we think of the situation as dangerous hence our reaction of fear.

(d) Suppose it is an unloaded gun?

(e) Suppose it is a toy gun?

(f) Is it not possible then that what you are saying is I may be killed or injured by the gun and this statement itself provokes anxiety since you do not wish to die immediately?

(g) What do you think will be the reaction of a person who has never seen a gun before?

The subjects were then told that the intention of the programme was to restructure their thinking. It is felt that most people behave the way they do as a result of their thinking.

Examples given were:

(i) How would you react to a woman who has been identified to you by your parents as a witch?

The subjects said they would look at her with fright and never move near her.

(ii) How would you react to a man your father introduced to you as the medicine man who saved your life when you were young? They all agreed that they would look at him with kindness and would want to move near him.

The therapist informed them that their thinking had mediated their behaviour in these two instances thereby making them feel frightened with one and relaxed with the other. An emphasis was made on how our thoughts mediate our activities in every day life.

Comments by students to each of these questions were noted and a flow from a - g above was manipulated by the therapist.

The therapist then explained to the clients that even though they may not conciously tell themselves that the situation was dangerous, they may nevertheless react as if they concluded that there was inherent danger.

The therapist then provided another hypothetical example of two students preparing for a discussion group. The first person is cool and calm and is looking forward to it. What is he likely to be saying to himself. Subjects reactions were again

taken. Therapist helped them with some of the self-statements he could be making to himself. "It should be an interesting discussion tonight. There will probably be some people there I do not know which can give me the opportunity to make some new friends. There will also be some people there I know and whom I like very much, so I will be able to renew some friendships. Therapists then suggested that the second person is anxious, nervous and fearful. Subjects were asked what he may be saying to himself. Subjects reactions were sought. Therapist then suggested statements like " I don't know how well I'll do tonight. There are going to be many people there I don't know and I am not sure if I will be able to say the right things. I don't want to look foolish especially since there will be many people there that I like".

The therapist then suggested that these different emotional reactions are due to these different self-statements. Subjects reactions were sought and discussed further.

Session three

In this session, an attempt was made to get the subjects to see that certain believes are irrational or unreasonable. This was done by a discussion of the following irrational statements by Ellis (1962). The therapist presented each

statement while the clients gave suggestions as to why they are irrational.

Statement (i) It is a dire necessity for an adult human being to be loved or approved of by virtually every significant other person in his community.

Statement (ii) It is a dire necessity that one should be thoroughly competent, adequate, and achieving in all possible respects if one is to consider oneself worthwhile.

Statement (iii) The idea that certain people are bad, wicked, or villainous and that they should be severely blamed and punished for their villainy.

Statement (iv) The idea that it is awful and catastrophic when things are not the way one would like them to be.

Statement (v) The idea that human unhappiness is exeternally caused and that people have little or no ability to control their sorrows and disturbances.

Statement (vi) The idea that one should be dependent on others and needs someone stronger than one self on whom to rely.

Statement (vii) The idea that one should become quite upset over other peoples problems and disturbances.

The therapist and the subjects discussed these statements one by one. They were encouraged to say why they considered the statements irrational or unreasonable. The therapist then suggested to them that at any point in time they should stop to examine their thoughts. Possibilities are that they could find explanations to most of their irrational behaviours.

Session four

This session was devoted to making the subjects acknowledge that their own fears and anxiety may be mediated by unrealistic self-statements. Some of the irrational statements discussed in the previous session were used as examples again. The case of a witch craft suspect within a family could lead to intense anxiety for some of those in the family. The therapist made them see that it is their thought pattern that creats such fear in them. The subjects were then asked to say what they think they may be saying to themselves during an occasion that requires speech making. Their statements were taken down.

The following statements were identified:

(a) I will make a very bad speech.

(b) My friends will laugh at me

(c) I am likely to make a fool of myself on the stage.

(d) My principal and teachers are in the audience and they will scold me for poor performance.

(e) The teacher will think of me as unintelligent if I asked a stupid question in class.

(f) My classmates will call me names and gear at me for asking an unintelligent question.

(g) People in the crowd usually like to pick at mistakes.

(h) All crowds at speech making sessions are always hostile looking.

(i) I will not like to disappoint my parents who are likely to expect a good performance from me on this occasion.

(j) I am afraid of getting confused on the stage and this happens when people stire at me.

(k) I will not be able to raise up my head before my colleagues again if I make a bad speech.

The therapist then encouraged the students that during the week they should re-examine the statements to see why they are irrational.

Session five

The self statements suggested by the group in session four were discussed one by one with the subjects. Reasons for their irrationality were suggested. This was a fairly long session

(1 hour 15 minutes) since each statement took an average of six minutes to discuss.

Session six

As in relaxation plus application.

Control

Only two sessions for data collection were applied. The sessions were similar to the sessions one and six of the relaxation training programme except that there was no treatment applied at all in this case.

CHAPTER FOUR

RESULTS

The results of the study are stated in this chapter in form of tables to which references are made. They are considered hypothesis by hypothesis.

There are five major hyptheses. Hypothesis 1 has four sub divisions while hypothesis five has three sub-divisions. Each of these hypotheses was tested at the 0.01 probability level.

Hypothesis 1 (a) (b) (c) (d)

This hypothesis states that there will be no significant differences in the mean scores of the low speech anxious and the high speech anxious subjects who received each of the remediation measures.

Results on tables 3, 4, 7 and 11 show that the hypothesis was rejected on the SRI ($F = 6.38$; $df = {}^{3}/_{40}$, $P < 0.1$) and the PRD ($F = 4.76$; $df = {}^{3}/_{40}$, $P < .01$) indicating that significant differences existed between the low and the high anxious subjects who received each of the remediation measures. The hypothesis was however accepted on the CLQ ($F = 2.53$; $df = {}^{3}/_{40}$; N.S; tables 8 and 9) and SRT ($F = 1.00$; $df = {}^{3}/_{40}$; N.S; tables 16 and 17).

TABLE 3

PRETEST (X-MEANS) AND ADJUSTED Y-MEANS FOR ALL TREATMENT GROUPS ON THE STIMULUS RESPONSE INVENTORY ON ANXIETY

TREATMENT GROUP	N	X-mean (Pre-test)	Adjusted Y-mean (Post-test)
Relaxation			
HA	6	47.83	32.57
LA	6	18.50	26.72
Systematic desensitization			
HA	6	43.50	19.31
LA	6	18.50	25.22
Cognitive restructuring			
HA	6	45.67	23.52
LA	6	21.83	28.41
Control			
HA	6	42.67	38.81
LA	6	21.83	25.91

HA = High anxious

LA = Low anxious

TABLE 4

ANALYSIS OF COVARIANCE FOR (ADJUSTED Y-MEAN) THE TREATMENT GROUPS ON THE STIMULUS-RESPONSE INVENTORY ANXIETY

VARIANCE	SOURCE	S.S	D.F.	M.S.	F	P
STIMULUS-RESPONSE INVENTORY	Rows (anxiety level)	6.66	1	6.57	1.11	NS
	Columns (treat-ments)	109.98	3	36.56	6.10	<.01
	Inter-action	115.07	3	38.36	6.38	<.01
	Within	1442.52	40	6.01		

In hypothesis 1 (a) in which the high and low speech anxious groups in relaxation procedure were compared, t - ratios obtained on the SRI and PRD were 4.12 and 3.53 respectively at df = 10 and P $<$ .01 (Tables 5 and 13).

Hypothesis 1(b) tested the differences between the high and low speech anxious subjects receiving the systematic desensitization treatment. T - ratios were 4.23 (SRI) and 3.86 (PRD) at df = 10 and P $<$ .01.

Hypothesis 1(c) tested the differences between the high and low speech anxious groups for subjects receiving the cognitive restructuring treatment. Again tables 5 and 13 show that the t - ratios were 3.44 (SRI) and 3.25 (PRD). The same trend is followed in hypothesis 1(d) which tested the significance in results of the high and low speech anxious groups in the countrol. T - ratios obtained were 9.07 (SRI) and 7.15 (PRD) at df = 10 and P $<$ .01.

FIGURE 11

BAR GRAPH OF ADJUSTED MEAN SCORES FOR ALL GROUPS ON THE STIMULUS RESPONSE INVENTORY SCALE

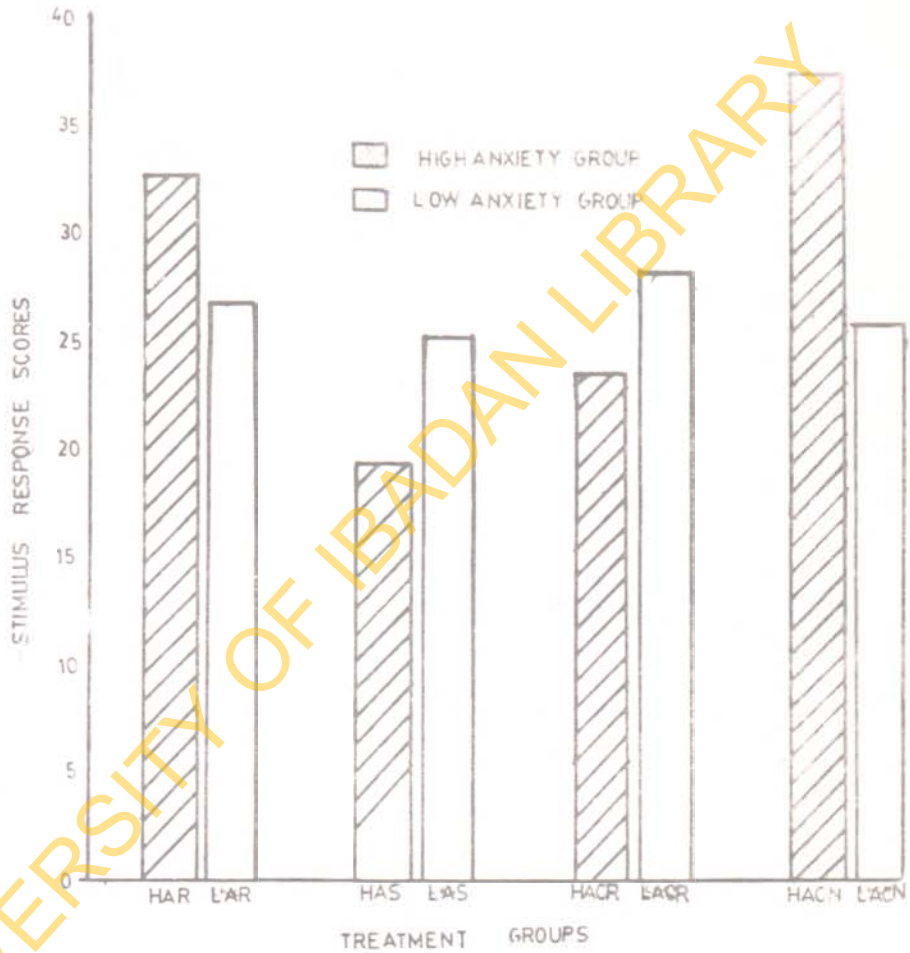


TABLE 5

SIGNIFICANCE T-VALUES ($P < 0.01$) IN THE COMPARISON OR PAIRS OF ADJUSTED MEANS FOR THE STIMULUS RESPONSE INVENTORY ON ANXIETY

Cell	N	LMS	Pooled S.E.	T-Values	P
HAR/LAR	6	6.01	1.42	4.12	
HAR/HAS	6	6.01	1.42	9.33	
HAR/LAS	6	6.01	1.42	5.18	
HAR/HACR	6	6.01	1.42	6.37	
HAR/HACN	6	6.01	1.42	4.39	
HAR/LACR	6	6.01	1.42	4.69	
LAR/HAS	6	6.01	1.42	5.21	$P < .01$
LAR/HACN	6	6.01	1.42	8.50	
HAS/LAS	6	6.01	1.42	4.23	
HAS/HACR	6	6.01	1.42	6.41	
HAS/HACN	6	6.01	1.42	13.73	
HAS/LACN	6	6.01	1.42	5.64	
LAS/HACN	6	6.01	1.42	9.56	
HACR/LACR	6	6.01	1.42	3.44	
HACR/HACN	6	6.01	1.42	10.76	
LACR/HACN	6	6.01	1.42	7.32	
HACN/LACN	6	6.01	1.42	9.07	

TABLE 6

SIGNIFICANT T-VALUES ($P < 0.05$) IN THE COMPARISON OF ADJUSTED MEANS FOR THE STIMULUS-RESPONSE INVENTORY (SRI) ON ANXIETY

Cell	N	LMS	Pooled S.E.	T-Values	P
HAR/LACR	6	6.01	1.42	2.93	$P < 0.05$
LAR/HACR	6	6.01	1.42	2.25	
HAS/HACR	6	6.01	1.42	2.96	
LAS/LACR	6	6.01	1.42	2.24	

Though the hypothesis was accepted on two of the instruments used (CLQ and SRT) the trend in results showed that the high anxiety groups were still more anxious than the low anxiety groups for the relaxation and control measures. The remediation measure of relaxation did not prove very effective in managing anxiety. Though it reduced the anxiety levels of subjects fairly, the increase was not enough to be statistically significant.

In the control procedure (hypothesis 1(d)) the results revealed that subjects had not sufficiently changed from the pre-test to the post-test. Those who were high anxious remained so while those who were low anxious also remained so.

In the systematic desensitization and cognitive restructuring procedures, (hypothesis 1(b) and (c)) the high anxious groups were statistically different from the low anxious groups. The results showed that at post-test, high anxious subjects who received these remediation measures had scores that had fallen below the scores of the low anxious groups.

TABLE 7

INSIGNIFICANT T-VALUES IN THE COMPARISON OF PAIRS OF ADJUSTED MEANS FOR THE STIMULUS-RESPONSE INVENTORY ON ANXIETY

Cell	N	LMS	Pooled S.E.	T-Values	P
LAR/LAS	6	6.01	1.42	1.06	
LAR/LACR	6	6.01	1.42	1.19	
LAR/LACN	6	6.01	1.42	0.57	
LAS/HACR	6	6.01	1.42	1.19	NS
LAS/LACN	6	6.01	1.42	0.49	
HACR/LACR	6	6.10	1.42	1.68	
LACR/HACN	6	6.10	1.42	1.76	

In effect, the HAS and the HACR had become less anxious than the LAS and LACR after the application of these remediation measures. The reverse was the case at pre-test (Figures II, III, IV, V)

Hypothesis 2

This hypothesis states that there will be no significant differences in the mean scores of the high anxious relaxation (HAR) and the high anxious control (HACN) groups.

