MODIFIED SYSTEMATIC DESENSITIZATION COMBINED WITH THE SELF-INSTRUCTIONAL TECHNIQUE

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ABSTRACT

The incorporation of 'cognitive variables within 'behaviour theraphy' represents a clear and an unmistakable trend since 1960's. Beginning from mid 1960's the mechanisms by which human behaviour is acquired have been increasingly formulated interms of cognitive processes. This reconceptualization of human learning within a cognitive framework had major implications for the explanation of the mechanisms through which therapeutic procedures alter behaviour and gave rise to the development of cognitively based therapeutic methods, many of which have incorporated treatment components used in already established behavioral therapies like 'systematic desensitization'.

Ellis 'rational-emotive theraphy', Becks' 'cognitive theraphy' and Meichenbaum's 'stress inoculation training' are the variants of these therapeutic methods which are generally termed as 'cognitive-behaviour' therapies.

Albert Bandura's "self-efficacy theory" is one of the outlets of this cognitive trend in the field. He labells the expectations about one's performance as "self-efficacy" beliefs and suggests that in the therapeutic situation, it is one of the most important. According to Bandura, it's mainly perceived inefficacy

in coping with potentially aversive situation that makes individuals fearsome and claims that, the successful psychological therapies are those that are most effective at increasing self-efficacy. The more impact they have on self-efficacy expectations, the more successful will be the outcome.

Bandura describes four main sources of beliefs about efficacy. The most important one is the 'performance accomplishments', due to the fact that actual performance has a particularly strong influence on efficacy judgements. Thus, therapies such as participant modelling and invivo desensitization which emphasize actual performance accoplishments are considered to be the mostly effective ones.

Self- efficacy theory has no direct assumptions regarding the potency of imaginal processes in increasing the efficacy expectations. Infact, the effectiveness of the imagery procedures, especially in SD, has been shown by many studies.

Thus, it was expected that, imaginal desensitization sessions designed to enhance a sense of coping efficacy would increase the effectiveness of this procedure.

The main purpose of the present study was to compare the differential effectiveness of a modified systematic desensitization procedure (i.e., the usage of self-instructional coping statements

during imagination) with the classic systematic desensitization procedure in the treatment of "test anxious" university students.

The modified SD and classical SD procedures (in imagination) compared in the present study were referred to a purely behavioral and a cognitive-behavioral therapies respectively.

"Test anxiety" with it's dualistic nature, including 'worry' and 'emotionality' components is considered as a suitable target problem for the comparison of a purely behavioral and a cognitive-behavioral treatment in enhancing self-efficacy expectations.

The modified SD procedure was expected to result in marked improvements in perceived self efficacy (measured with a 40 item questionaire) and hence, in other measures of test anxiety (i.e.,test-anxiety inventory-T, 'worry', 'emotionality' and 'nervousness' subscales of T.A.I-T, state anxiety (administered before an actual exam and Raven Matrices), self-rating of anxiety (before an actual exam and Raven Matrices) and G.P.A scores) compared to classic SD procedure.

Treatments were conducted in group format in imagination and lasted eight weeks. 21 'test anxious' university students were randomly assigned to two treatment conditions (classic SD and modified SD conditions).

In the 'modified SD' (self instructional) condition, the additional manipulation made was the usage of the coping self-statements by the Ss, besides the relaxation exercises during imagination (exposure).

'Classic SD' condition was derived from traditional 'exposure' model. The anxiety eliciting scene (the item) presentation was paired with a relaxed state.

The item hierarchies used in both of the SD procedures were designed to be unique for each S, in order to increase the effectiveness of this procedure.

Because of dropouts at different phases of the study, the analyses for pre and posttreatment assessments were carried out for 16 subjects (eight from each group) and for 14 subjects (seven from each group) for the pre-post-follow up assessments.

The results failed to show differential effectiveness of modified SD procedure in treating test anxious university students as compared to classic SD. The two treatment groups did not differ significantly from one another in their response to treatment and thus there were no differential effects of the treatments on groups.

However, significant 'time main' effects were obtained for most of the measures.

For all Ss there were significant improvements in the measures included in pre and post assessments ('state anxiety' (adminestered before an actual exam and Raven Matrices) and 'self-rating of anxiety' (before an actual exam and Raven Matrices)) except the G.P.A scores.

Similar results have been obtained for the analyses of the pre, post and follow-up measures (self-efficacy, T.A.I-T (general) and "worry" and "emotionality" subscales of T.A.I-T) except the "nervousness" subscale of T.A.I-T.

'Time main' effects indicated significant improvements for these measures from pre to post treatment which was maintained at the follow-up period. But again differential effectiveness of the group was not observed.

The results were interpreted and discussed together with methodological shortcomings and suggesstions for future.

ÖZET

1960'lı yılların ortalarından bu yana insan davranışının mekanizmaları daha çok bilişsel süreçlerle açıklanmaktadır.

Bu eğilim tedavi yöntemlerinde de kendini göstermiş ve sıkça kullanılan salt davranış terapilerine, bilişsel terapi teknikleri eklenerek bu yöntemler de "bilişsel-davranış terapileri" adı altında toplanmıştır.

Albert Bandura'nın "self-efficacy" teorisi bu bilişsel akımın çarpıcı örneklerinden biridir. Bu teoriye göre bir tedavi yönteminin ne kadar etkili olduğu, kişinin problemiyle başa çıkmaya yönelik yeterlilik duygusu ve inancını ne kadar arttırabildiği ile doğru orantılıdır.

Bandura bu doğrultuda, tedavi esnasında somut performansın etkili olduğunu vurgulamakta ancak canlandırma tekniğinin etkisine ilişkin herhangi bir varsayım öne sürmemektedir. Diğer tarafta yapılan tedavi çalışmaları ise "canlandırma tekniği"ninde kişinin problemiyle başa çıkmasında etkili bir yöntem olabildiğini göstermektedir.

Bu bulgular doğrultusunda, kişinin problemiyle başa çıkmaya yönelik yeterlilik duygusu ve inancını geliştirmeyi hedef alan ve canlandırma tekniğinin kullanıldığı "sistematik duyarsızlaştırma" seanslarının tedavi başarısını arttırması beklenmektedir.

Bu çalışmanın ana amacı üniversite öğrencilerinin "sınav kaygısı" tedavisinde, "uyarlanmış sistematik duyarsızlaştırma" tekniği ile "klasik sistematik duyarsızlaştırma" tekniğini tedavisel başarı farklılıkları açısından karşılaştırmaktadır.

"Uyarlanmış sistematik duyarsızlaştırma" tekniğinın, kişinin problemiyle başa çıkmaya yönelik yeterlilik duygusu algısını (40 item lik bir envanterle ölçülen) 'klasik sistematik duyarsızlaştırma" tekniğine oranla daha fazla arttıracağı ve sınav kaygısını (sınav kaygısı envanteri, ve "endişe", "duygulanım" ve "gerilim" alt ölçekleri, durumluk kaygı envanteri, (gerçek bir sınav öncesi ve hazırlanmış bir sınav durumu öncesi uygulananan) ve kendi kaygı değerlendirmesi (gerçek bir sınav öncesi ve hazırlanmış bir sınav durumu öncesi değerlendirilen) ile ölçülen) daha fazla düşüreceği, dolayısıyla performansıda (G.P.A ile ölçülen) daha fazla artıracağı beklenmektedir.

Önerilen "uyarlanmış sistematik duyarsızlaştırma" tedavi yönteminde "klasik sistematik duyarsızlaştırma" tekniğine ek olarak her bir denek için ayrı ayrı hazırlanmış olan ve problemiyle başa çıkmaya yönelik "yapıcı cümleler" kullanılmıştır.

Çalışma süresince iki deneysel gruba, sözü edilen iki farklı tedavi yöntemi uygulanmış ve değerlendirmeler sonucunda her iki grupda tedavi öncesine oranla sınav kaygısında anlamlı bir düşüş ve yeterlilik duygusu algılarında anlamlı bir yükselme saptanmış ancak gruplar arasında tedavilerin etkililiği açısından anlamlı bir farklılık bulunamamıştır.

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SECTION I

INTRODUCTION

I.1 IMPACT OF COGNITIVE VARIABLES ON THE DEVELOPMENT OF 'BEHAVIOUR THERAPHY'

Initial appearance of the roots of 'behaviour theraphy' may be extended to Watson's Psychology Laboratory which was the first place giving rise to radical behaviorism in the early 1900s. Nevertheless, the gradual impact of behaviorism on clinical psychology let the formal beginnings of behaviour theraphy emerge in the 1950 s.

Corsini (1984) defined the developmental period of 'behaviour theraphy' by delineating out separate but related attempts of different researchers. Joseph Wolpe (1958), generated his own experimental application of learning principles to adult neurotic disorders. Pavlov's conditioning principles, Hull's stimulus response learning theory and his own experimental research on fear reduction in laboratory animals were the fundamentals of his inspiration towards developing specific techniques designed to extinguish neurotic habits of humans (cited in Corsini, 1984).

Anxiety was considered as the causal agent in all neurotic reactions. It was defined as an individual organism's characteristic pattern of autonomic responses to noxious stimulation acquired through the process of classical conditioning. He developed several specific techniques in order to extinguish conditioned autonomic reactions of neurotic anxiety. Among these, systematic desensitization has become one of the most widely used methods of behaviour theraphy.

The history of behaviour theraphy exhibits parallel works from a different researcher; Hans J.Eysenck. According to Corsini (1984), Eysenck's approach was another landmark in the growth of behaviour theraphy and an alternative model to the traditional psychoanalytic orientation. In Eysenck's terms, behaviour theraphy was the application of modern learning theory to the treatment of behavioral and emotional disorders. He stressed the principles and procedures of Pavlov and Hull, as well as learning theorists such as Mowrer and Miller. Eysenck in his formulation of behaviour theraphy regarded it as an applied science that is testable and falsifiable.

Growth of operant conditioning and the extension of operant conditioning principles to clinical problems were taken as a major force in the emergence of behaviour theraphy. The pioneering works by Skinner were carried out with the fundamental assumption regarding behaviour as a function of it's consequences. Based on this perspective, Skinner (1953) criticized psychodynamic concepts

and reformulated psychotheraphy in behavioral terms. This necessitated treatment procedures to be based on altering relationships between overt behaviours and their consequences (cited in Corsini, 1984).

In it's early stages of development, behaviour theraphy was viewed as the logical extension of behaviorism to complex forms of human activities (Corsini,1984). However, it has undergone significant changes in both nature and scope in two decades following it's formal initiation. With its rapid rate of change and growth, behaviour theraphy has grown increasingly more complex and sophisticated. This makes sure that behaviour theraphy did not stay unresponsive to advances in experimental psychology and innovations in clinical practice. As a result, with its wide range of heterogenous procedures, with different theoretical rationales and open debate about conceptual bases, methodological requirements and evidence of efficacy (Kazdin and Wilson, 1978) behaviour theraphy has no longer been simple clinical application of classical and operant conditioning theory (cited in Corsini,1984).

Accordingly, active attempts to expand theoretical and research bases of behaviour theraphy beyond simple learning principles facilitated the incorporation of cognitive variables into its broad spectrum. With the increasing impact of cognitively oriented theories in clinical problems, 1970s witnessed an apparent emphasis on cognitive processes and procedures in behaviour theraphy.

Within the cognitive point of view, cognitions are central to human behaviour which is definetely far more than the simple function of its consequences. Overwhelming influence of cognitive approach on clinical psychology has inevitably given rise to cognitively based therapeutic methods many of which integrated cognitive components and behavioral treatment procedures. The result of this evolution has been the generation of 'cognitive behaviour therapies'.

Cognitive behaviour therapies encompass a number of diverse procedures some of which have developed outside the mainstream of behaviour theraphy (Corsini,1984). Among these variants of cognitive behaviour therapies Ellis' "rational emotive theraphy", Beck's "cognitive theraphy" and Meichenbaum's "stress inoculation training" were the popular therapeutic methods evolving from provocative theoretical ideas during the last decade (Miller and Berman, 1983). The very key principle of the cognitive behavioral approach is its stress on helping patients to identify and challenge their maladaptive thoughts. Since much of the maladaptive behaviours are based on and motivated by faulty idiosyncratic cognitions, premises, assumptions and attitudes; correction of them should theoretically lead to behavioral change (Ledwidge, 1978). Great extent of the current work in this area has been based on the clinical observations of Ellis (1962) who has argued that modification of inappropriate expectations and bliefs could lead to behaviour change (cited in Ellis, 1963). As Goldfried, Linehan and

Smith (1978) pointed out, until the 1970's there has been difficulties in fitting the principles of Ellis' rational emotive theraphy into a behavioral orientation which might be due, in part to the lack of clear therapeutic guidelines as well as to the absence of an empirical data base for its clinical effectiveness. Parallel with the expansion of the scope of behaviour theraphy during these years, this situation has begun to change toward incorporating many of Ellis'concepts into the field of cognitive behaviour theraphy (Beck, 1976; Goldfried & Davison, 1976; Meichenbaum, 1977, cited in Goldfried, Linehan and Smith, 1978).

A great deal of outcome studies evidenced that depression, impulsivity, pain, drinking problems and anxiety based disorders including speech anxiety, interpersonal anxiety, unassertive behaviour, phobias and test anxiety can be reduced by cognitive behaviour intervention procedures (Goldfried et all., 1978; Miller and Berman, 1983). This implies that, cognitive behaviour therapies have proved their clinical efficacy in treating most of the clinical problems.

However, how explicitly behavioral and cognitive techniques were combined together in a treatment procedure was questionable. According to Miller and Berman (1983), since cognitively based therapies typically incorporate behavioral treatmennt components in practice but do not always specify them, it is difficult to identify cognitive bahaviour therapies as the explicit mixture of cognitive and behavioral techniques.