The hypothesis was rejected on three of the instruments used and accepted on one. There were significant differences on the SRI ($F = 6.10$, $df = {}^{3}/_{40}$, $P < .01$) CLQ ($F = 8.08$, $df = {}^{3}/_{40}$, $P < .01$ and the PRD ($F = 8.11$, $df = {}^{3}/_{40}$, $P < .01$). The hypothesis was accepted on the SRT ($F = 2.48$, $df = {}^{3}/_{40}$, NS). See tables 3, 4, 8, 9, 11, 12, 16, and 17. T-ratios obtained are shown on tables 5, 6, 10, and 13. They are 4.39 (SRI), 5.88 (CLQ) and 7.65 (PRD) at $df = 10$ and $P < .01$.

Although the hypothesis was accepted in the SRT the results indicated that there were differences which were almost significant at the 0.05 significance level.

TABLE 8

PRE-TEST (X-MEANS) AND ADJUSTED Y-MEAN FOR ALL TREATMENT GROUPS ON THE CHECK-LIST QUESTIONNAIRE ON ANXIETY

Treatment group	N	X-Mean (Pre-test)	Adjusted Y-mean (Post-test)
Relaxation			
HA	6	10.50	6.10
LA	6	3.83	5.14
Systematic desensitization			
HA	6	11.00	2.89
LA	6	2.67	3.52
Cognitive restructuring			
HA	6	11.17	4.32
LA	6	4.83	6.40
Control			
HA	6	11.17	9.16
LA	6	4.50	6.37

HA = High anxious

LA = Low anxious

TABLE 9

ANALYSIS OF COVARIANCE FOR (ADJUSTED Y-MEAN) THE TREATMENT GROUPS ON THE CHECK-LIST QUESTIONNAIRE ON ANXIETY

Variance	Source	S.S	D.F	M.S.	F	P
Check-list questionnaire	Row (anxiety level)	0.11	1	0.11	0.13	NS
	Columns (treat-ment)	20.40	3	6.8	8.08	<.01
	Inter-action	6.65	3	2.2	2.53	NS
	Within	201.98	40	0.84		

FIGURE II

BAR GRAPH OF ADJUSTED MEAN SCORES FOR ALL GROUPS ON THE CHECK-LIST QUESTIONAIRE

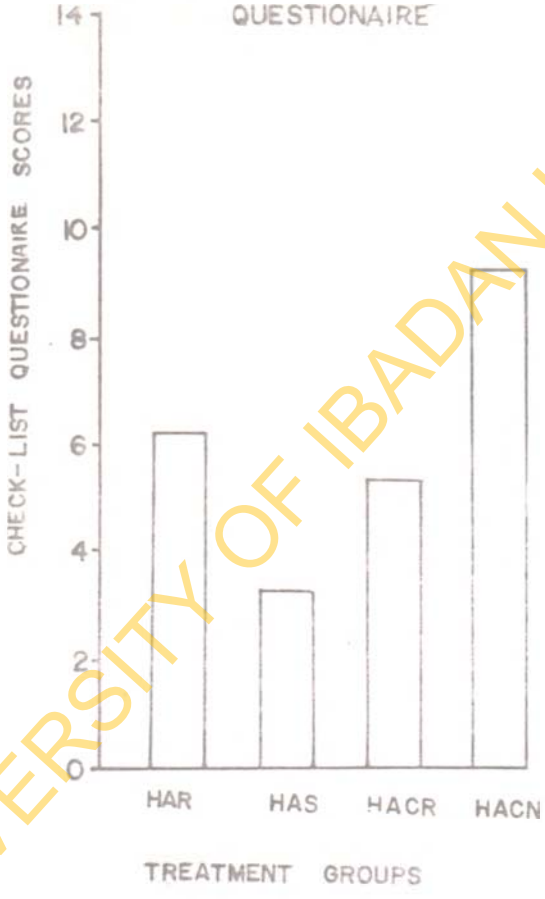


TABLE 10

T-VALUES IN THE COMPARISON OF PAIRS OF ADJUSTED MEANS FOR THE CHECK-LIST QUESTIONNAIRE (CLQ) ON ANXIETY

Cell	N	LMS	Pooled S.E.	T-Values	P
HAR/HAS	6	0.84	0.52	6.17	$<.01$
HAR/HACR	6	0.84	0.52	3.41	$<.01$
HAR/HACN	6	0.84	0.52	5.88	$<.01$
HAS/HACR	6	0.84	0.52	2.75	$<.05$
HAS/HACN	6	0.84	0.52	12.10	$<.01$
HACR/HACN	6	0.84	0.52	9.31	$<.01$

The scores of the HAR were consistently superior to those of the HACN indicating that the relaxation treatment was more effective in managing anxiety than the control (no treatment) procedure.

Hypothesis 3

This states that there will be no significant differences in the mean scores of the high anxious systematic desensitization and the high anxious control groups.

Tables 3, 4, 8, 9, 11, 12 and figures II, III and IV indicate that there were significant differences on the SRI ($F = 6.10$, $df = {}^{3}/_{40}$, $P < .01$), CLQ ($F = 8.08$, $df = {}^{3}/_{40}$; $P < .01$) and PRD ($F = 8.11$, $df = {}^{3}/_{40}$; $P < .01$). The hypothesis was however accepted on the SRT ($F = 2.48$; $df = {}^{3}/_{40}$; NS; tables 16 and 17 and figure V).

T-values obtained at df = 10 and $P < .01$ were 13.73 (SRI), 12.01 (CLQ) and 12.91 (PRD) respectively. Even though there were no significant differences on the SRT results followed the same trend as the SRI, CLQ and PRD. This indicated that the systematic desensitization procedure was a superior speech anxiety management therapy than the control (no treatment) procedure. The significant interaction obtained on the SRI ($F = 6.38$, $df = {}^{3}/_{40}$; $P < .01$) and PRD

($F = 4.76$; $df = {}^{3}/_{40}$; $P < .01$) was an indication of the treatment effects on the anxiety levels. These treatment procedures affect anxiety levels positively.

TABLE 11

PRE-TEST (X-MEANS) AND ADJUSTED Y-MEANS FOR ALL TREATMENT GROUPS ON THE PULSE RATE DIFFERENTIAL

Treatment group	N	X-mean (Pre-test)	Adjusted Y-mean (Post-test)
Relaxation			
HA	6	21.33	11.31
LA	6	15.00	5.94
Systematic desensitization			
HA	6	19.33	3.31
LA	6	7.33	9.17
Cognitive restructuring			
HA	6	32.00	4.40
LA	6	13.67	9.35
Control			
HA	6	19.00	22.93
LA	6	6.67	12.06

HA = High anxious

LA = Low anxious

TABLE 12

ANALYSIS OF COVARIANCE FOR (ADJUSTED Y-MEAN) THE TREATMENT GROUPS ON THE PULSE RATE DIFFERENTIAL

Variance	Source	S.S	D.F	M.S	F	P
Pulse-rate differential	Row (anxiety level)	6.52	1	6.52	1.01	NS
	Columns (Treat-ment)	157.80	3	52.50	8.11	<.01
	Inter-action	92.70	3	30.90	4.76	<.01
	Within	1557.16	40	6.49		

Hypothesis 4

This hypothesis states that there will be no significant differences in the mean scores of the high anxious cognitive restructuring and the high anxious control groups.

There were no significant differences on the SRT ($F = 2.48$; $df = 3/40$; NS; tables 16 17 and figure V). Significant differences were recorded on the SRI ($F = 6.10$, $df = 3/40$; $P < .01$; tables 3, 4 and figure II), CLQ ($F = 8.08$; $df = 3/40$; $P < .01$; tables 8, 9 and figure III) and PRD ($F = 8.11$; $df = 3/40$; $P < .01$; tables 11, 12 and figure IV). T - ratios obtained at df = 10 and $P < .01$ are 10.76 (SRI), 9.31 (CLQ) and 12.20 (PRD). The results showed that the cognitive restructuring procedure is superior in anxiety management than the no-treatment approach. This same trend was exhibited even in the SRT which was not significant.

Hypothesis 5 (a), (b) and (c)

This hypothesis states that there will be no significant differences in the mean scores of the high anxiety groups of the three measures of remediation. The hypothesis was rejected on three of the instruments used and accepted in one.

FIGURE IV

BAR GRAPH OF ADJUSTED MEAN SCORES FOR ALL GROUPS ON THE PULSE RATE DIFFERETIAL

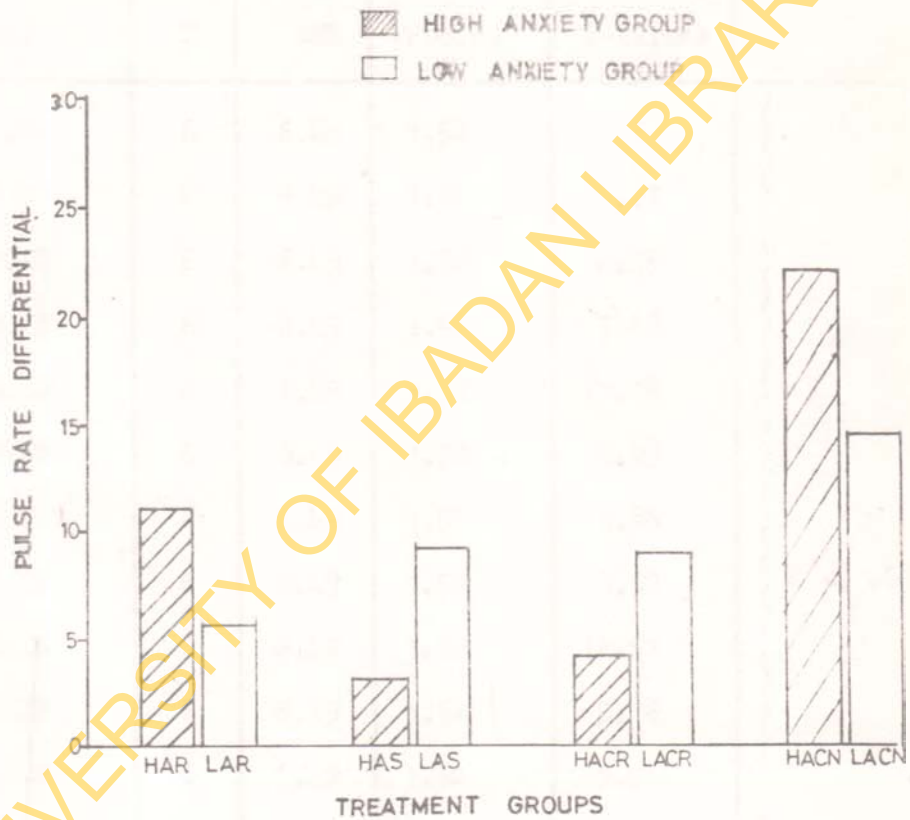


TABLE 13

SIGNIFICANT T-VALUES ($P < .01$) IN THE COMPARISON OF PAIRS OF ADJUSTED MEANS FOR THE PULSE-RATE DIFFERENTIAL

Cell	N	LMS	Pooled	T-values	P
HAR/LAR	6	6.49	1.52	3.53	
HAR/HAS	6	6.49	1.52	5.27	
HAR/HACR	6	6.49	1.52	4.55	
HAR/HACN	6	6.49	1.52	7.65	
LAR/LACN	6	6.49	1.52	11.18	
LAR/HACN	6	6.49	1.52	4.03	
HAS/LAS	6	6.49	1.52	3.86	
HAS/LACR	6	6.49	1.52	3.97	$P < .01$
HAS/HACN	6	6.49	1.52	12.91	
HAS/LACN	6	6.49	1.52	5.76	
LAS/HACN	6	6.49	1.52	9.06	
HACR/LACR	6	6.49	1.52	3.25	
HACR/HACN	6	6.49	1.52	12.20	
HACR/LACN	6	6.49	1.52	5.07	
LACR/HACN	6	6.49	1.52	8.94	
HACN/LACN	6	6.49	1.52	7.15	

TABLE 14

SIGNIFICANT T-VALUES ($P \leq 0.05$) IN THE COMPARISON OF PAIRS OF ADJUSTED MEANS FOR THE PULSE RATE DIFFERENTIAL

Cell	N	LMS	Pooled S.E.	T-value	P
LAR/LACR	6	6.49	1.52	2.24	<.05
LAR/HACR	6	6.49	1.52	3.14	<.05

There were significant differences as indicated on the SRI ($F = 6.10$, df = $^{3}/_{40}$, $P < .01$; tables 3, 4 and figure II), CLQ ($F = 8.08$, df = $^{3}/_{40}$, $P < .01$; tables 8, 9 and figure III) and the PRD ($F = 8.11$, df $^{3}/_{40}$, $P < .01$; tables 11, 12 and figure IV). On the SRT ($F = 2.48$, df $^{3}/_{40}$, N.S; tables 16 and 17 and figure V); the results were not significant. T - values obtained were according to the sub-divisions in the hypothesis.

Hypothesis 5(a) tested differences between the HAR and HAS. T - values obtained at df = 10 and $P < .01$ were 9.33 (SRI), 6.17 (CLQ) and 5.27 (PRD). Hypothesis 5(b) indicated significant differences between the HAR and the HACR groups. Values obtained as t - ratio at df = 10 and $P < .01$ are shown on tables 5, 10 and 13. They are 6.37 (SRI), 3.41 (CLQ) and 4.55 (PRD).

Hypothesis 5(c) also indicated differences between the HAS and HACR. T - values obtained are 6.41 (SRI) at df = 10 and $P < .01$, and 2.75 (CLQ) at df = 10 and $P < .05$. On the PRD, results were not significant ($t = 0.72$, df = 10, N.S.). See tables 5, 10 and 13.

TABLE 15

INSIGNIFICANT T-VALUES IN THE COMPARISON OF PAIRS OF ADJUSTED MEANS FOR THE PULSE RATE DIFFERENTIAL

Cell	N	LMS	Pooled S.E.	T-Value	P
HAR/LAS	6	6.49	1.52	1.41	
HAR/LACR	6	6.49	1.52	1.68	
LAR/HAS	6	6.49	1.52	1.73	
LAR/LAS	6	6.49	1.52	2.12	
LAR/HACR	6	6.49	1.52	1.02	
HAS/HACR	6	6.49	1.52	0.72	N.S.
LAS/HACR	6	6.49	1.52	0.12	
LAS/LACN	6	6.49	1.52	1.90	
HAR/LACN	6	6.49	1.52	0.49	
LACR/LACN	6	6.49	1.52	1.79	

The results of this study showed that in all the measures of remediation used, the systematic desensitization procedure was most superior in the management of anxiety. This is closely followed by the cognitive restructuring procedure and the relaxation procedure. This is shown by the scores obtained on all the instruments used (Tables 3, 8, 11, 16 and figures II, III, IV and V.