Nevertheless, it seems possible to attain an explicit and successful combination of cognitive and behavioral techniques in a well known and widely used behaviour theraphy procedure termed as 'systematic desensitization'. With it's technical features, SD, seems to be quite suitable for being modified as to incorporate cognitive variables. Thus, it's reasonable to examine SD both within a behavioral and a cognitive frame work.

I.1.1 Systematic Desensitization as a Behaviour Theraphy Technique

SD, as a treatment technique was developed by Wolpe in the 1950s with the interest of modifying behavioral and autonomic fear responses (Wolpe, 1973). The procedure involves the presentation of anxiety evoking situations in an ascending hierarchial order paired with deep muscle relaxation. Following the relaxation training sessions, when the client has attained a capacity to calm himself by relaxation, the therapist comes to provide him with a presentation of anxiety provoking scenes in a relaxed state. Early applications of systematic desensitization had been carried out in real life situations. Subsequently, the difficulty to arrange these situations in each session led to the discovery of imagination technique which proved to be as effective as in vivo desensitization (Mathews, Johnston, Lancashire, Munby, Shaw and Gelder, 1976). Within a widespread clinical use, SD has demonstrated its therapeutic effectiveness in alleviation of fears and phobias (Cooke, 1968; Davison, 1968; Greenwood and Benson,

1977; Kazdin and Wilcoxon, 1976; Lader and Mathews, 1968; Lang and Lazovik, 1963; Lang, Lazowik & Reynolds,1965).

While the effectiveness of SD is not controversial, different explanations have been presented on its underlying mechanisms. According to Wolpe's (1981) reciprocal inhibition hypothesis, the feelings of anxiety is learned in the presence of specific stimuli through a process of classical conditioning. Then, if a response incompatible with anxiety can be made to occur in the presence of an anxiety-evoking stimulus, the bond between the stimulus and the anxiety response will be broken. Although relaxation serves this function in SD, any other response associated with a predominance of parasymphathetic nervous system activity could be employed. Increased parasympathetic functioning produced by relaxation or any other anxiety-incompatible response reciprocally inhibits the sympathetic activity which is presumed to be the basis of anxiety. This process of reciprocal inhibition is repeated for several times for each item in the hierarchy and each supression of the anxiety response leads to the development of conditioned inhibition. As the strength of not responding anxiously increases, phobic reaction decreases. The major assumption underlying this model is that the presence of the anxiety-antogonistic response i.e., the relaxation may form the critical factor during hierarchy visualization interms of therapeutic effectivenes. In support of this hypothesis, several studies showed that muscular relaxation results in significantly reduced autonomic arousal in response to stressful imagery

(Mathews and Gelder, 1969; Paul, 1969).

On the other hand, in a more detailed analysis of physiological responses, Borkovec and Sides (1979) obtained different results with speech phobic subjects. Desensitization subjects compared with two exposure conditions without relaxation, exhibited the greatest heart rate reaction to the first visualization of initial scenes in each session. Furthermore, this inital greatest cardiovascular response for the desensitization group, showed declines within repeated visualizations of increasingly anxiety provoking scenes (augmentation and habibuation of the autonomic reactivity) whereas the exposure groups showed no tentency for augmentation and habituation.

These findings constitute a challenge to Wolpe's (1981) reciprocal inhibition hypothesis and cast doubt on it. While this model assumes that the role of relaxation is to inhibit autonomic anxiety responses to the imaginal presentations of phobic stimuli, results of Borkovec and Sides (1979) study, indicated that relaxation augmented the initial autonomic response to these stimuli and facilitated habituation.

They explained their finding by referring to Lang's information processing analysis of the phobic imagery. The role of relaxation in SD, according to them, is first to enhance tha processing of the feared images (i.e.,to increase vividness of the

imaginal stimuli) then to increase functional exposure to them which is the process resulting in better fear reduction.

According to Greenwood and Benson (1977) this physiological pattern produced by progressive relaxation might be a significant factor delineating the reciprocal inhibition model ambiguous. However,it does not necessarily lead to the rejection of the theoretical framework of SD. Instead, a critical question that should be adressed is whether or not muscular relaxation is crucial.

Even though relaxation appeared to be an essential element of SD, Rachman (1968) believes that it does not necessarily have to be muscular relaxation. Rather, what's crucial is a sense of calmness, or mental relaxation in the therapeutic procedure of SD. Rachman supported this viewpoint by relying on clinical observations of SD applications and a number of literature findings. However the strongest evidence for this hypothesis comes from Lader (1967) who reported a lack of correspondence between subjects' reported feelings of calmness and the EMG (muscle tension) tracings (cited in Rachman, 1968). Further support has been provided by Marshall, Strawbridge and Keltner (1972) who attempted to explore Rachman's notion about the effectiveness of inducing mental relaxation. Results of the study demonstrated a significant improvement for the muscle relaxation alone, mental relaxation alone and combined treatment groups.

All these findings seem to question Wolpe's autonomic hypothesis and provide a support for Rachman's alternative explanation according to which mental relaxation underlies all successful desensitization procedures and muscle relaxation is not an anxiety-antogonistic response.

It's apparent that, this reconceptualization of SD has challenged it's position as a purely behavioral technique and seems to create a reform on it's status to be included within a cognitive framework.

I.1.2 Reformulation of Systematic Desensitization as a Cognitive-Behavioral Theraphy Technique

Behind all the attempts of reconceptualization and reformulation of SD, lies a fundemental argument; it is not a passive deconditioning process but rather involves an active attempt on the part of the client to cope with anxiety. According to Goldfried's (1971) mediational interpretation, what the client learns during the SD process is his proprioceptive cues for tension and to use newly acquired skill in muscular relaxation in order to deal with them. The process also enables him to differentiate between feelings of tension and feelings of relaxation. When the client attains a capacity to calm himself in the aversive situation, he is encouraged to approach the heretofore avoided object. From this point of view, the client seems to learn a means of actively coping with the anxiety rather than an immediate replacement for it.

Several desensitization studies indicated the importance of cognitive variables in anxiety reduction. Manipulation of the individual's expectancy for improvement enhanced the effectiveness of SD (Leitenberg, Agras, Barlow and Oliveau, 1969, cited in Goldfried, 1971). In Valins and Ray's (1967) study false heart-rate feedback was presented in order to manipulate S's cognitions about his state of emotional arousal in the presence of aversive stimuli, and subjects were succesfully desensitized to the feared object. These studies demonstrated that cognitions about expectancy for improvement and control over individual's own internal state may be the crucial factors in the effectiveness of systematic desensitization.

The most comprehensive work on this issue has been primarily conducted by Meichenbaum (1972). In his modification of SD, Meichenbaum included a "coping" imagery procedure which required the subject for each of the proposed imagery scenes to visualize him/her self handling and coping with this anxiety by means of slow deep breaths and self-instructing to attend the task. This procedure was in marked contrast to the mastery-type imagery used in standard desensitization procedures in which subject is told to signal if the visualized image elicits anxiety and then to terminate that image and relax. However, the coping imagery procedure makes the subject vizualize the experience of anxiety and ways to cope and reduce such anxiety.

The premise underlying the modification of the desensitization procedure was that when desensitized subjects are

instructed to imagine hierarchy scenes, they are in fact providing themselves with a model for their own behaviour. Prior research (Meichenbaum, 1971) suggested that coping imagery in which the high test anxious subject might visualize himself/herself coping and handling anxiety by means of self-instructions and relaxations may be more effective in reducing test anxiety than the standard desensitization mastery imagery group (cited in Meichenbaum, 1972).

This outstanding effort to incorporate cognitive variables into systematic desensitization may be at the same time the reflection of a general trend to formulate underlying mechanisms of human behaviour interms of cognitive processes.It is not then surprising that the increased emphasis on the role of cognitive processes in SD clearly strengthens its position within a cognitive framework.

Since this development is the inevitable function of the dramatic impact exerted by cognitive theories upon clinical psychology in general, the trend to combine behavioral and cognitive components undoubtly exhibits itself in examining certain maladaptive behaviours by differentially referring to their cognitive and behavioral aspects. One of the most explicit attempts to understand human behaviour interms of its behavioral and cognitive components can be seen in studying a specific construct, termed "test anxiety".

I.2 THE DYNAMICS OF TEST ANXIETY

The term "test anxiety" (TA) has been used to describe a multifaceted condition which encompasses task irrelevant cognitions, heightened physiological arousal and inefficient study behaviour exciting a debilitating effect on academic performance (Kirkland and Hollandsworth, 1980)

The earliest work on the association between anxiety arousal and decrements in academic performance has started at the beginning of this century with the pioneering efforts of Yerkes and Dodson (1908) (cited in Covington and Omelich, 1987). From the time of this initiating attempt to the present day, researchers have consistently reported a negative correlation between every aspect of school achievement and a wide range of anxiety measures (Covington & Omelich, 1987). Almost without exception, an interference interpretation serves as the underlying presumption for all of those findings in which anxiety is supposed to temporarily distrupt normal intellectual functioning. According to Covington and Omelich (1987) interference interpretation has been the cornerstone of every successive advance in understanding the dynamics of test anxiety.

Consistent with this argument, the literature revealed the following profile of test anxiety research. In 1960 Alpert and Haber proposed a bidimensional theory in which the drives leading

to task-directed and task-irrelevant behaviours were labeled as facilitating and debilitating anxieties respectively(cited in Hembree, 1988). Later on Liebert and Morris (1967) proposed that debilitating test anxiety is itself bidimensional, consisting of the components of "worry" and "emotionality". Worry was defined as "any cognitive expression of concern about one's own performance, while emotionality refers to autonomic reactions, which tend to occur under examination situations (e.g., perspiration and accelarated heart beat). Their experiments suggested that worry or cognitive manifestations of anxiety (e.g.negative expectations for success and concerns about one's performance) interferes with performance but emotionality and performance are not strongly related except for persons low on the worry component (Morris & Liebert, 1970).

Seemingly, the work of Liebert and Morris shifted the TA theory toward a cognitive orientation. Wine (1971) formulated an attentional theory to explain the debilitating effect of TA on performance. Previous research suggested that the emotionality component is less likely to interfere with the performance of the high test anxious, whereas worry requires more attention and more directly causes decrement in performance. Consistent with this argument Wine indicated that the importance of worry component underscores an attentional interpretation of the debilitating effects of TA. The adverse effects of TA are due to attention being divided between task-relevant activities and preoccupations with

worry, self-criticism and somatic concerns. Performance deficit is then the result of less attention available for task directed efforts.

A different anxiety dichotomy has been introduced by Spielberger (1972) whose conceptualization led to the division of anxiety into trait and state components (cited in Hembree, 1988). A-State is a transitory emotional state of tension and nervous reaction, whereas A-Trait is defined as a chronic anxiety prononess in a wide range of stimulus situations. In the framework of trait-state theory, TA is a form of trait anxiety (Spielberger, Anton & Bedell, 1976), and as a trait like entity anxiety was supposed to interfere with achievement only when the particular conditions of evaluation were sufficiently thereatening to elicit state-like emotionality (cited in Hembree,1988). Since highly anxious persons respond to testing with elevations in emotionality, worry seems to be triggered by the AState manifestations. Thus, emotionality and worry both contribute to depressed performance.

Deffenbacher (1978) documented a body of evidence which has consistently demonstrated that high test anxious individuals perform more poorly than low-test anxious individuals in a variety of contexts, for example, on classroom tests, grade point averages, intelligence tests, aptitude tests and reading tests. According to him, the lower performance of the highly anxious, is not a simple artifact of ability, since the highly test anxious are not

definetely less capable. Sarasons (1961,1972,1973) laboratory studies have indicated that the highly test anxious perform as well as or better than the less anxious when evaluative stress is low (cited in Deffenbacher, 1978). Performance of the highly anxious seems to vary with evaluative stress. When evaluative stress is low, the high anxious perform as well as the low anxious, however under high evaluative stress their performance is lower than that of the low anxious and than their own under low stress.

Thus, evaluative stress seems to evoke performance interfering behaviours for the highly anxious. The sources of this interference and its underlying mechanism are the topics which are of interest for much of the TA research.

Meichenbaum (1972) reported the major causes of performance decrement as failure of the high test anxious person to attend to relevant parts of the task,intrusion of irrelevant thoughts, and high emotional arousal which interferes with performance. Research conducted by Mandler and Watson (1966) and Marlett and Watson (1968) has indicated that, under performance evaluation high test anxious persons spend more of their time a) worrying about their performance and about how well others are doing, b) ruminating over alternatives, c) being preoccupied with such things as feelings of inadequacy, anticipation of punishment, loss of status and esteem, and heightened somatic and autonomic reactions (cited in Meichenbaum, 1972).

Consistent with this description Sarason (1972) and Wine (1971) interpreted the performance deterioration in terms of selective attention. According to this model, highly anxious persons when they experience stress, show personalized, self-oriented responses which direct attention from the task. Therefore performance suffers as a function of less time spent on the task itself (cited in Meichenbaum, 1972).