In summary, the trend of the overall results observed indicated that all the instruments of research behaved in the same pattern. In all, the scores showed that the systematic desensitization group demonstrated better scores for all the variables considered. This is because it seemed to combine more elements in treatment than the cognitive restructuring and relaxation procedures. Moreover, the cognitive restructuring procedure was not preceeded by a relaxation training in this study as was done in other studies in the past.

Tables 18 and 19 show the correlation matrix for both the pre and the post-test scores for all the instruments of research in all the groups. Results revealed that the instruments of research correlated with one another at the .01 level of significance.

TABLE 16

PRE-TEST (X-MEAN) AND ADJUSTED Y-MEANS FOR ALL TREATMENT GROUPS ON SPEECH RATING

Treatment group	N	Y-mean (Pre-test)	Adjusted Y-means (Post-test)
Relaxation			
HA	6	3.17	5.15
LA	6	5.17	3.32
Systematic desensitization			
HA	6	3.33	6.36
LA	6	5.17	3.32
Cognitive restructuring			
HA	6	2.50	4.32
LA	6	4.67	4.19
Control			
HA	6	3.33	3.03
LA	6	5.00	3.94

HA = High anxious

LA = Low anxious

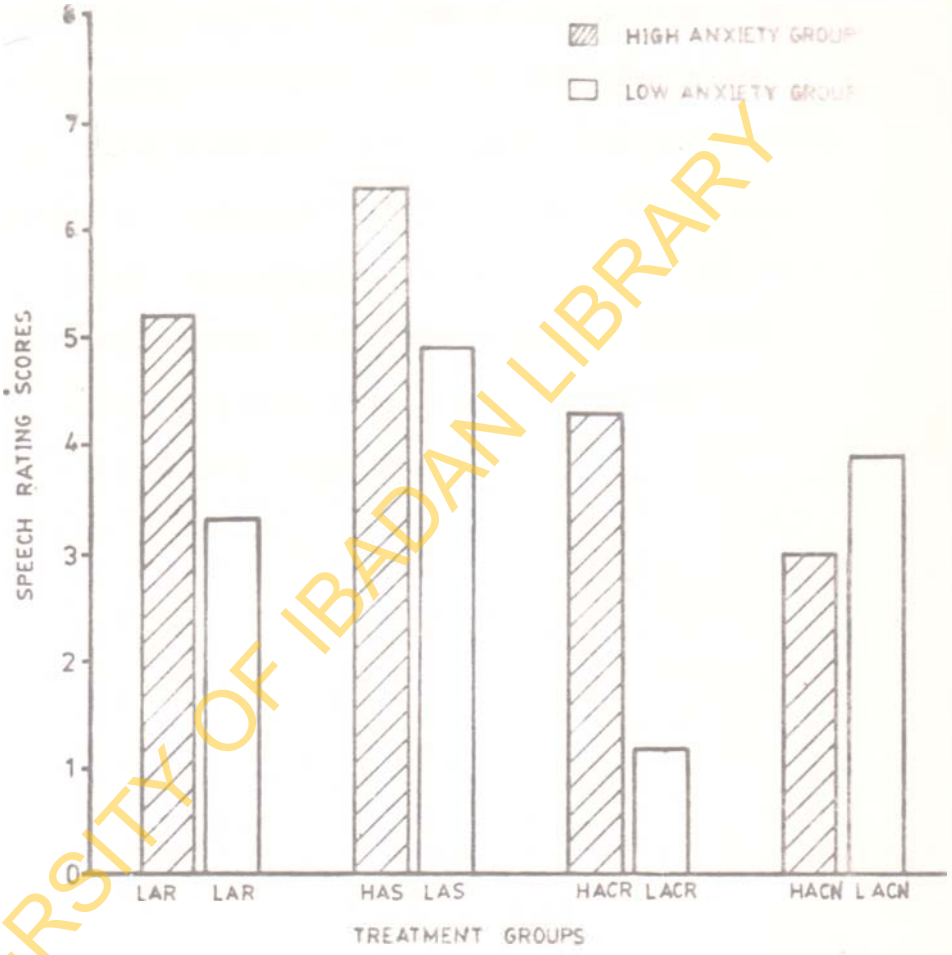
TABLE 17

ANALYSIS OF COVARIANCE FOR (ADJUSTED Y-MEAN) THE TREATMENT GROUPS ON THE SPEECH RATING

Variance	Source	S.S	D.F	M.S	F	P
Speech rating	Rows (anxiety level)	0.81	1	0.81	1.32	NS
	Columns (treatment)	4.52	3	1.51	2.48	NS
	Interaction	1.82	3	0.61	1.00	
	Within	145.78	40	0.61		

FIGURE V

BAR GRAPH OF ADJUSTED SCORES FOR ALL THE GROUPS ON SPEECH RATING



Except for a low correlation between the check-list questionnaire and pulse rate differential at the pre-test all the other pairs correlated highly. The most significant is the correlation between the stimulus response and check-list questionnaires. The speech rating displayed negative correlations. As the scores of the other questionnaires decreased, scores of the speech rating increased. This was expected. At the post-test, the speech rating was very poorly correlated with the other instruments.

TABLE 18

CORRELATION MATRIX FOR THE PRE-TEST SCORES OF THE VARIOUS INSTRUMENTS OF RESEARCH

Variable No	1 (SRI)	2 Check-list (CLQ)	3 Pulse Rate differential (PRD)	4 Speech rating (SRT)
1	-	0.869**	0.363**	-0.536**
2	-	-	0.187	-0.400**
3	-	-	-	-0.567**
4	-	-	-	-

R (45).01 = 0.338

** Significant at 0.01 level

TABLE 19

CORRELATION MATRIX FOR THE POST-TEST SCORE OF THE VARIOUS INSTRUMENT OF RESEARCH

Variable No.	1 (SRI)	2 Check-list (CLQ)	3 Pulse Rate differential (PRD)	4 Speech rating (STR)
1	-	0.712**	0.558**	-0.023
2	-	-	0.528**	-0.144
3	-	-	-	0.060
4	-	-	-	-

R (45) .01 = 0.338

** Significant at 0.01 level

CHAPTER FIVE

DISCUSSION AND CONCLUSIONS

In this chapter the results of this study are discussed according to the five major hypotheses propounded in chapter 3. An attempt is made to explain the findings within the general framework of available literature (both theoretical and emperical).

DISCUSSION

Hypotheses 1(a), 2, 5(a) and 5(b)

Hypothesis 1(a) states that there will be no significant differences in the mean scores of the low and high speech anxious subjects who received the relaxation treatment. Result revealed that there were significant differences. It indicated that the relaxation procedure could not effectively reduce the anxiety level of the clients to a point where they may be seen as low speech anxious. Although this is so, the mean scores obtained showed that there was a decrease in anxiety level of the subjects in the HAR but this was not enough to justify equating the HAR effect with LAR effect in the reduction of speech anxiety.

It is suggested that the relaxation treatment conceived of anxiety as the tenseness of the muscles and training was given to ensure that muscles can relax when tense. Evidence from literature suggests that this method works only for uncomfortably high level tension responses

like insomnia, tension headaches and general tenseness or "tight-nerves" according to Bernstein and Borkovec (1973).

The concept of anxiety is not just physiological. Philips, Martins and Mayers (1972) believe that it involves psychological and phenomenological manifestations. Management of anxiety should therefore go beyond training for relaxation of muscles and nerves. Such a management strategy should involve aspects of cognition and affect in the human organism. The procedure in this study tried to make the subjects transfer the relaxation concept beyond the training sessions by emphasising practice in real life situations. Attempts were made to get the subjects to use mental instructions to activate the relaxation process rather than physically bending the legs and hands. It seems that they were only partially successful in doing this hence the fairly lowered anxiety level observed in the HAR at the end of treatment.

Some researchers like Watson and Tharp (1977), Stranghan and Dufort (1969) have recorded successful applications of relaxation training in managing anxiety. It would seem that the cases mentioned are simple ones involving the ability to listen and recall. According to Meichenbaum (1972) the relaxation process lowers the arousal level of the subject thereby reducing the number of task irrelevant responses thus causing an improvement in performance. Practice, subjecting the

emotionally aroused individual to stressful situations that cause his arousal is probably essential in either imagined or real life situations. This aspect is lacking in relaxation training processes. Bernstein and Borkovec(1973) agreed that most experiments recorded by earlier writers used relaxation in this manner. It is no wonder that Lazarus (1971) presumed that contrary to Jacobson (1938) relaxation was not always effective in decreasing anxiety. It is also possible that relaxation may become effective when treatment lasts for longer periods.

Hypothesis 2 states that there will be no significant differences in the mean scores of the HAR and HACN while hypothesis 5(a) states that there will be no significant differences in the mean scores of the HAR and HAS. Hypothesis 5(b) states that there will be no significant differences between the mean scores of the HAR and HACR. Results of all these hypotheses (2, 5(a) and 5(b)) showed that significant differents existed between the groups tested. Trends in the result showed that the relaxation training did not sufficiently lower the anxiety level of the high anxious subjects compared with the systematic desensitization and cognitive restructuring procedures. Its subjects, however, reduced their speech anxiety in comparison with those in the control (no-treatment) group. It is therefore suggested,

as shown from results, that in instances where there is a choice between treating and not treating an anxious client, the relaxation procedure is better than no treatment at all. However, where a choice of treatment procedures exists the systematic desensitization and the cognitive restructuring procedures are better than the relaxation procedure.

The poorer performance of the relaxation group compared with the two other groups may be due to the inability of the subjects to carry the procedure beyond the physical aspects of bending hands, legs and twinkling eyes as earlier suggested. It would seem that they did not quite absorb the process of mentally instructing all the muscles of the body to relax. This ability to instruct at mental command was the skill the group was supposed to acquire. May be it required more than six sessions to acquire such a skill. Jacobsons procedure required 56 sessions while Wolpes relaxation programme required six 0 minutes sessions with two 15 minutes daily home practice sessions between training sessions.

Banduras (1969) however, thought that relaxation is a facilitator rather than a necessary condition for eliminating anxiety. In this experiment the procedure has proved to be less effective in managing anxiety. This supports the findings of some authors who have in the past,

asserted that relaxation training is not very effective in reducing anxiety (Cooke, 1968; Donalson, 1968; Lang, Lozenski and Raymolds, 1965; Rachman, 1956, 1968; Goldfried and Trier, 1974).

It may therefore be inferred that relaxation has to be used as a preliminary process in most behaviour modification procedures for treating anxiety. This is confirmed by the performance of subjects in the systematic desensitization group who were first given a relaxation training preceeding the process of desensitization. The high anxious group fell to the level of the low anxious group after application of the treatment. The pulse rate of the subjects were regularised in speech situations while their speeches became more coherent and sensible.

Hypotheses 1(b), 3, 5(a) and 5(c)

Hypothesis 1(b) states that there will be no significant differences between the high and low speech anxious groups which received the systematic desensitization treatment. Results revealed that significant differences existed. However, unlike in the relaxation treatment the HAS had lower scores on the anxiety rating scales than the LAS except in SRT where the scores were higher at post-test as expected. While the LAS had remained at the pre-test level, subjects in the HAS had decreased their anxiety beyond the level of the subjects in the LAS. The significant result is therefore

explained in the context of a now superior HAS group. The decrease in anxiety level from the pre-test to the post-test was very remarkable.

Hypothesis 3 states that there will be no significant differences in the mean scores of the HAS and HACN.

Hypothesis 5 states that there will be no significant differences in the mean scores of (a) HAR and HAS and (c) HAS and HACR. In all the pairs tested, results revealed that there were significant differences. It can be inferred from the results obtained that the systematic desensitization procedure was superior to the other two procedures in the management of anxiety.

The overall efficiency of the systematic desensitization procedure has been witnessed by several authors including Lang, (1969; Paul and Shannon, 1966; Paul (1966); Paul (1969); Goldfried (1971); Leitenberg et al (1969). While Lang considers that the subjects may have learnt a cognitive set regarding emotional arousal during systematic desensitization, Leitenberg et al pastulated that the systematic reinforcement of the individuals progress during systematic desensitization facilitated improvement because desensitization was actually providing the client with an active coping skill.

This view was accepted by Goldfried who saw improvement resulting from systematic desensitization as readily explained through a self-control model. While it can be agreed that there is an emotional aspect to anxiety it is believed that anxiety is basically a learnt procedure and can be unlearnt by a process of reconditioning and gradual reinforcements which is what the systematic desensitization procedure provides. Such learning can be more effective if the individual views it as a self control (coping) strategy. The client imagines an anxiety provoking skill and tries to remain relaxed while he is cognitively confined within this scene. He tries this instance to learn to remain relaxed (cognitively) in an anxious setting. If he does this successfully the learning is reinforced. In all these situations, he controls his own action in coping. The researcher therefore subscribes to the feeling that systematic desensitization has been most effective over the years because it combines more elements in treating anxiety - cognition, emotion, learning and reinforcement.

According to Paul and Shannon (1966) clients themselves have in many cases viewed the beneficial effects of systematic desensitization as learning a strategy for coping with stress in general. Their subjects had perceived the method as an active mastery technique which they could acquire and use themselves. They had described utilizing

the technique to master anticipated areas of stress implying the development of a confidence - building "how to cope" orientation.

Some other research evidences in psychotherapy which indicate the general effectiveness of systematic desensitization in reducing anxiety better than other methods include Salter (1949), Cooke (1968), Davison (1968), Goldfried (1973). These authors agree that desensitization represents the most frequently used and empirically well founded technique currently used by the behaviour oriented clinicians. Results of this study testify to its superiority over other methods used. It is therefore possible that its better performance than the other methods is related to its long standing use apart from combining elements of cognition, emotion and learning in effecting treatment. It is thought that therapists understand and know how to manipulate the procedure more easily than the other methods.