Three classes of distractors or interfering behaviours were formulated: "Worry" (W), "emotionality" (E), and task generated interference. W and E were originally operationalized by Liebert and Morris (1967), while the third source of interference, task-generated interference was the product of the drive theories of anxiety (Spence and Spence, 1966; Spielberger, 1966, cited in Deffenbacher, 1978). Several
authors documented the debilitating effects of worry or cognitive concern over performance (Deffenbacher, 1977; Doctor and Altman, 1969; Morris and Liebert, 1970). Their implication was that the "emotionality" component is less likely to interfere with the performance of the high test anxious subject whereas "worry" requires more of the subject's attention and more directly causes decrement in performance. Research has also shown "worry" to be inversely related to performance expectations (Doctor and Altman, 1969; Liebert and Morris, 1967; Morris and Liebert, 1970). Even though generally negatively related, emotionality has been less consistently and usually less strongly related to performance

related indices (Deffenbacher, 1977; Doctor and Altman, 1969; Morris & Liebert, 1970). The third source, task-generated interference refers to the suggestion that highly anxious people are more susceptible to task-produced competing responses under high drive conditions. Hence within an attentional interpretation, the highly anxious person may direct attention away from the task to increased autonomic arousal (emotionality), self-oriented cognitions (worry) and/or competing response tendencies generated by the task (task generated interference) (Deffenbacher, 1978). In his research to test the predictions derived from attentional theory, Deffenbacher (1978) reported validating results for the theory by concluding that as evaluative stress increases, anxiety related interference of the highly test anxious, also increases and time spent on task and performance decreases. More specificaly the high anxiety, high stress group a) reacted more negatively to testing b) performed more poorly c) spent less time on task d) reported greater interference due to worry, emotionality and task generated interference than either the high anxiety, low-stress or the low anxiety, high stress groups. However high anxiety, high stress group reported significantly more worry and task generated interference then emotionality.

Consistent with the previous research which has shown "worry" to be more important than emotionality (Deffenbacher, 1977; Doctor & Altman, 1969; Morris & Liebert, 1970), evaluative stress appeared to elicit a tendency for the highly anxious to become preoccupied

primarly with worrisome cognitions and task irrelevancies and only secondarily with heightened emotional arousal.

Further line of evidence pointing out to the adversive effects of cognitions comes from the studies by Holyrod, Westbrook, Wolf and Badhorn (1978) and Hollandsworth, Glazeski, Kirkland, Jones and VanNorman (1979), which indicated that high compared to low-test anxious individuals did not differ in physiological arousal levels both prior to and during a test but differed in the appraisal and interpretations made about their arousal. Anxious subjects defined their arousal as debilitative whereas non-anxious subjects perceived their arousal as a cue to exert greater effort toward the test. Thus, the pattern and focus of self statements seem to be as critical as anxiety, because under evaluative threat anxious students engage in more negative thinking which may interfere with task accomplishment.

Eventhough TA is in an inverse relationship with school achievement, not always is the lowered anxiety accompanied by improvements in test performance (Denney, 1980; Finger, 1975 cited in Bruch, Juster & Kaflowitz, 1983). These findings have inspired several investigators to develop more comprehensive models of TA with the interest of identifying variables that affect performance directly or indirectly (Benjamin, Mc Keachie, Lin and Holinger, 1981; Meichenbaum and Butler, 1980; Tobias, 1980,cited in Bruch, Juster and Kaflowitz, 1983). In Meichenbaum and Butler's (1980)

model, four groups of variables are postulated that are highly interdependent for both test anxiety and its treatment. These are;

a) The content and patterning of the students' internal dialogue, the self statements and images which occur during a test which can either increase or decrease anxiety and performance.

b) Cognitive structures (more enduring meaning system) reflecting the subjective meaning that students attach to academic evaluation and may relate to their self-statements.

c) Behavioral acts including study skills, interpersonal behaviour prior to tests and test taking skills.

d) Reactions to the testing situation and its outcomes, body sensations, mood states, subjectively perceived anxiety and causal attributions about grades after a test.

Galassi, Frierson and Scharer (1981) studied the students during an actual test situation and evaluated the relevance of some of these components to TA and performance. With the primary focus on students' internal dialogues or cognitions during a test, they also investigated both differences in meaning systems or cognitive structures and differences in bodily sensations with respect to differences in test anxiety and past performance. Their results demonstrated that high compared to low-test anxious students

emitted more negative self-statements, attached more negative meanings to test, reported a more anxious mood and more bodily sensations indicative of arousal. The most frequent negative thoughts for high test-anxious students were "wish I could get out or test was over", "test is hard" and "not enough time to finish" and " think, how awful it'll be if I fail or do poorly". Thus, they seemed to interpret the testing experience in terms of predicting their own failure or poor performance. On the other hand, low test anxious students interpreted the testing experience in such a way as to predict their successful performance. Post hoc data examination showed that the students' number of positive and negative thoughts experienced during a test were much more closely related to their levels of test anxiety than to their test performance.

Contrary to this finding, later research studying actual test situations yielded a nonsignificant relationship between TA and negative thoughts (Galassi, Frierson and Segal, 1984; Klingler, 1984; Hunsley, 1985). However a great deal of analogue studies found a positive relationship between the frequency of negative and interfering cognitions and TA (Arkın, Detchon, Mamyama,1982; Bruch, Juster & Kaflowits, 1983; Deffenbacher, 1978; Deffenbacher & Hazeleus, 1985; Hollandsworth, Glazeski, Kirkland, Jones and Van Norman,1979; Sarason, 1984; Sarason & Stoop, 1978).

Thus,there appears an inconsistency between the results of different studies examining the internal dialogue of 'test anxious' subjects.

In a recent study, Hunsley (1987) explains this inconsistency by pointing out a crucial difference between analogue and classroom studies. While all the mentioned analogue studies used self-statement inventories measuring the frequency of negative thoughts, classroom studies used measures of the total number of negative thoughts (thought listing)or the total number of different negative thoughts (cognition check lists).

In his attempt to investigate this critical dimension, Hunsley (1987) reported significant positive correlations between TA and the frequency of negative internal dialogue across multiple exams, revealing that, higher levels of TA are associated with more frequent negative cognitions during academic examinations. Thus, he argues that, the internal dialogue of high test anxious may be characterized by intrusive, repetitive negative thoughts rather than by the large variety of negative thoughts.

The nature of the research directed to investigate the structure and dynamics of TA apparently ensures the considerable impact of cognitive processes in this clinical entity. Consequently, with its characteristic pattern of emotional and cognitive processes, TA seems to be both a behavioral and cognitive construct.

I.2.1 Treatment Modalities Used to Reduce Test Anxiety

Major therapeutic attempts at the reduction of TA have focused primarly on the use of systematic desensitization (e.g.Cohen, 1969; Donner, 1970; Freeling & Shenberg, 1970; Suinn, 1968). Previous research has demonstrated the effectiveness of SD in alleviating test anxiety (Katahn, Strenger and Cherry, 1966; Emery and Krumboltz, 1967; Garlington and Cotler, 1968). Relatedly, Freeling and Shenberg (1970) suggested that relaxation in conjunction with the presentation of a hierarchy of relevant scenes produced a significant reduction in self-reported test anxiety. Meichenbaum (1972) presented two implicit assumptions underlying the desensitization treatment approach of TA. Firstly, that test anxiety differs only in degree from specific anxieties and phobias which have been successfully been treated by means of desensitization procedures and secondly, anxiety is characterized and defined by heightened emotionality.

Thus,lowered arousal level of high test anxious subjects through relaxation should result in a reduced number of task irrelevant responses, increased proportion of task relevant responses and consequently improved performance. However, even though several studies have found desensitization treatment approach to be effective in reducing self reports of test anxiety, there is only little consistent effect on improving test performance (e.g.Allen, Ellias and Zlotlow, 1980, cited in Crowley,

Crowley and Clodfelter, 1986). For example Allen (1971) concluded that SD may be no more effective than an equally credible and convincing placebo.

A plausable explanation for limited results obtained with SD has been provided by Holyrod (1976) who pointed out the failure of the desensitization procedure to modify crucial components of TA. SD procedure mainly focuses on reducing emotional arousal elicited by exam situations. However recent formulations consistently suggest that the performance decrement of the test anxious is largely a function of maladaptive cognitive and attentional responses rather than heightened emotional arousal. It's well known that the desensitization treatment as a purely behavioral technique has not explicity and directly treated the worry component or attentional behaviour of test anxious persons.

Undoubtly, an overhelming influence of cognitive approach introduces its challenge into the research where purely behavioral techniques remain insufficient. In this context, Meichenbaum (1971) suggested the application of a cognitive modification treatment procedure to deal directly with the "worry" and "emotionality" components of the high test anxious person (cited in Meichenbaum, 1972). The first component of the cognitive modification treatment procedure attempted to develop insight in the test anxious subjects by increasing their awareness of thoughts, self verbalizations and self-instructions emitted prior to and during test situations which

contributed to poor performance. The aim is to make the subjects aware of the internal and external cues which signal anxiety and task-irrelevant behaviours.

This insight procedure was principally derived from Ellis'(1963) rational-emotive theraphy techniques, and has been found successful in reducing speech anxiety (Meichenbaum, Gillmore & Fedomicius, 1971). Through out this procedure the therapist and client operationalize the "worry" component for the test anxious to a set of self-statements the client is likely to emit in evaluative situations.

The second component of the cognitive treatment procedure was a modification of SD including a "coping" imagery procedure (described in the previous sections). In this procedure, when the imagery scenes are presented, the subject is required to imagine himself getting anxious and then visualize him/herself coping with this anxiety by slow deep breaths and self-instructions to attend the task.

In summary, the cognitive modification treatment was basically designed to deal with the two major components of TA, "worry" and "emotionality" compared with a standard SD treatment group and a waiting list assessment control group. The cognitive modification treatment procedure which attempst to make high test anxious Ss aware of the anxiety endengering self-statements they

emit and aware of incompatible self-instructions and behaviours they are likely to emit,produced greater improvements in TA and GPA than SD alone (Meichenbaum, 1972). This study illustrates that the desensitization procedure can be both successfully modified and supplemented by treatment procedures designed to change the selflabeling or cognitive processes of the client. Relying on these findings and of Wine (1971), Meichenbaum suggested that the ruminative or worry behaviour which the high test anxious subject emits is subject to modification.

Relatedy a further line of evidence indicated that among the studies in which examination performance has been used as an outcome measure, self-control cognitive treatment approaches have demonstrated greater success in reducing self reported test anxiety and producing most consistent positive effect on performance (Denny, 1980, cited in Bruch, Juster & Kaflowitz, 1983).

Most of the cognitive behavioral stress management programs provide individuals with rehearsal of coping skills that are acquired. Meichenbaum (1977) suggessted that stress management skills are best learned and most successfully applied when clients possess the opportunity to practice or rehearse them (cited in Smith & Nye, 1989). Failure to provide rehearsal opportunities causes relatively ineffective coping, in actual stress situations especially when situational demands increase. Mastering of the responses during the rehearsal phase is likely to increase clients'

appraisal of their resources (Lazarus & Folkman, 1984, cited in Smith & Nye, 1989) and to enhance self-efficacy expectancies (Bandura, 1986, cited in Smith & Nye, 1989).

In Meichenbaum's stress inoculation training, covert or imaginal rehearsal of coping responses seems to be central to the procedure (Meichenbaum, 1977,1985, cited in Smith & Nye, 1989). After being trained in relaxation and cognitive coping skills, subjects imagine themselves applying the responses in order to cope with potentially stressful situations. If emotional arousal occurs during covert rehearsal, clients are instructed to use the same coping skills to reduce them. It can be clearly seen that, the explicit manipulation of the Ss' self-statements by modelling or imagery techniques resulted in behavioral change and less accompanying anxiety.

At this poit, Albert Bandura's (1977) self-efficacy theory merits attention with respect to it's relationship with cognitive coping strategies.

I.3 SELF-EFFICACY THEORY

The following statement, "treatments, whatever their forms alleviate phobias by instilling and strengthening self-perception of"coping efficacy" (Williamms, Dooseman, and Kleifield, 1984) forms one of the basic assumption of the self-efficacy theory, developed by Albert Bandura (1977).

"Self-efficacy" is a construct that's roughly 10 years old but one that, has generated an enormous amount of literature in it's role as a mediator of behaviour change and arousal in a variety of areas (Litt, 1988).

According to Bandura (1977), all behaviour change is mediated through changes in self-efficacy, or beliefs that one has the ability to behave in such a way as to produce desirable outcomes. In more explicit terms; an efficacy expectation is the convinction that one can successfully execute the behaviour required to produce the desired outcome (Bandura, Adams and Beyer 1977). Expectations of personal efficacy or mastery, are said to influence the initiation of coping responses.

Bandura (1977) asserts that self-efficacy expectancies may vary on several dimensions. The 'magnitude', or 'level' of efficacy refers to the person's estimate of his/her best possibble performance of a given behaviour. The 'strength' of efficacy refers to the person's degree of confidence that he/she can perform at a given level: A person may be very confident of being able to perform at a low level, but less confident of being able to perform at a higher level. Finally, efficacy expectations also differ in 'generality'. Some experiences create circumscribed mastery expectations, while others instill a sense of efficacy that extends beyond the specific situation. According to Bandura (1977), given reasonable outcome expectancies (refer to a person's belief that a

given behaviour will lead to a given outcome), the level and strength of one's efficacy expectations for a particular behaviour determine whether or not the behaviour will be attempted, how much effort will be expended, and how long that effort wil be sustained. In other words, the stronger the perceived efficacy, the more likely the person will get involved and the more active and longer the efforts will be in dealing with problematic situations. According to this conceptualization, Litt (1988) argues that, cognitive strategies designed to modify the aversiveness of an event should be effective to the extend that they enhance efficacy expectations.

Supportting Litt's argument, self-efficacy theory postulates an interactive, though asymmetric relation between perceived self efficacy and fear arousal and posits that it is mainly perceived inefficacy in coping with potentially aversive events that makes individuals fearsome (Bandura, 1983).

Bandura (1983), defines perceived self-efficacy as people's judgements of how well they can organize and execute constituent cognitive, social and behavioral skills in dealing with prospective situations, and claims that; perceived self-efficacy is concerned not with one has, but with judgements of what one can do with what one has. Relatedly he makes an argument that, people who judge themselves to be inefficacious in managing potential threats, approach such situations anxiously, and the experience of

distruptive arousal, in turn, lowers their sense of efficacy that they will be able to perform skillfully.