Hypotheses 1(c), 4, 5(b) and 5(c)

Hypothesis 3 states that there are no significant differences between the high and the low speech anxious groups which received the cognitive restructuring procedure as treatment. Results revealed that there were significant differences. The results of the experiment showed that the anxiety level of the HACR had decreased below that of the LACR even though at pre-test it was much higher. It is therefore suggested that the procedure has a very remarkable effect in managing

anxiety. It does not only cater for the emotional aspects of the subject but also attempts to alter their cognition positively.

Sassenrath (1964) and Sassenrath et al (1965) emphasised that the worry component in this case, the cognitive concern over the outcome of the speech, contributed more to anxiety than heightened emotionality managed by the desensitization procedure. According to Wine (1971) it is therefore important that any method of management for anxiety should correct the worry component. The ability to worry makes the anxious subject to focus attention on the negative aspects of the speech situation. For example, a speech anxious subject may now see his teacher in the audience and immediately conclude that he is there to pick out his mistakes. This thought further depresses him making him to remember all his past inadequacies at speech sessions and emotional failures at such occasions. At this point his coping capacity may fail him. The end result is accute anxiety followed by a very poor speech. This adds to his repatoire of experience to be called out for use in the future if this misconceptions still prevail.

The procedure of cognitive restructuring attempts to correct the feelings and make more positive use of experiences and thought patterns. It creates a type of motivating effect that is intrinsic in the individual who now wants to see how he performs in relation to his former speeches-the urge to do better.

In comparing this procedure with the others used in this study (Hypotheses 4, 5(b) and 5(c) it was found to be more effective in the management of speech anxiety than the control and the relaxation procedures. It was, however, slightly less effective than the systematic desensitization procedure.

Cognitive restructuring has been reported as an effective method of anxiety management by several other authors amongst whom are Jacks (1972), Goldfried and Trier (1974); Meichenbaum (1972); and Adeola (1978). The results of this study agree with the findings of these authors that the procedure reduces anxiety sufficiently to make the subjects function properly in the society. The subjects in this experiment seemed to like the procedure since it involved only thinking.

This experiment confirms the role of perception (cognitive thoughts) in evoking anxiety. Subjects talked of their thoughts during speech making situations and after analysis agreed that their perception of the situation created some emotional reaction which affected their performance. This agrees with the findings of Ellis (1962). Experiments by Sarason (1961) and Adeola (1979) are also confirmed. The last two authors discovered that the perception of the test situations as threatening makes the high anxious individuals to perform poorly at

such situations. Ellis propounded that ones thoughts mediated ones actions. In developing his rational emotive therapy, he therefore attempted to ensure that clients perceived situations reationally. The procedure of cognitive restructuring, had in the period of six weeks reduced the anxiety of subjects in this experiment beyond the low anxiety group.

In spite of the results of the present experiment there are authors who opined that the cognitive restructuring procedure is as effective if not more effective than the systematic desensitization procedure. Meichenbaum (1972), Jacks (1972) and Goldfried (1971) concluded that cognitive restructuring when used as a self-control methodology is as good as the systematic desensitization procedure. In their experiments, however, relaxation procedure was used as a first step before the procedure of cognitive restructuring was introduced. In this experiment, the researcher did not instruct the cognitive restructuring group in the art of relaxation. The results may have been different if this had been done. Adeola (1978) introduced some cognition with the relaxation procedure in treating text anxiety and the subjects showed very dramatic recoveries in four weeks.

Hypotheses 1(d), 2, 3, and 4

Hypothesis 1(d) states that there are no significant differences between the high and low anxious groups which did not receive any

treatment (control groups). Results showed that there were significant differences. The high anxious group was still as high anxious at post-test as the subjects were at pre-test. Also in comparing the control with all the other treatment effects (Hypotheses 2, 3, 4), it was found that all the other procedures were superior in reducing anxiety compared with the control (no-treatment) group. The most effective was systematic desensitization, followed by cognitive restructuring and the relaxation procedures.

Most of the low - anxiety groups were statistically the same at post-test for all the variables. Minor variations observed were slight increases in mean scores from the pre to the post-test. Though these increases were not significant, their occurence inferred that low anxious persons experience slight increases in anxiety overtime. This may be attributable to some emotional effects. For example Bernstein and Borkovec (1973) had suggested that giving relaxation training to low tension level individuals can result in an unimpressed, hostile client. This hostility could be translated into annoyance, boredom and irritability. It is possible that such states could have made the low anxious individuals a little more anxious than they normally were.

A look at the individual scores of the low anxiety groups also revealed that one or two individuals per group shot up in scores at the

post-test in the stimulus response inventory. These individuals had recorded very low scores at the pre-test. Such high scores contributed to the higher mean score at post-test experienced by the group. The feelings of annoyance and possible irritability supposedly felt by the subjects lends support to the feeling of anxiety as an emotional state (Spielberger, 1972). While such emotions are very intense in the case of the high anxious they are not disorganizing in the case of the low anxious.

All the variables used in this study can be said to have responded similarly in assessing subjects. The self-report questionnaires and the physiological batteries (Pulse-rating and speech rating) were very similar to themselves in assessing anxiety in subjects. The correlation matric shown on tables 18 and 19 revealed that the instruments were highly correlated with one another both at the pre-test and the post-test. This implies that the subjects were frank in filling their self-report batteries. If these were highly correlated with the physiological batteries, they had to be accepted as true since it was difficult to fake physiological attributes.

It should be emphasized that automation was used as part of the treatment procedure in all the treatment groups. This was very much so in the relaxation and systematic desensitization groups. Procedures used are those of Hartman (appendix 10) and Goldfried (appendix 11). Even though researches abound to show that automated procedures

are very useful as a substitute for interpersonal contact, it is possible that the subjects had some difficulty with the instructions. At regular weekly sessions however, the therapist had gone through each tape several times to ensure that the clients had no trouble with the taped instructions. All the groups had reacted very positively to this. Moreover the therapist tried to maintain contact with the groups for at least four days of the week. This infers that the the procedures were not fully automated. Impact of and contact with the therapist was maintained for a larger part of the programme. It is, however, evident that automated procedures are in widespread use and have proved very successful in the treatment of anxiety cases. Such evidences are available in the researches of Goldfried and Trier (1974), Suinn and Richardson (1971), Lang, Melamed and Hart (1970) and Adeola (1978).

Attrition was almost posing a problem initially. The experimenter intended to start the experiment with at least sixty subjects. The programme had to be delayed for one week to ensure that at least forty of the subjects were present. Finally a total of forty-eight subjects who showed up were made use of. In most cases, the reason for high attrition rate was due to lack of motivation. This is particularly true with experiments on obesity. In two experiments by Harris and Bruner (1971), 13 of 32 subjects were lost after the first two

weeks of treatment in the first experiment and five of 15 subjects did not return in the second experiment. Jeffrey (1974) reported that people dropping out prematurely from traditional treatment approaches to weight reduction had long been a problem.

In the present study the experimenter had to ensure that the subjects were kept on to the completion of the treatment. The researcher showed interest in helping the subjects not only in the areas of speech anxiety but in other related areas where the subjects had difficulties. For example, individual students who indicated that they were test anxious were counselled apart from the speech anxiety groups. One other strong motivating force in the subjects who took part in this experiment was the oral examination (both mock-ral and final oral examination) of the teachers college which coincided with the timing of the experiment. The subjects had received some treatment sessions before the mock-final oral English examination. At this examination, they were given impromptu speeches similar to what they had at the introduction of the treatment procedures in this research. Most of them recounted with enthusiasm how they had used the skills they learnt for the examination. This further kindled their interest in the treatment programmes since they skill had the actual grade II final oral examination to sit. This, in itself, contributed to the final bust of active participation in the programme. Some of their colleagues

who were not part of the programme now asked if they could join midstream. The researcher promised to arrange special sessions for them. This did not materialise before they went on vacation.

Results of all the instruments of research were very similar to themselves. These instruments used together reduced any effect subjectivity of assessment would have had on the out come of the results. While it is easy for inconsistencies in perception of subjects reaction to stressful situations to result in differences in pre and post-test scores, it is very difficult for the subjects to do this for all the four instruments. Even if they were inconsistent in the self report batteries, the physiological assessors - heart beat and speech rating - could have proved them wrong. In this study however, all four instruments of research were highly correlated with one another at the pre or post-test level. It can, therefore, be inferred that the results reflected the true reaction of the subjects since both self-report and physiological assessment batteries gave the same answers.

While it is possible for the results to have been affected by contamination between treatments, one could assume that the effect of contamination was very minimal in this study, if it ever existed. The procedure followed in each treatment was such that required the presence of the therapist with the subjects on some occasions. It was therefore

impossible for subjects not present at sessions of particular treatments to master such procedures. The control group would have improved fairly if there had been any statistically relevant contamination.

In summary the findings of this research indicated that the reduced anxiety states of two treatment groups - systematic desensitization and cognitive restructuring - were due minaly to the treatment effects. It is possible from this research to conclude that the relaxation aspect of the systematic desensitization programme was not totally responsible for the reduced state of anxiety reported by the group. This is so because the relaxation treatment group itself did nit show very highly significant reduction in anxiety. It is, however, not possible to ascribe the total effect (anxiety reduction) to desensitization alone. While one can say that it contributed immensely to the results achieved, it will be unrealistic to put a percentage to such contribution. Ideally, a group exposed to desensitization without relaxation would have been very necessary in order to evaluate effectively what aspects of the treatment contributed immensely to the drastic change.

It is also not possible, from this study, to evaluate the impact of automation in anxiety reduction. In all cases, the therapist met

with the subjects for specific times in the week. The only group that did not see the therapist when treatment commenced was the control group. For this reason, any results ascribable to automation would be very wrong. To do this, a different group that was supposed to react to the taped instructions without contact with the therapist would have been ideal. The design of this study did not incorporate this.

The time used for the execution of the treatment effects (six weeks) was very adequate. Most other authors have used less than this length of time.

Conclusions

An experiment was designed to study the effects of relaxation and systematic desensitization in the reduction of speech anxiety in students of the teacher training college. Results showed that the experiment was successful. Analysis of the adjusted post-test scores indicated that the systematic desensitization and the cognitive restructuring groups had reported significantly reduced anxiety states. The relaxation treatment, which was earlier on assumed to be very effective in treating anxiety did not prove to be as effective as the other treatment groups in this experiment. Indications are that it reduced anxiety to an extent but not enough to be significant.

The analysis of the adjusted post-test treatment assessment for all the groups revealed that the systematic desensitization procedure was the most effective. Of all the treatment procedures used it proved to manage anxiety much better than any of the other group considered.

Recommendations and Implications

Adeola (1984) has shown the necessity of remediation measures in speech anxiety for trainees of the teachers' college. Since, according to Colen and Garner, (1971), the teaching practice is the most vital part of the teacher's professional training, if this is tampered with adversely, the product is a substandard teacher. Speech anxiety is capable of ruining this process for a student teacher. The present study has shown that a number of treatment programmes can be very effective in reducing such anxiety in students of the teachers college. A replication of the study will be necessary in view of its rarity in the Nigerian environment. If proven, treatment programmes of systematic desensitization and cognitive restructuring can be introduced into such schools so that the teacher trainee would have acquired the required anti-anxiety skills before going to the schools for his or her teaching practice.

This experiment was carried out using trainees of the teachers' college who experienced some anxiety during the teaching practices.

In a preliminary survey of 158 students of such schools more than 45 percent of students sampled indicated that they were speech anxious. The results may be higher in secondary schools, universities or most other institutions though this cannot be stated categorically since no research or survey has confirmed it. It would therefore be necessary to carry out such a study in these institutions mentioned. Such replicated studies should include more subjects and more time for the relaxation group.

Further studies in this area should attempt to find out what proportion of success is contributed by relaxation and by desensitization. If the systematic desensitization without relaxation proves to be very successful in reducing anxiety then efforts may be directed at producing programmes devoid of relaxation which may save a lot of time in treatment. It is also possible that such efforts may lead to programmes which are specific for the African environment.

A larger sample may be very adequate in future studies. This will ensure that a comparison can be made between sexes and therefore make recommendations very specific. Lastly, future studies should aim at constructing instruments specific to the African environment. Other physiological assessors should also be used. An example is the psychogalvanometer.

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APPENDIX 1

PRE-TEST SCORES OF INDIVIDUAL SUBJECTS FOR ALL THE GROUPS

Groups	SRI	CLQ	Pulse Rate Differential	Speech Rating
Relaxation HA	64	13	24	4
	41	9	40	3
	43	8	24	1.5
	49	11	12	3
	36	7	20	2
	54	15	8	4.5
LA	20	7	4	4.5
	16	3	2	6.25
	14	1	36	4.5
	14	3	16	2.5
	20	2	32	4
	27	7	0	7.5
Systematic desensitization HA	47	14	4	4
	43	12	20	3
	42	8	36	3
	51	11	28	1.5
	41	11	12	4
	37	10	16	3.5
LA	26	7	8	5.5
	14	1	12	4.5
	19	2	0	3.5
	17	2	12	5.5
	21	3	8	4
	14	1	4	6

Groups		SRI	CLQ	Pulse Rate Differential	Speech Rating
Cognitive Restructuring	HA	44	10	44	2.5
		58	13	24	1
		40	12	40	2.5
		48	12	32	2.5
		42	10	32	1
		42	10	20	3.5
	LA	21	4	20	6
		17	4	8	5
		22	3	4	5
		21	2	30	4.5
		18	11	0	4
		32	5	20	2.5
Control	HA	45	8	16	2
		38	11	20	3.5
		35	10	48	2
		41	9	16	4
		42	16	4	5
		55	13	10	2.5
	LA	18	2	12	3.5
		25	6	4	6
		17	4	4	3.5
		18	4	4	3.5
		31	9	8	5
		22	2	8	6.5

SRI = Stimulus Response Inventory

CLQ = Check-list Questionnaire

HA = High Anxious

LA = Low Anxious.