The relation between self-percepts of coping efficacy and fear has been tested directly in several lines of research with severe phobics (Bandura and Adams 1977; Bandura,Adams and Beyer, 1977; Bandura, Adams, Hardy and Howells,1980). In these experiments the intensity of fear is analyzed as a function of the strength of perceived self-efficacy in coping with different threats. The findings have consistently showed that phobics experienced high anticipatory and performance fear on tasks on which they perceived themselves to be inefficacious, but as the strength of their self-percepts of efficacy increased, their fear had declined. The generality of the perceived inefficacy-fear relation is further confirmed in research, using physiological indexes of fear (Bandura, Reese, and Adams, 1982).

Phobics have displayed no visceral arousal while performing coping tasks they regard with utmost self-efficaciousness. However on tasks about which they doubt their coping efficacy, their heart rate accelerated and their blood pressure rised during anticipation and performance of the activites. After self-percepts of coping efficacy were strengthened to maximal levels, these same activities were executed without any visceral agitation.

All these results confirm that there is a relationship between perceived coping in efficacy and fear arousal, therefore

perceived self-efficacy can be claimed to be an accurate predictor of the therapeutic outcome.

Besides these series of experiments, a large body of research suggests that perceived self-efficacy predicts behaviour across a wide range of behaviours. The other behavioral domains that have been examined have included social skills (e.g.,Kazdin 1979; Lee,1984), vocational choice (Betz and Hackett, 1981), smoking cessation (e.g., Candiotte and Lichtenstein, 1981; Nicki, Remington and MacDonald, 1984), recovery from heart attacks (Bandura, 1982), physical endurance, (e,g.,Weinberg, Gould, and Jackson, 1979) and sports performance (e.g., Feltz, Landers, and Raeder, 1979; Lee, 1982).

According to Bandura (1977), expectations of personal efficacy are based on four major sources of information which are, 'vicarious experience', 'verbal persuasion','physiological states' (or emotional arousal) and 'performance accomplishments' (or enactive attainments) which is assumed to be the most influential source of increasing personal efficacy expectations.

'Vicarious experience', is a less dependable source of information about one's capabilities than is direct evidence of personal accomplishments. However, as Bandura (1977) claims, many expectations are derived from vicarious experience. Seeing similar others perform threatening activities without adverse consequences

can generate expectations in observers that they too will improve if they intensify and persist in their efforts. They persuade themselves that if others can do it, they should be able to achieve at least some improvement in performance.

'Verbal persuasion' is widely used because of its ease and ready availability, in attempts to influence human behaviour. People are led, through suggesstion, into believing they can cope successfully with what has over-whelmed them in the past. Efficacy expectations induced in this manner are also likely to be weaker than those arising from one's own acomplishments because they do not provide an authentic experiential base for them. In the face of distressing threats and a long history of failure in coping with them, whatever mastery expectations are induced by suğğestion can be readily extinguished by disconfirming experiences (Bandura, 1977). In laboratory studies, "placebo" conditions designed suggestively to raise expectations of improvement produce little change in refractory behaviour (Lick and Bootzin, 1975; Moore, 1965; Paul, 1969).

'Emotional arousal', is another source of information that can affect perceived self-efficacy in coping with threatening situations. Bandura (1977), states that people rely partly on their state of physiological arousal in judging their anxiety and vulnerability to stress. Because high arousal usually debilitates performance, individuals are more likely to expect success when

they are not beset by aversive arousal than if they are tense and viscerally agitated. Thus it can be concluded that diminishing arousal can reduce avoidance behaviour, but different theories posit different explanatory mechanisms for the observed effects.

Researchers working within the attributional framework have attempted to modify avoidance behaviour by directly manipulating the cognitive labeling of emotional arousal (Valins and Nisbett, 1977, cited in Bandura, 1977). The presumption is that if phobics are led to believe that the things they have previously feared no longer affect them internally, the cognitive reevaluation alone will reduce avoidance behaviour. In such studies, phobics received false physiological feedback suggesting that they were no longer emotionally upset by threatening events. However, the results of this procedure were essentially negative. Early claims that erroneous arousal feedback reduces avoidance behaviour (Valins & Ray, 1967) were disputed by methodologically superior studies showing that false feedback of physiological tranquility in the presence of threats has either no appreciable effect on subsequent fearful behaviour (Rosen, Rosen, and Reid, 1972) or resulted in only minor changes (Borkovec, 1973).

Misattribution of emotional arousal is another variant of the attributional approach to modification of fearful behavior. The strategy is to lead fearful people into believing that their emotional arousal is caused by a nonemotional source. To the extent

that they no longer label their agitated state as anxiety, they will behave more boldly. But the highly anxious are not easily led into misattributing their anxiety to irrelevant sources (Nisbett and Schacter, 1966). When evaluated systematically, misttribution treatments do not produce significant changes in chronic anxiety conditions (Singerman, Borkovec & Baron, 1976).

According to Bandura (1977), any reduction in fear resulting from deceptive feedback is considered to be short lived because illusory assurances are not an especially reliable way of creating durable self expectations. Severe height phobics for example may be temporarily misled into believing that they no longer fear high elevations, but they will reexperience unnerving internal feedback when confronted with dreaded heights.

Finally, 'performance accomplishments' is assumed to be the most powerful source of increasing personal efficacy expectations since it is based on personal mastery experiences providing the clients with reliable first hand information of their coping abilities. According to Bandura (1977) performance success, results in the strongest sense of self-efficacy.

The effectiveness of performance based treatments are enhanced even more when the client receive moderate or large amounts of mastery aids such as proximal goals, graduated time, physical support, modelling, eliminating defensive meneuvers

provided by the therapist (Bandura, Jefferey, and Wright, 1974; O'Brien and Kelly, 1980)

Results of recent studies support the thesis that generalized, lasting changes in self-efficacy and behaviour can best be achieved by participant methods using powerful induction procedures initially to develop capabilities, then removing external aids to verify personal efficacy, then finally using self-directed mastery to strengthen and generalize expectations of personal efficacy (Bandura, Jeffery, Gajdos, 1975).

Independent performance creates additional exposure to former threats, which provides participants with further evidence that they are no longer aversively aroused by what they previously feared, reduced emotional arousal confirms increased coping capabilities and self-directed mastery provides opportunities to perfect coping skills, which lessen personal vulnerability to stress.Independent performance, if well executed, produces success experiences, which further reinforces expectations of self competency (Bandura, 1977).