APPENDIX 2

POST-TEST SCORES OF INDIVIDUAL SUBJECTS FOR ALL THE GROUPS

Groups		SRI	CLQ	Pulse Rate Differential	Speech Rating
Relaxation	HA	45	9	12	5.5
		39	12	28	3
		38	7	8	4.5
		40	5	20	3.5
		32	4	4	4.5
		42	7	8	5
	LA	20	3	4	4.25
		15	3	4	6
		18	1	8	5.25
		23	6	8	2
		21	3	4	4.75
		26	6	4	7
Systematic desensitization	HA	28	4	4	4.75
		20	3	8	5.5
		23	2	8	4
		28	6	0	3
		31	7	4	4.25
		15	4	4	5
	LA	30	1	8	6
		14	1	12	4.5
		15	1	8	4
		16	1	0	5
		23	4	8	4
		16	2	0	7

Groups		SRI	CLQ	Pulse Rate differential	Speech Rating
Cognitive Restructuring	HA	25	2	8	4.5
		37	11	8	2.5
		36	9	20	2
		33	6	12	4
		29	5	4	3.5
		16	2	8	4.75
	LA	14	5	8	6.5
		18	7	8	5
		14	1	8	4.5
		44	4	24	4
		23	7	0	4
		29	8	0	4.25
Control	HA	45	8	16	2
		49	10	24	3
		43	11	44	1
		36	12	24	3.5
		45	10	4	4
		38	13	30	2
	LA	19	4	8	4
		20	9	10	6.5
		21	3	16	3
		18	3	4	4
		31	9	8	5
		18	3	6	5.5

SRI = Stimulus - Response Inventory

CLQ = Check-list questionnaire

HA = High Anxious

LA = Low Anxious

APPENDIX 3

SUMMARY OF ONE-WAY ANALYSIS OF VARIANCE FOR PRE-TEST RESULTS IN THE VARIOUS TREATMENTS

Instrument	Sub-Group	Column	Means	S.D	Probability
Stimulus Response inventory	HAR	Pre-test	47.8	10.1	0.09 (NS)
		Post-test	39.3	4.4	
	LAR	Pre-test	18.5	5.0	0.06 (NS)
		Post-test	20.5	3.8	
	HAS	Pre-test	43.5	4.9	0.0003**
		Post-test	24.2	6.0	
	LAS	Pre-test	16.5	4.6	0.87 (NS)
		Post-test	19.0	6.3	
	HACR	Pre-test	45.7	6.6	0.0033**
		Post-test	29.3	7.9	
	LACR	Pre-test	21.8	5.3	0.73 (NS)
		Post-test	23.7	11.5	
	HACN	Pre-test	42.6	5.9	0.92 (NS)
		Post-test	42.7	4.8	
	LACN	Pre-test	21.8	5.4	0.82 (NS)
		Post-test	21.2	5.0	
Check-list questionnaire	HAR	Pre-test	10.7	3.1	0.09 (NS)
		Post-test	7.3	2.7	
	LAR	Pre-test	3.8	2.6	0.88 (NS)
		Post-test	3.7	2.0	
	HAS	Pre-test	11.0	1.9	0.0003**
		Post-test	4.3	3.9	

Instrument	Sub-Group	Column	Means	S.D	Probability
Check-list questionnaire	LAS	Pre-test	12.7	2.3	0.63 (NS)
		Post-test	1.7	1.2	
	HACR	Pre-test	11.2	1.3	0.007**
		Post-test	5.8	3.7	
	LACR	Pre-test	4.8	3.2	0.77 (NS)
		Post-test	5.3	2.6	
	HACN	Pre-test	11.2	2.9	0.73 (NS)
		Post-test	10.7	1.8	
	LACN	Pre-test	4.5	2.7	0.69 (NS)
		Post-test	5.2	3.0	
Pulse-Rate Differential	HAR	Pre-test	21.3	11.2	0.20 (NS)
		Post-test	13.3	9.0	
	LAR	Pre-test	16.7	14.6	0.09 (NS)
		Post-test	5.3	2.1	
	HAS	Pre-test	19.3	11.4	0.01**
		Post-test	4.6	3.0	
	LAS	Pre-test	7.3	4.7	0.64 (NS)
		Post-test	6.0	4.1	
	HACR	Pre-test	32	9.1	.0007**
		Post-test	10	5.5	
	LACR	Pre-test	13.7	11.5	0.64 (NS)
		Post-test	8.0	8.8	
	HACN	Pre-test	19.0	15.3	0.59 (NS)
		Post-test	23.7	13.3	
	LACN	Pre-test	6.7	3.3	0.62 (NS)
		Post-test	8.7	4.1	

Instrument	Sub-Group	Column	Means	S.D	Probability
Speech Rating	HAR	Pre-test Post-test	3 4.3	3.3 0.9	.05*
	LAR	Pre-test Post-test	4.88 4.88		1.0 (NS)
	HAS	Pre-test Post-test	3.2 4.4	0.9 0.9	0.04*
	LAS	Pre-test Post-test	4.8 5.1	1.0 1.2	0.70 (NS)
	HACR	Pre-test Post-test	2.2 3.5	1.0 1.10	0.04*
	LACR	Pre-test Post-test	4.5 4.7	1.2 1.0	0.74 (NS)
	HACN	Pre-test Post-test	3.2 2.6	1.2 1.1	0.59 (NS)
	LACN	Pre-test Post-test	4.7 4.7	1.4 1.3	0.99 (NS)

** = Significant at 0.01 probability level

* = Significant at 0.05 probability level

NS = Not significant.

APPENDIX 4

CHECK-LIST QUESTIONNAIRE ON SPEECH ANXIETY

Please check the statements that are applicable to you by putting this mark X in the appropriate boxes.

I get anxious (nervous) when I

1. ☐ chat with classmates
2. ☐ Chat with my father
3. ☐ Chat with my mother
4. ☐ Chat with my brothers and sisters
5. ☐ Chat with strangers in the motor park
6. ☐ Ask questions in class
7. ☐ Tell a joke before many people

8.  Talk to a large audience about my special project

9.  Address a large crowd on social matters

10.  Tell a salesman what a cheat he is

11.  Tell my close friend how hurt I was about his jokes

12.  Am called upon to handle an important speech

13.  Am involved in speeches at parties

14.  Have to give instructions to subordinates

15.  Have to speak before my superiors

16.  Discover familiar faces in my audience

17.  Look directly at the faces of those in my audience

18.  Address my audience in English

19.  Address my audience in my native language

When I am anxious at speech making situations

20.  I almost forget what to say to the audience

21.  I feel dumb

22.  My heart beats much faster

23.  I sweat profusely

24.  My body quivers

I am anxious at speech making situations

25.  When the room is warm

26.  At the very early part of the speech

27.  For as long as the situation lasts

Answer yes or No to Questions 28 - 31

28.  Are you speech anxious

29.  Will you feel better or will your relationship with others improve if you could speak up the more (especially before a large audience?)

30.  Will you like to cure your speech anxiety?

31. ☐ If yes will you partake in a speech anxiety therapy programme in the Department of Guidance and Counselling, U.I.

32. Please indicate whether you are

Female:

Male:

Christian:

Muslem:

Others:

33. Family Background:

Fathers occupation:

Mothers occupation:

34. Age between:

15 - 20

20 - 25

25 - 30

30 - 35

35 - 40

40 - 45

45 - 50

50 - Above.

35. Name and adress (optional)

_____

_____

APPENDIX 5

STIMULUS - RESPONSE INVENTORY

Print your name, the date, the date of your birth, age, sex, in the blanks provided for this on the next page. After you have completed filling in this blanks, please finish reading the instructions.

This inventory represents a means of studying people's reaction to and attitudes towards various types of situations. On the following page is represented a situation which most people usually experience personally or vacariously through stories, etc. For the situation certain common types of personal reactions and feelings are listed. Indicate in the alternatives on the ANSWER SHEET, representing the five points on the scales shown in pages three through five, the degree to which you would show these reactions and feelings in the situations indicated.

Here is an example:

You are about to go on a roller coaster

Heart beats faster 1 2 3 4 5
Not at all Much faster.

If your heart beats much faster in this situation you would circle alternative 5 on the ANSWER SHEET: If your heart beats somewhat faster, you would circle either alternative 2, 3 or 4 depending on how much faster; if in this situation your heart does not beat faster at all, you circle alternative 1 on the AHSWER SHEET.

If you have no question, please turn to the items on the following pages.

Name: _____

Date of Birth: _____

Age: _____

Sex: _____

Marital Status: _____

Address: _____

_____

_____

THE TIME FOR YOU TO DELIVER A SPEECH ON A VERY IMPORTANT TOPIC TO A VERY LARGE GATHERING HAS COME

1.	My heart beats faster	Not at all	1	2	3	4	5	Much faster
2.	I get an "Uneasy feeling"	None	1	2	3	4	5	Very strongly
3.	My thoughs get disorganised	Not at all	1	2	3	4	5	Very disruptive
4.	I feel happy	Very much	1	2	3	4	5	Not at all
5.	I want to avoid situation	Not at all	1	2	3	4	5	Very much
6.	I begin to sweat	Not at all	1	2	3	4	5	Perspire much
7.	I feel like uminating	Not at all	1	2	3	4	5	Very frequently
8.	I enjoy the challenge	Enjoy much	1	2	3	4	5	Not at all
9.	My mouth gets dry	Not at all	1	2	3	4	5	Very dry
10.	My hands become unsteady	Not at all	1	2	3	4	5	Completely

11.	My voice becomes shaky	Not at all	1	2	3	4	5	Shaky
12.	I love such experiences	Very much	1	2	3	4	5	Not at all
13.	I develop loose bowels	None	1	2	3	4	5	Very much
14.	I develop headache	Not at all	1	2	3	4	5	Very much

APPENDIX 6

RELAXATION INSTRUCTION

(a) Muscle of right hand and lower hand (Make a fist).

(b) Right biceps (push elbow against arm of chair)

(c) Left hand and lower arm (make a fist)

(d) Left bicep (push elbow against arm of chair)

(e) Face (i) Forehead (lift eyebrows as high as you can)

(ii) Upper cheek and nose (squint eyes tightly, wrinkle nose)

(iii) Jaws and lower cheek (bite teeth together and pull corners of your mouth back)

(f) Neck (pull chin downward your chest while trying to prevent it from touching your chest.

(g) Chest and shoulders and upper back (deep breath, hold it, at same time pull shoulder blades together).

(h) Abdomen (make stomach as hard as you can. Tense it up as though you were going to hit yourself in the stomach).

(i) Right upper legs and thigh (lift leg up slightly).

(j) Right calf and right lower leg (pull the toes upward towards your head).

(k) Right foot (point toes (turn foot inwards) and curl toes).

(l) Left upper leg (lift leg up slightly).

(m) Left lower leg (pull the toes upward towards your head).

(n) Left foot (point toes (turn foot inwards) and curl toes).

APPENDIX 7

DEVELOPING RELAXATION SKILLS TENSING AND RELAXING

Set aside a period daily for this relaxation exercise. Record date, your pre-exercise tension level and then listen to the tape following the instructions and performing all the acts as explained in your cassettee.

Record your tension level and any special experiences or difficulties you had during the exercise.

DAY	Record how tense you feel on a scale of 0 to 100:		Note any special feelings (tingling, lightness, etc. or difficulties (wandering mind, interruption, etc.) You had during your exercise today	Note any areas of your body where you sense tension after doing exercise today
	BEFORE YOUR EXERCISE	AFTER YOUR EXERCISE		

APPENDIX 8

CONSTRUCTING A TENSION LADDER: SITUATIONS WHICH CAUSE ANXIETY

INSTRUCTIONS:

The list of tension-producing situations you develop at this point will guide you to use your growing relaxation skills to cope successfully, first in your imagination and then in real life conditions.

Start by summarizing briefly, on the bottom line of the next page, situation which, for you, is pleasant and completely free from anxiety. Notice that the anxiety/tension score already placed at the right is 0 for this situation.

Next, on the top line briefly describe a situation which causes you maximum anxiety. This situation is already scored with an anxiety/tension level of 100%.

Now, on scratch paper, briefly describe up to 18 other situations in your life in which you feel varying levels of anxiety, between 0 and 100%. Include in your description sufficient detail so that you can visualize each situation vividly and accurately. Thus, you should refer to the place it occurs, people involved, and, where appropriate, how soon it will happen, how close you are to it, etc. Remember that each situation should be one which you can realistically expect to experience.

Now, assign approximate anxiety/tension scores to each situation you have described. Remember that you are aiming to have a wide range of scores. Ideally, your list should have situations that are separated by five percentage points or so from each other (e.g. one at 5% a second at 10%, and so on).

Finally, enter each description, keeping it brief, and the accompanying anxiety/tension score on the chart on the next page. Put the situation to which you have given the lowest score (5%) on the next to the bottom line. Then put the next, more bothersome (10%) situation on the line just above, and so on until you have completed your tension ladder.

STEP	PERSONAL TENSION LADDER SITUATION DESCRIPTION	TENSION LEVEL %
20		100%
19		
18		
17		
16		
15		
14		
13		
12		
11		

STEP	PERSONAL TENSION LADDER: SITUATION DESCRIPTION	TENSION LEVEL %
10		
9		
8		
7		
6		
5		
4		
3		
2		
1		0%

APPENDIX 9

USING RELAXATION SKILLS TO COPE IN IMAGINATION WITH TENSION LADDER SITUATIONS (SYSTEMATIC DESENSITIZATION)

Now you are ready to apply your relaxation skills as you imagine each situation you have described on your tension ladder. Start with situation on Step 2 of the ladder. Begin by copying the description in the space provided on the next page. Then spend a few minutes carefully visualizing it. At the first sign of anxiety, use your relaxation skill to calm yourself. Repeat this exercise until you can imagine the situation thoroughly without becoming anxious. This may require several practice attempts. When it no longer bothers you repeat the same procedure for the situation on Step 3, and so on until you reach the top of your ladder.

Set aside a period each day for practice. Record the date and your tension level when first imagining the situation and there after attempting to cope with your anxiety by relaxing. When you are ready to move up a step to the next situation on your tension ladder, draw a horizontal line on this form to separate your description and exercise record from the prior step.

STEP	SITUATION DESCRIPTION	PRACTICE SESSION DATE(S)	TENSION LEVEL ON IMAGINING SITUATION (0 to 100)	TENSION LEVEL AFTER COPYING PRACTICE (0 to 100)

APPENDIX 10

MIXED SCANNING RELAXATION TRAINING PROGRAMME INTRODUCTORY AND ADVANCED INSTRUCTION

Prepared and Spoken

by

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South Lake City.

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Side, one, contains Introductory Instructions - Side two, Advanced Instructions.

These instructions are to help you train yourself in deep muscle relaxation. If you had previous training in relaxation, you may find the procedures differ slightly from the methods you have previously practised, but you should be able to follow the instructions with no difficulty. During their first experiences with

relaxations, people sometimes notice sensations such as tingling, or floating sensations when parts of their body become very deeply relaxed. Sometimes people notice this very quickly and other times it is sometimes after they begin learning relaxation. In any event, this is only mentioned so if you experience this you will not be puzzled. This should simply be regarded as a sign that those muscles are becoming deeply relaxed.

To begin with, settle yourself comfortably in a chair or couch, or lounge that will allow your body to become very deeply relaxed or provide comfortable support for as much of your body as possible. If sitting in a chair, it will usually be better to place your feet flat on the floor so that the weight of your legs is directed straight down along the bones. Allow your hands to rest either on the arm of the chair or comfortably in your lap which ever is the easiest position for them to naturally settle into. Let your head rest against the back of the chair or if the chair is not high enough to support your head, position your head above your body so that it tends to balance on its own accord.

Now, close your eyes to remove all visual stimulation. We will begin by focussing attention on the muscles of your arms and hands. To do this, I want you to introduce tension all along both of your arms and make a fist out of your hands, introduce some moderate

amount of tension, do not exhaust yorself to the point that your arms quiver, then maintain that tension, and notice the pulling tightness. Now, gently release it, and carefully make a mental note of the sensations as you release the tension. Allow the sensation to continue. Allow your arms and your hands to experience the deepening and extending of the sensation of relaxation - very good. Now in a moment we will repeat the exercise re-establishing tension in your arms and hands. However, this time as you tense up the muscles of your arms and hands rather than making a fist, extend your fingers as far as they can extend themselves out, even attempt to bend your finger backward, pull your hand up backward, bend your waist backward; establish tension in your arms and hands in this manner -- Notice the pull on the muscles, maintain the tightness. Now let go. Let go.

You should study the sense of letting go. Just allow all the muscles to release their tension. Do not try to force the relaxation. Just allow it to happen. Make a mental note of the sensation of releasing tension. When you practice by yourself without a tape recording I will suggest that you utilise whatever

tensing method is more effective for you in releasing the tension; Now allowing your arms and hands to remain very deeply relaxed, let us concentrate on the musculature of your face and head, beginning with the forehead. This time, I want you to apply tension to the forehead in several ways initially. First, by moving your eyebrow down, frowning as if you are going to pull them down over your eyeballs - Now move them up, up towards your hair line as if to run them together. Now release them - just release all tension. Just let the muscles move out; let them become more and more smooth so that each small muscle group lets go all of its tension. If after a brief period you notice further tension in that muscle group, very briefly, repeat the tension exercise. Then imagine something cool and smooth, just gently smoothing out your forehead. As soon as those muscles seem very comfortably relaxed just enjoy that for a few moments, then we go on to more of the facial muscles.

To proceed, I want you to squint your eyes tight as if you are going out to a dust storm and at the same time pull the muscles of your mouth back toward your ears so that your mouth makes a wide smile; pull the corners of your mouth back, squint your eyes; hold it for little bit now. Just let go. Notice that feeling now - Study it, just let it continue, just let all of those muscles release

their tension. Let all of your facial muscles just let go all of their tension - very good, very good.

Now, in a moment we will proceed with some of the muscles around the jaw and tongue. To develop control over release of tension in those muscles begin by clamping your jaw shut tight, pushing your tongue up against the roof of your mouth, hold them tight for a while. Now let go. Just let the jaws go. Just let all the tension go. Notice the easing, the easing, the easing of the tension as you release it. Make good mental note of that feeling. Just let it continue until all the tension is released. Your mouth and your lips will tend to path. Your mouth would be opened very slightly, just let it open. As all of the tension is released you will tend to sage; just let it go ahead - very good.

Now to the muscles of the Neck. We use several exercises to establish your awareness of the tensions in the neck. Let's begin by having you pull your head down into your shoulders as if you were a tortoise. Pull that head down in there; pull it for a little bit; now try extending it; extend your head way out; try get it out as far as you can. Now Twist it a little bit round to get all of those muscles stretched. Now let go. Just let go. Note the feeling - just let all of those muscles release themselves now. Let those muscles become very deeply relaxed - very good, very good.

Now, your arms and hands, your face, your jaws, your neck are very deeply relaxed. Just let them remain very comfortably relaxed, very deeply relaxed while we proceed to other muscle groups. Now let's move to your shoulders. The exercise with your shoulders will begin this way. Sort of visualize them as if they were the binding of a book using it to pull them forward up around your chest - that's right; pull your forehead, now pull them back, pull them right around back, pull all those muscle. Now let them go. Just let them go. Notice the feeling of letting go. Always notice the feeling of tightness and then the feeling of release as you let go. The ability to release at mental command is the skill you want to develop. Just let all the tension go. That is fine.

Now, we will proceed to the chest and your back muscles. Take a very deep breath and them begin tightening the chest. Do not apply so much pressure that you experience uncomfortable tightness and pressure on the head. Just tighten those muscles all around your chest. Now, just release - that's it. Just let them go just let all of those muscles release the tension. Concentrate on that feeling. As you practice different times it may be better to focus your attention one time on the back muscle, another time

on the muscle across the front of your chest. Perhaps another time on the muscles from the side of your chest. Notice these feelings. Study the sensation as you release.

Now, proceeding to the muscles in the stomach and around the small of the back. In the same manner, take a deep breath, hold it and start tightening up all those muscles, muscles in the back, muscle across the front of your stomach, tighten those all up. Now let go. Notice the feeling. Notice the sensation of release. Make, a careful mental notice of it. Now, more and more of your body is becoming more deeply relaxed and as you do this, as you proceed in relaxing so that more portions of your body tend to become more and more relaxed too; even more relaxed than you were able to attain with them when you first began. Enjoy that feeling. Alright.

Now let's proceed to your legs. We will focus our attention on both complete lower extremes at once just as we did with your arms and hands. Now, tighten up the muscles in your backs all around your heaps. Your upper legs, your lower legs, your feet, your toes, get those all together hold it for a little bit, now let go; that's it. Notice the warm sense of relaxation. Just let your whole body become warmly, comfortably, deeply relaxed. Now, just let that relaxation deepen. As such muscle group, each muscle fibre, releases the tension very comfortably - just allow it go;don't press it, don't push it,

don't struggle with it - just allow all the tension to be released, Enjoy that feeling. It's a very pleasant, very comfortable feeling - good.

It will be very useful for you to develop skills in mentally scanning all of your muscle groups without physical movement. But mentally, make a checklist to see if habitually the tension has re-established itself by now. Check your hands, your arms, your shoulders, your neck, the muscles on your face and your forehead. Even your eyes just let them relax. If you notice any tendency of your eyes to want to twitch or now one thing you might do is, with your eye lids closed, think of looking up, up through your brow over one side, down on the other side then after that, just let your eyeball rest. Just let them rest. You can even release all of the tension in those very small muscles. The muscles that control your eyebrows. Now continue through the checklist; your face, your jaw, your tongue, down your back and chest, your stomach, your back, your heaps, your thigh, just all the way down. If at any point you notice that habitually tension has re-established itself in any muscle group, focus your attention on that muscle group and mentally instruct it to release. You may need an occasion to practice re-establishing the connnection between your mental instructions and

the release of tension in that particular muscle area. When you are deeply relaxed, a very comfortable feeling, just enjoy it, just let all the tension remain drained out so that your entire body is very comfortably relaxed.

When you are so very deeply relaxed your mind seems to be free of thoughts for concern. Remain awake as it is through maintaining at least some level of mental alertness that you can maintain the deeply relaxed stage. Only give yourself the task of checking over your muscle system. Just scan them point by point every now and then to make certain that the entire body remains very deeply relaxed - very good. Now, it is important that when you practice relaxation you do it the majority of the time without the tape or assistance so that you develop more and more, the ability to assume that self direction of the relaxation. When you practice by yourself, you may wish to maintain deep relaxation for a somewhat longer period of time. When ready, you may arouse yourself the following way - rouse yourself by re-establishing muscle tuneness through your body beginning with the extremities; start by moving your hands, your arms, your legs, now your shoulders and your head - move them around stretch a bit, re-establish muscle tuneness into the system to your body, your chest; everything. Now as the normal muscle tuneness return: then you will be able to arise very

refreshing, very comfortable, very pleasant experience and have a good day.

APPENDIX 11

SELF MODIFICATION OF ANXIETY

Client Instructions. Prepared and spoken by Marvin R. Goldfried, Ph.D., Professor of Psychology, State University of New York at Stonybrook. This presentation appears in Volume 2 of the audio journal Behaviour Therapy - Techniques, principles and patient aids, edited by Cyril M. Franks, Ph.D. Published by Biomonitoring Applications Incorporated, New York.

The very idea of learning to deal with your own anxieties and fears may seem somewhat unusual or strange to you. In working with anxious clients, I often come across such comments as "Well, it's my nature to be a nervous person" or "It's just the way that I am. I have always been that way and it's just too late for me to change". This whole line of thinking, that nothing can be done may very well have resulted from your attempts to reduce your anxiety on your own, which could have failed in the past. If you have tried and failed, you may be inclined to feel that nothing can really work. Past difficulties in learning to reduce your anxiety may very well have been due to techniques that were really not appropriate or effective or perhaps if they were potentially effective, may have been used unsystematically or may not have been used over a long enough period of time. If you are skeptical for whatever reason, it's important to recognize at the very outset of this tape, that it is possible for most people to learn

to control and reduce their anxieties.

Notice that the title of this tape says Self Modification of Anxiety. All too often, people who seek professional help in reducing their anxiety approach a therapist much as they would approach a physician to deal with some kind of physical problem. That is, they come to the therapist, describe the problem and sit back and wait for something to be done to them. In fact, what we are talking about here works the other way around. It's you, yourself, who can and must actually bring about the appropriate change. This is the orientation that I will be describing on this tape. Through it you can be able to, as many other people have, to learn some skills for reducing your anxiety. The instructions and pointers I will be giving will help you to learn this important new skill. Once you have learned it, these skills will become part of you. It is much like the situation you see in trying to teach a child to ride a two wheel bike. Here, external support such as training wheels, specific instructions and holding the bicycle for the child are needed initially. But once you sense that the child is learning to gain balance and has learned to move without difficulty, you gradually remove these external supports and let the child go off alone. Although you provided some initial help and guidance the ultimate objective is the child's independence. This is what I hope to

provide you with, in learning to get you to cope with your own anxieties. If I sound optimistic, it's because I have reason to sound this way. My own clinical experience, as well as a good deal of research has shown that we do currently have techniques that are effective in helping people to leran to manage and reduce their own anxieties and fears. But let me add a note of caution. Quite often anxiety reactions are caused by something physical, either by something within the body, for example a hormonal imbalance or perhaps problems with one's diet. Under such circumstance, you would hardly expect self modification procedures for anxiety reduction to do the job. As a result, I would caution you as I caution any client to receive a thorough physical examination in order to make certain that none of the problems you are experiencing has a physical basis. If you are currently seeing a psychotherapist, I would strongly urge that you ask your therapist whether this procedure that is described on this tape is consistent with the goals and orientations of your therapy. You may in fact be using the tape in conjuction with your therapy or at the suggestion of your therapist. If this is the case, I think that you are at a very distinct advantage. For while it is possible to learn techniques for controlling anxiety, this process has potential pitfalls, and the

assistant of a trained professional may be important to help you overcome such problems if they arise.

No single technique is appropriate for all individuals and the generally effective methods that I will be describing may or may not be adequate in your case. Discussing with your therapist the nature of your anxieties may reveal that additional methods would be beneficial to you.

Can you use this tape completely on your own? It depends on the nature of your problem, its severity, how long you have been experiencing your anxiety and a number of other factors. People differ very much in how quickly or easily that can learn to cope with their anxiety. Although I will be describing some of these procedures in detail, you will have to exert a genuine effort. To start with you must understand what the learning process is like. In many respects, the methods I will be teaching you are similar to those involved in any other skill learning you've experienced. A good example is learning to drive a car, where prior to actually driving a car you may have been struck with how complicated the task would be. Perhaps you even doubted that you could even master it at all. If you were fortunate enough to have someone guide you, then certainly the task became that much easier. Like learning any kind

of skill, it requires a great deal of practice and persistence. You should not become too frustrated or pessimistic if you encounter some initial difficulties. There is really little mystery in learning to drive a car. Almost anybody can do it, provided that he or she receives correct instructions, practices conscientiously, tolerates initial frustrations and difficulties, and presses on in the learning. I feel that this is the same attitude that you should bring to bear in learning the skills for coping with anxieties.

Now when we talk about anxiety, we mean a number of different things. Anxiety is experienced differently by different people. Some have obvious physiological reactions to anxiety such as heart palpitations, excessive perspiration, constipation, diarrhea, headaches, or backaches. Some find that their thinking processes are affected - that their minds wander - that they are continually on edge, jittery. Some may experience sleep or eating problems or may find that they "snap" at other people and are generally very irritable. Some people may experience certain "phobias" that interfere with their lives - they may be afraid of crowds and closed places, heights, animals, or being away from home. Or they may feel a frequent vague sense of dread that something terrible is going to happen. These experiences can all indicate some form of anxiety.

Just as anxiety can take different forms its cause can also vary. Anxiety often results from current situations which past experience has you to find unpleasant. In other words you may have learned automatically to associate worry, concern or fear with particular situations so that whenever they arise you become anxious without even thinking about it. A common example may be the continuing fear adults feel for dogs because someone they know was once seriously bitten. You can probably think of specific situations or events in your own life which you have learned to become anxious about in a similar way. Sometimes of course there may be good reasons to maintain your anxiety reaction, since certain situations may be inherently dangerous such as feeding bears in the National Park from your hand. More often than not, however, learned reactions of this kind are no longer appropriate or constructive and therefore cause you much unnecessary distress. In such situations your anxiety is in a real sense unrealistic and you would be well advised to unlearn your negative reactions and conditions which in fact do not really threaten your well being. An effective way of learning to overcome such automatic anxiety reactions is to identify a relative situation which you find midly upsetting and under proper conditions to expose

yourself to it repeatedly until your anxiety becomes manageable. Then you are ready to move to another anxiety related situation which upsets you a bit more than the first. Again by confronting that situation repeatedly you can learn to reduce and control your anxiety. By continuing such experiences until you feel relatively comfortable in most situations associated with your original fear or concern you will develop what we call a coping skill which is kind of a new self mastery. This a most valuable effective tool for overcoming significant causes of anxiety. Later in this tape I shall explain in more detail how you can achieve and use it.

I'd like to turn now to a second common cause of anxiety, namely, things that we tell ourselves, what we think about when we're in certain kinds of situations. Most often this seems to occur in social situations where we are overly concerned about being evaluated by others. Here we often create our own source of anxiety by the way we think about the situation. The second half of this tape will be devoted to technique for learning to recognize some of these anxiety provoking thoughts and to describe methods for eliminating them. Although we will not go into detail about them here there are two other causes of anxiety of which we should be aware. Many people experience anxiety in certain situations but

because they have difficulty in knowing how to respond. In such cases, it seems that the most appropriate method for reducing anxiety would be to learn a more effective way of relating to people. This involves developing more effective social skills. The bibliography accompanying this tape provides useful references for self improvement of this type.

A fourth possible source of anxiety is your environment. Many people are anxious primarily because they find themselves in a bad or unsatisfying life situation. Their jobs may make very unreasonable demands on their time or efforts. They may have a very unreasonable boss or for financial reasons they may have to work very long hours, at more than one job - be always on the go and continually experience excessive pressure. They may find themselves in a very unhappy family situation which produces stress and anxiety. Under these circumstances some change in the environment would seem to be in order. To select the best change for the potential benefits and hazards associated with the particular change frequently requires professional help. The two skills that we'll be focussing on here involve first the use of voluntary relaxation to cope with anxiety. This skill is most appropriate for dealing with the first cause of anxiety that I described - that is learned or

conditioned fears or "phobia". The second technique is learning to more realistically evaluate and correct your thinking about certain kinds of social situations which make you anxious. This skill is most appropriate to overcome the second type of anxiety I described. Anxiety resulting from your conscious concerns about what other people think about you - how they may be evaluating you.

Four basic steps are required to develop these two skills to cope with your anxiety. One is to learn the skill. Two is to outline a series of situations in which you hope to apply it. Starting from a situation which is only slightly upsetting and working up to situations which gradually become more and more upsetting. Setting it off much like a staircase where each step involves the amount of tension that a situation would create.

The third step is trying to apply this skill that you've learned to each of these situations as a trial run. The final step is applying these coping skills to your real life situation. Let's begin with the use of relaxation as a coping skill for reducing anxiety and start with Step 1. Learning the Skill. In my own clinical work I prefer a method where you first learn the technique of deep-muscle relaxation and then use this new skill to reduce your anxiety in real life situations. The relaxation technique I suggest has three steps.

First with systematic external instruction you learn to tense and then relax muscles throughout your body. Second, again using external instructions you practice relaxing your muscles without prior tensing. Finally you develop your own personal method for relaxing. At this point you will have achieved sufficient skill to use your relaxation for coping with anxiety in real life situations. I 've found in my own clinical work that taped instructions tend to be fairly effective for learning deep muscle relaxation. The accompanying bibliography cites an easy-to-follow programme which contains both tension and relaxation and letting go only exercises. If you are receiving professional help for your anxiety problem your therapist may recommend some other standard programme or may wish to make tapes specifically for you. In any case you should initially set aside about a half hour a day for practice. As you become better at it you will find that you need less time. By the end of the training you should be able to relax yourself fairly deeply without the external instructions. Now lets examine each step in the relaxation learning. Alternatively tensing and relaxing your muscles teaches you to become more aware of how tension and relaxation really feel and to recognize more easily in your daily life when you are bothered or when you are at ease. As you tense your muscles you

experience the sensations of tension that occur as you start to become anxious in real life situations. In other words this part of the first exercise helps you to tune into your body so you can better sense unwanted tension when it starts to occur. On the other hand, when you let go of your muscles during the training procedure you will start to develop a capacity to react to anxiety provoking experiences with a calming relaxation response. I would recommend that you practice this tension relaxation daily preferably at the same time and the same place. It can be in a comfortable overstuffed chair, where you can just sink in and not have to support any part of your body or it can be in your bed where you can just lie back, perhaps tucking a pillow beneath each arm so that you can get in as comfortable position as possible. In any even it should be a setting where there are no noises and no distractions where you are left completely alone for that period of time when you are practising. To chart your progress you should keep careful records. The sample form that accompanies this tape provides a useful guide for your daily record keeping. At this first stage you should indicate how tense you are both before and after going through relaxation instructions each time. A simple method of guaging the amount of tension is to use the percentage of anxiety that you experience ranging from zero to one hundred. A typical example

of zero percent anxiety is where you are in a very very comfortable deeply relaxed state, feeling not a care in the world. An example of this might be if you were down in the Carribean for a month's vacation where you have obligations, no responsibilities, lying on the beach on a nice warm day and a cool breeze is blowing over your body - the sand feels good under you and quiet sounds of the sea lapping up onto the shore provides you with a nice soothing background. You're just enjoying and experiencing the good feelings. Or you might think of another pleasant situation. In any even we count that as zero. At the other end of the yardstick we have 100% and that is as tense as you can really ever experience being in. If you happen to be afraid of heights it might involve your standing on top of a very very tall building with the window open looking all the way down. If you are very anxious about speaking in public the situation may involve your standing in front of several hundred people about to give a talk and you find yourself having difficulty reading your notes. Most of us are somewhere between 100 percent and zero percent tension during the course of our day. You may find that you start off by giving relaxation training session at a level of about 50 or if you are particularly anxious that day you may be higher - 75 - 80 or perhaps lower than that. After practising your muscle tensing and relaxing exercise you should note the percentage of tension.

You're likely now to feel less tense than at the start but not always. You should be aware that there are very wide individual differences in how quickly you can expect to learn to relax. In my clinical experience I have found that the vast majority of individuals can learn to be quite good after practising on a regular basis for anywhere between 1-2 months. If you find that you have practiced for two or more months in the use of relaxation with little effect then obviously the method is either not appropriate for your or there are certain problems you are having in carrying out the exercise. I would then very strongly urge that you seek out professional assistance to help you overcome the difficulty you may be having. There are certain common problems that people do experience. For example, some individuals become somewhat uneasy about the sensations of relaxation because they arre so very novel to them. Often what happens is that your body feels different because your muscles are no longer tense. It might be that you experience being very light or very tingly, or heavy or warm. Or you may experience a floating feeling. These experiences of relaxation vary from person to person and I would suggest that you let yourself experience whatever feelings you have. Just go with these sensations and let them happen. The unusual feelings people typically have are to be expected and are a normal by-product of relaxation. If you tune into them and

notice their pleasant aspects you can enhance the good feeling that you have as you learn to relax. It is important to also realize that as you relax you're really not losing control over yourself but rather you are gaining control. After all you are the one who is following the instructions. No one is relaxing you. You may be hearing the instructions from another person but ultimately you are in control, and ultimately as you became more skilled at relaxation you will be controlling yourself much more effectively in real life situations. A frequent problem in learning to relax is that your mind may wander. At first it may be hard to fucs on the instructions for relaxation. If you mind is not fully tuned into what is being described and what you are doing, then the effects of relaxation will be diminished. If you find that your mind does wander, recognize that it is to be expected initially and that you should make every effort to refocus your attention on the instructions. As the instructions provide for tensing different muscles before relaxing them you should be aware that the purpose of the tension is not to strain yourself but rather to experience what it feels like to be tense. If you have a trick knee or sore back you should be particularly careful not to strain that particular part of your body.

Getting back to record keeping - I would suggest that you keep a daily log using the form that accompanies this tape. As you can see you should indicate the date you practice, the percentage of tension you felt before your exercise, the percentage after you finish the experience and plus any problems you notice such as mind wandering, particular tension in different parts of your body and so forth. The purpose of noting these things is that the next time you will be reminded to devote extra attention to overcoming these difficulties. After two or three weeks of daily practice you will probably notice that the percentage of tension after your exercise goes down perhaps into the twenties, perhaps even less. This is an indication that you are ready to move on to the next phase of relaxation training which involves learning to simply let go of your muscles without initially tensing them. This gets closer to what eventually what you are going to be doing in a real life situation. Recall that the purpose of this is to learn the skills to cope with tension in those daily situations to which you react automatically with anxiety. Times when you body tenses up without your thinking about. In such situations you are already tense when this next phase of relaxation training comes closer to what you are eventually going to do. Namely recognize tension when it is building and learning to relax it away before it gets out of hand.

I would suggest that you continue to keep your record of percentage of tension before and after this more advanced training exercise, plus any other experiences you may have.

As you notice that the percentage of tension regularly gets down into the 20's or below after listening to this more advanced tape you are then ready to move on to the next training phase which involves taking approximately ten minutes before putting on the tape and just letting to and relaxing on your own. In this phase just think of the different parts of the body - notice any tension and let go, providing yourself with your own instructions for relaxation. After ten minutes of this then put on the tape to provide external instructions for relaxation without initial tensing. At this point you should be keeping a record of anxiety level at 3 points in time, the first being before you lie down to relax on your own, the second after about ten minutes of relaxing on your own but not yet having turned on the tape and the third after having listened to the tape that gives instructions for letting go only. As you find that your anxiety level at point 2 regularly gets down to the 20's or below and also that the tape for relaxation instruction has minimal effect on relaxing you even further you then know that the tape is not adding to what you can already do on your own. When you reached that stage you no longer need the external

instructions for relaxation. You will then be able to eliminate the tape and probably also be at the point where you can start to use relaxation for real coping purposes. I should emphasize that during the whole process of listening to relaxation instructions the primary purpose is not to cope with whatever tension you may be having during that day but rather learning the skill of relaxation. And while it's true that you may be experiencing a deeper state of relaxation and even feel good after listenining to the tape you should also be aware that the primary purpose is to learn the technique of relaxation. Only after t you get good at it can you hope to really put it to use.

Let's turn now to step two which is to outline a series of situations that create anxiety. This is a step that can be taken at the same time as you are learning to relax. What the second step involves is to establish a list of situations in your life that can be ranked according to the amount of anxiety or tension they cause you. Start with a pleasant scene. The one that is completely tension free - zero percent anxiety. Then identify a situation which produces maximum anxiety - the one that you can give a score of 100%. As I mentioned to you earlier if you are afraid of heights the situation could involve standing on top of a tall

building looking out the window. Simply pick whatever situation causes you greatest anxiety and range that 100. Then try to identify a list of other situations between zero 100 so that there are no large percentage steps between one situation and the next in your tension ladder. In other words try not to have a space of more than may be five or ten percent anxiety between situation 1 and situation 2 between situation 2 and 3 and so on. Each of these situations should reflect events that really could happen to you in actual life and preferably situations that you can actively place yourself in. For example if you have a choice between having a stranger come over and speak to you at a party versus your going over to speak to a stranger, select the second situation because in real life you cam choose to place yourself in that situation and thereby oope with it. For each of these situations write a one sentence description that includes the place and the people involved so that you can clearly imagine it is as if it were occurrihg to you right at the time. An example might be I'm preparing for a speech that I have to deliver in fron of a very large audience in a week's time. I am sitting at my desk looking over my notes. Be sure that each situation is the kind that you can visualize and vividly imagine. As one way of increasing or decreasing the amount of anxiety any situation causes

you, you can vary how close you are to the fearful situation in time. For example a situation involving a speech can be made more and more anxiety-provoking as the time of the speech gets closer and closer. How closely you are physically to the feared situation can also be used to describe where to place the situation on your tention ladder. If you are afraid of dogs you are more likely to be afraid if you are standing next to the dog then if the dog is across the street. Still another way to vary the nature of the situation is by changing differ at parts of it - that is the dog can be a large dog or a small dog, the audience to which you are giving a speech can be small and friendly, small and unfriendly, large and friendly, or large and unfriendly. Once you are good at relaxing, that is, once you can site in a comfortable chair and within five minutes you are quite relaxed, you are ready for step three.

This involves imagining each situation on your staircase starting from the lowest. Here you should try to imagine that you've in the situation as if it is occuring to you right at the moment. Visualize the details as vividly as possible sence any tension that develops, continue to experience the situation but at the same time attempt to relax away the tension. For example, if you are sitting at your desk looking over your notes while preparing for a speech and you feel yourself getting tense you should then

imagine yourself sitting at your desk and relaxing, letting go of the tension as you can continue to look over your notes. You should continue to imagine yourself this way until you can successfully relax away the tension. Don't necessarily expect to achieve this the first time - quite the contrary. You should count on imagining yourself in each situation a number of times until you can finally do it without experiencing any tension. Once you are able to do this with some ease you are then ready to move up to the next step of your ladder or staricase or situations and repeat the same process until one stop at a time you are able in your imagination to cope with your anxiety. When you've completed practice in imagination, when you are able to feel comfortable in imagining even your 100% situation you are ready for the fourth and final stage which is actually using your relaxation skills to cope with anxiety in real life. In this fourth and most crucial step your task is to repeat what you did in step three but in actual situations, starting with the least anxiety producing situation and working your way up to the more anxiety producing situation. I don't mean that you should necessarily lie down and relax when you experience the anxiety but rather as you've done in your imagination stay in the situations, such as sitting at your desk or standing in front of an audience and

and just let go of whatever tension you are experiencing. By the time you've reached this fourth and final stage you will have had ample practice in your imagination at doing precisely this. However, don't expect to enter these real situations in a completely anxiety-free state. You probably will experience some tension and your task is to recognize when it occurs and respond to it by relaxing it away. You should also anticipate that you won't always be successful. You may have placed yourself in a given situation a number of times before you can successfully reduce your tension, thus it is essential that you focus on low-level situations before moving up to more difficult ones. In order to keep close tape on progress, I suggest that you record in your notebook your experiences and success in each of these situations. In keeping these records you can follow the form which accompanies this tape.

Now let's turn to the second basic method for coping with tension, namely, to change our thinking in stressful situations so that you can more realistically view these situations and eliminate any misconceptions that may create the tension. It is well accepted that a person's thinking influences as being dangerous you're likely to react with anxiety. For example, somebody points a gun at you, you are likely to become very apprehensive. But there is really nothing in the gun itself which should make you

feel anxious that the gun could go off, that it could hurt you or perhaps even kill you that causes you the anxiety - not the physical object itself. If you had never seen a gun before in your life and it was pointed at you you'd probably not react with much apprehension, because your thoughts about the gun would be different. Now when I say your thoughts about the gun or what you think or tell yourself about the situation - I don't necessarily mean that you site there and deliberately think things through and then become anxious. Instead what occurs is a more or less automatic thought which nonetheless has an emotional result. Now there's nothing wrong with being anxious when somebody points a gun at you and there's nothing inappropriate about being anxious when there's real danger. Most of your anxiety is when they become problems in your life, however, occur when you interpret situations as being dangerous, when they are really not dangerous. For example two individuals may be in the same discussion group - one person may feel very relaxed and the other person may feel very anxious. The relaxed person may be thinking "Gee, it's kind of nice to be sitting around here and exchanging views with other". The other person may be thinking "Gee, I have to be really careful expressing my point of view. If I do what are the other people going to think. If I sound foolish they're going to think terrible things about me and that's going to be very upsetting". The different thinking by each person produces a different emotional

reaction. It's the same group discussion and there's really nothing about the group itself that's different though that creates the anxiety. There are frequently individuals who tend to be anxious in social situations - where there's a possibility - they're going to be evaluated or judged by others, worry to the point where they view situations as really dangers perhaps unrealistically so. It's their view of the situation - what they tell themselves that makes them anxious. However, what they are telling themselves about the situation may not be realistic. Therefore the method for learning to cope with such situation is by learning to more realistically evaluate the situation and put it into a more appropriate perspective.

I'd like to outline the four steps that can be used in learning how to realistically re-evaluate potentially upsetting situations. The four steps in many ways parallel the steps for using relaxation as a coping skill. Step 1 involves learning how to put things in to more realistic perspective. As you will see, this skill is not all that difficult. You have probably experienced being in a situation and getting very, very upset about it. Perhaps you had problems at work or had difficulties with a spouse or very close friend where at the time, you were very upset. You may have even thought that your life would never be the same again, that it was

really a horrible situation - really catastrophic. Now, however, when you look back at the situation with hindsight you may be able to more realistically evaluate what went on and perhaps even realize that it did't warrant getting so upset over. So everyone has the ability at a later time to put such situations into a more realistic perspective. You may have also found that you have the ability to be realistic when it doesn't involve yourself. There's an ecellent book that discusses this whole issue. It's written by Albert Ellis and Robert Harper and is entitled A New Guide to Rational Living. It's available in paperback and I would very strongly recommend that you read it to see how some of the cases and illustrations they describe might constructively apply to your own life.

Working now on this initial step - Learning of the Skill- I would like to have you test yourself in your own ability to see things in a realistic way. What I'll do is to describe an unrealistic one. In other words, why is it illogical? Why is it unreasonable? Why is it self-defeating? Try to imagine that you are trying to convince someone that their idea is unreasonable. I'd like you now to stop the tape and get pencil and paper so that you can make a list of separate reasons for why the belief is unreasonable. OK -- now I'd like you to listen to the belief that I'll describe and

try to write down as many separate reasons as possible - hopefully 10 or more if you can as to why this statement that I am going to describe to you is unreasonable. The belief is as follows: It is absolutely necdessary that I be approved of and loved by everyone in everything I do and for everything I say. Everybody must love me and must approve of me and if they don't that means that I am totally worthless as an individual.

Go back now and listen to that statement again. Listen to it several times if need be and make a list of counter arguments that you could offer to point out why this attitude does not make sense. Stop the tape at this point after having listened to that statement at least twice and write out your list. OK - now your list can have a variety of different thoughts to it. Le me give you several examples. You might say - well people differ from each other and its never possible for a person to please everybody, or everybody has different opinions and no one opinion is necessarily better than another; or another person may not approve or agree with you because they have their own problems. They may be concerned about something else. Or if you agreed with everyone - in the long run you're going to lose other people's respect - not gain it. Or if you try to please everyone all the time you are going to end up displeasing yourself. Or if other people disagree with you that doesn't mean that they dislike you or if in

fact other people do dislike you it doesn't necessarily mean that you are a bad person. Or even people who really love you will never be able to approve of everything you do. Or if you yourself don't approve of everything other people do why should you expect others to approve of everything you do. These examples may help you to develop you own list of counter arguments. I would like you now to stop the tape again and compare your own list of 10 or more reasons for not accepting this statement with the list of reasons that I have just given. OK - now before showing you how to use this list let me describe a second unreasonable belief. Again I would like you to listen to it a few times and list counter arguments to that belief. The belief is as follows: It is absolutely necessary that I be perfect in everything I do. If I am anywhere less than totally perfect even in any one thing, then I am totally worthless as an individual.

You can now stop the tape and make a list of reasons why it is an unreasonable belief. Again your list can include a number of different things. Let me give you some examples:

There's just not enough time available for a person to be perfect in everything because if I tried to be perfect in one thing I am going to take away time from doing something else. Or people differ in their abilities. It's not unreasonable to expect a person to have

the ability to do everything or even when you have the ability and even when you have time to do any one task you still can't achieve perfection because there will always be room for improvement. Or if you always expect to achieve perfection you are going to be continually frustrated and you are never going to give yourself appropriate credit. Or if you expect perfection you may prevent yourself from doing things because you are afraid you are not going to achieve perfection in which case you end up doing nothing rather than something well. Or people who admit to not being perfect are generally non-threatening to others - can get along with others quite well and have very satisfactory relationships with others. Or because somebody does something better than you does not necessarily mean that he or she is a better person or you cannot always expect to even do things as well as you have in the past because you might be distracted by other thoughts or might be tired you may not be feeling well so it is unreasonable, therefore, to expect that you are going to be perfect or that you are going to be consistent all the time.

OK - I'd like you to stop the tape now and compare these arrangements that I have given with your own list and perhaps add anything to your list that you may feel is relevant or that you agree with. Before continuing let me emphasize that I am not imply

that you have been thinking in these extreme unrealistic ways that I presented with these two beliefs. I presented these ideas in an extreme form simply so that it would be easier for you to come up with more realistic thoughts. This is the style of thinking that eventually you can use when you are feeling upset or anxious. As you develop this skill you will be better able to cope with situations by seeing them in a more realistic way. In order to be able to use your ability to think realistically I suggest that you take your list of realistic arguments and change all the yous to "I's" and all the persons to "me". In other words, change around each statement so that it becomes something you can tell yourself. Stop the tape again now and take some time to do this. Some of you may be thinking, well I know there are situations where I tend to blow things out of perspective and I know that I am overly cautioning myself at times and I have this list of reasons why I shouldn't think this way and even though I know all these things, I am not sure if I can see how this is going to affect how I feel. Well, simply knowing these things will not help you to change. Knowing how to relax doesn't make you a relaxed person unless you use your skill of relaxation when you need it - when you are tense. Similarly having the ability to put things in a realistic perspective does you no good unless you learn to put that ability to use when you are

feeling upset. And to do this we move on now to step two.

Step two parallels step two associated with using relaxation as a coping skill which is outlining a list of situations starting from least upsetting ones and moving up to more upsetting situations. Situations where you may be overly concerned about how other people respond to you - what they may be thinking of you. Sometimes where you may be overly concerned about doing well, about doing a good job and where the successive concern makes you unnecessarily anxious. Such situations involve social gatherings, your work where you are concerned about just the perfect job that is done, situations around the house where you are overly concerned and overly perfectionistic about sometimes. Or at times where you are being evaluated, examined or tested by others. As in applying relaxation skills, here, you should again develop a staircase of situations ranging from less upsetting to more upsetting situations - from 0% to 100%. Once you have listed these situations you are now ready for step 3; getting some initial practice in reducing your anxiety.

Recall in coping by means of relaxation techniques I suggested that you imagine several situations starting from the least upsetting noting any tension as you visualize being in the situation and then relaxing away the tension. Now in learning to use your ability to

think things through, I'd like you to imagine yourself in a situation, in a situation you have listed starting again from the least upsetting ones and while still in the imagining situation tune into any feelings of tension or any thoughts such as when "I must do something" or even "I can't possible do this". These feelings of tension and these thoughts should serve as a signal to stp and question yourself what you may be thinking about in this situation that is upsetting you. In your imagination stay in the situation so that you are still experiencing it but now imagine yourself thinking things through. I will tell you how I might do it. Let me give you an example. I am imagining myself in a discussion group with other people and I am going to be thinking out loud to tell you how I can tune into the thoughts that are upsetting me and then I will also show you how I am trying to put them into a more realistic perspective.

OK - how I'm imagining myself in a group and I am being very quiet. Other people seem to be doing all the talking. They're making points saying things that I thought of saying but somehow I was just too uptight to say. And I feel very anxious and nervous and I can't possibly speak up. Hold on a minute, let me see if I can figure out what I'm thinking that's upsetting me. I can't say anything because - because I'm afraid that if I say something that it's

not going to sound right. Why does this upset me? That upsets me because - because I guess I'm afraid that other people will think that I'm foolish or maybe they'll disagree with me. May be they'll think my oinion isn't a good one and why does that upset me? Let's see. I find that upsetting because I don't want people to think badly of me, I don't want people to disagree with me. And if they did disagree with me - why would that upset me? I guess may be it's that I think that others have to agree with me. They have to like me in all situations - to approve of what I say. But yet, that doesn't make sense. Let me think about that in a more realistic way. What are the chances that other people are going to think these negative thoughts about me if I join in the conversation. I'd say the chances are probably very slim. I mean after all these are people I know. They do seem to like me and I like them so they probably won't react that way at all. That makes me feel a little bit comfortable but what if they do. Let me suppose for a minute that they do think these things - these terrible things. How can I put that into a more realistic perspective. I do know that other people disagree with me but that doesn't mean that they're right or better than me, or they're worse than me. It simply may be a matter of disagreement. It happens often, it's normal. Besides if somebody thinks that I said something foolish that doesn't make me

foolsih, doesn't make me dumb. Another person's thoughts don't make me anything - another whether vain or myself. I know that I have my own ideas and that I have a legitimate opinion. I'm a person and I have a right to my own opinion. OK - I'm still imagining myself in a situation - I haven't said anything yet but somehow I'm feeling a little bit more comfortable - a little less uptight - as I start thinking that the chances are nothing bad is going to be that terrible anyway. OK - now I'd like you to notice that I did in this situation. First of all I recognized my anxiety and also the thought that that I couldn't possible speak up. I then used this as a signal for me to stop and question myself about the thoughts that might be upsetting me. At first I didn't get to the route of my upsets - I was very general - I just said that I was concerned about how I would sound. I kept asking myself the question - why would that upset me? I then tried to finish the sentence - that would upset me because - and I gave myself another reason why it would upset me but I I wasn't satisfied to stop there. I kept questioning myself, until I was able to pull out certain very unrealistic thoughts that were underlying my view of the situation. Then I tried to put these thoughts into a more realistic perspective by thinking first - What are the chances that these terrible things are going to happen.

What are the chances that other people are going to think these thoughts about me. Sometimes just thinking that something is unlikely to happen will be sufficient to make you feel more comfortable. However, I carried my thinking one step further. Assuming that they would think these thoughts, I tried to give myself realistic reasons why other people don't always have to agreewith me or approve of everything I say or do. A little while ago we made up a list of realistic reasons or things you might tell yourself. Not all of these reasons would be appropriate for particular situations and the remembering of them may not work immediately even though you may feel you have an appropriately unrealistic thought. It will probably take a while before you really believe that some of these thoughts apply to given situations. You may find yourself telling yourself these things and saying "Yeah, but I really don't fully believe it". That's understandable. Keep practising - taking it one situation at a time - not moving up to the next situation until you feel comfortable in the previous less-anxious situation. In time and with practice you'll find that in your imagination you'll feel more comfortable about being in these situations. As you develop the skill at viewing the situation in a more realistic way. At first you may have difficulty in really thinking about the unrealistic thoughts and putting them into a

realistic perspective. It may be an effort initially - it may be continued with practice - it'll get easier and easier. The unrealistic thoughts will occur to you more readily and your ability to put them into a realistic perspective will come with greater ease. To keep tract of your practice in imagination use the accompanying form to record your unrealistic thoughts and your ability to re-evaluate each situation more realistically. This will let you to go back and see where you have general tendencies to think certain unrealistic thoughts and also to recognize which counter arguments, which positive things you can tell yourself a make you feel better. Once you have worked through your list of situations in your imagination you're ready for for Step 4 which as in the previous use of relaxation to cope involves putting real-life situations into realistic perspective. Ideally the real-life application should involve the same situations you practiced in your imagination. So the idea is to practise the situations in your imagination which is Step 3 and then when you feel comfortable in going through all of them right up to the top then try it out in real life taking it one step at a time walking your way from the bottom up and as you did with your imaginal practice observe how you do by keeping records and you may find it convenient to use the record form that accompanies this cassette. I'd like

to conclude this tape by suggesting that you listen to it another time if not several more times so that the procedures are firmly fixed in your mind. In practising these skills of relaxation and realistic re-evaluation you have to expect that it's going to take some time before it can work - that there are going to be ups and downs in your progress. But you cannot expect to have overnight results. It is very important for you to be aware of whatever progress you make - however small or however gradual. Try to imagine yourself walking up a staircase. You've got a way to go but you're taking it one step at a time. Sometimes progress may be slow. You may stay on one step for a period of time or may be even go back a few steps but remember if you occasionally begin to feel discouraged look back and compare what you have already accomplished with where you started. Don't continually be concerned about how far you have to go but rather notice with satisfaction how far you've already come and then focus on the next step. Eventually this will hl help you to reach your goal of learning to deal with your own anxieties. If you are like most people who have gone through these procedures the effort will be well worth it.

APPENDIX 12

IMPROMTU SPEECHES: TOPICS RANDOMLY DISTRIBUTED TO THE SUBJECTS AT THE PRE AND POST ASSESSMENT STAGES

My last teaching practice

My best sports

The food I love to prepare

The music I love best

The subject I love best

My School

The customs and traditions of the Yorubas

My home

The School Library

Footballing in Nigeria

Cities in Nigeria

Village life in Nigeria

Simple things in nature that I love

Traditional dances in Nigeria

My Career

Hammatan in Nigeria

Importance of water to man.

APPENDIX 13

INTRODUCTION TO PROGRAMME

The programmes you will be going through these few weeks are designed to help you cope with your speech anxiety. Do not feel that you are the only ones suffering from such predicaments. There are a host of others who have same disability and have been helped to manage their anxieties by the procedures you will go through.

It is important that you consider taking these few weeks seriously so that you may master the procedures very well. I am very confident that you will be able to talk to any audience, however hostile, after you have gone through the programme.

Let me mention here that some of the tapes you will be using as part of the procedures will involve you in doing some very funny acts. I implore you take these acts seriously as they will determine how perfectly relaxed you can be on the long run.

I wish to welcome you to the first session of the programme and hope that we shall be spending a successful period of six weeks together.

Let me also wish you a beautiful time of perfect recovery from your anxiety in speech situations after the programming.