Bandura (1977) aimed to analyze the relationship between self-efficacy and behavioral change, severe phobics received treatments designed to create differential levels of efficacy; adult snake phobics whose phobias affected their lives adversely, were administered either participant modelling, modelling alone, or

no treatment for equivalent periods. In participant modelling, which operate through direct mastery experiences, subjects were assisted, by whatever induction aids were needed, to engage in progressively more threatening interactions with a boa constrictor. After completing all the therapeutic tasks (e.q., holding the snake etc.), the subjects engaged in a brief period of self-directed mastery. On the other side, subjects receiving the modelling treatment merely observed the therapist perform the same activities for an equivalent period. These Ss did not engage in any behaviour themselves, and consequently they had no performance sources of information for their efficacy expectations. Enactive and vicarious procedures were selected for the study to assess the predictive value of self-efficacy created by quite different modes of treatments. The level, strength and generality of the subjects' efficacy expectations were measured at the critical junctures in the change process. These measures were obtained prior to treatment, following treatment but before the behavioral post test and after completing the post test. Ss assigned to the control condition participated in the assessment procedure without receiving any intervening treatment. The results of this experiment showed that experiences based on performance accomplishments produced higher, more generalized and stronger efficacy expectations than did vicarious experience, which in turn exceeded those in the control condition. Another result showed that performance change corresponded closely to the magnitude of expectancy change; the greater the increments in self perceived efficacy, the greater were the changes in bahaviour.

Although the enactive and vicarious treatments differed in their power to enhance self-efficacy, the efficacy expectations were equally predictive of subsequent performance irrespective of how they were instated. The higher the level of perceived self efficacy at the completion of treatment, the higher was the level of approach behaviour for efficacy expectations instated enactively and vicariously.

In another study, Williams, Turner and Peer (1985) compared quided mastery desensitization and classic 'performance desensitization' (in vivo desensitization). In this study, severe height phobics were randomly assigned either to 'quided mastery desensitization', 'performance desensitization' or 'no treatment' conditions. In performance desensitization, Ss were asked to overcome their phobias and try to stand at the realing of each balcony while remaining calm and relatively free of anxiety. In 'quided mastery, on the other hand, Ss were told to overcome their problems by tackling more difficult tasks as rapidly as possible. In addition, the therapist provided a variety of performance aids like 'proximal goals'(having Ss focus their efforts on attaining an intermideate goal if they found a given task too difficult), 'graduated time' (a difficult activity first is tried for a very brief period and then the time is gradually increased), ('physical support' (e.g., holding the arm of the therapist), 'modeling' (the therapist models the activities), 'eliminating defensive maneuvers' (suggestions aiming to improve the quality of performance to

eliminate defensive activities are provided by the therapist). The results showed that; although performance desensitization Ss received significantly more exposure to phobic situation than guided mastery Ss, the latter proved to be significantly more effective than classic SD, in raising the Ss' perception of self efficacy and in reducing their anticipated anxiety related to the phobic situation.

Also, in a series of experiments, severe snake phobics received treatments relying on enactive, vicarious, emotive, and cognitive modes of influence (Bandura, and Adams,1977; Bandura, Adams & Beyer, 1977; Bandura, Adams, Hardy, & Howells, 1980). Results of these studies, have confirmed that different modes of influence all raise and strengthen self percepts of efficacy. Moreover behavior corresponds closely to level of self-efficacy change, regardless of the method by which self-efficacy is enhanced. The higher the level of perceived self-efficacy, the greater the performance accomplishments.

As a conclusion, self-efficacy theory states that, self percept of efficacy functions as a cognitive mediator of actions and perceived inefficacy in coping with potentially aversive events/situations produces fear arousal in individuals. Psychological procedures,aimed at reducing anxiety, whatever their forms serve as means of creating and strengthening the self-percept of coping efficacy and this is achieved most effectively by therapist assisted enactive mastery experiences.

While examining the explanatory and predictive power of the theory, most of the studies used 'performance (invivo) desensitization', as the theraphy technique to alter behaviour and this technique is compared mostly with therapist assisted "quided mastery desensitization".

Imaginal SD procedure has proved to be effective in reducing anxiety and avoidance behaviour (Mathews, Johnston, Lancashire, Munby, Show and Gelder, 1976). Thus, it may be expected that, imaginal desensitization sessions designed to enhance a sense of coping efficacy may increase the efectiveness of this procedure.

Self-efficacy literature includes no empirical research employing mastery expectations in imaginal SD procedure, nor any direct assumption comes from this theory regarding the potency of imaginal mastery experiences in increasing self-efficacy expectations.

The main assumption of the self-efficacy theory is that; treatments whatever their form are likely to increase self-percept of coping efficacy. The more impact they have on self-efficacy expectations, the more successful will be the outcome.

Taking this assumption as a base, a modified SD in imagination which aimed at developing a stronger sense of self-efficacy with the usage of "self-instructional coping

self-statements" will be applied in the present study and compared with a classic SD in imagination where Ss are considered relatively to have a lesser chance of developing efficacy expectations in reducing TA and increasing academic performance.

The classic SD and modified SD procedures mentioned above are referred to as the purely behavioral treatment and cognitive-behavioral treatment respectively. In other words, the major aim of the pretent study is to investigate the differential effects of a behavioral (SD) and a cognitive behavioral (modified SD) treatment on altering self-efficacy expectations. TA with it's dualistic nature, including "worry" and "emotionality" components is considered as an appropriate target problem for the comparison of purely behavioral and cognitive behavioral treatments in enhancing efficacy expectations. The "test anxiety" literature included no research indicating the role of self-efficacy expectations on the problem of TA, although much of the anxiety research (e.g. phobias, speech anxiety) refer to self-eficacy theory in attempts to explain their results.

Therefore, the present study is designed to test the following hypothesis: self-instructional technique (including the usage of cognitive coping self-statements) when combined with SD in imagination, will result in higher perception of coping efficacy and better treatment outcome as measured by different measures of TA and test performance than traditional or classic imagery systematic desensitization.

SECTION II

METHOD

II.1 SUBJECTS

Subjects (Ss) were 21 test anxious university students, 11 male and 10 female (M : 20.61 years old, SD : 2.08, R : 17-24), selected among the 35 volunteers who responded to the advertisement of the programme posted at various departments, library, cafeteria and restaurant of the Middle East Technical University.

II.2 MEASURES AND INSTRUMENTS

a. Test Anxiety Inventory (T.A.I):

Test Anxiety Inventory which was developed by Spielberger (1980) and adopted to the Turkish culture by Öner and Kaymak (1985,1986) and Öner (1986), was administered to each subject at pre, post-treatment, and follow up assessments.

The Turkish edition of the T.A.I (T.A.I-T) was accomplished in three stages, each constituting an independent study:

Test Anxiety Inventory is a self report psychometric scale designed to measure individual diferences in test anxiety as a situation specific personality trait.

The original form of T.A.I is composed of two subscales, called "Worry" and "Emotionality" both of which were determined by factor analysis. There are four additional items with moderately high loadings on both factors, and these are taken into consideration for the computation of the T.A.I Total score. Thus, the original T.A.I consists of eight "worry", eight "emotionality" and four additional items, adding up to 20 Total items.

However, the factor analyses of the Turkish edition of (T.A.I-T), suggested a three factors solution; "Worry", "Emotionality" and " Nervousness" structure for the T.A.I-T. Items comprising the "worry" factor were exactly the same with the eight "Worry" items of the English T.A.I. The other two factors commonly identified in most of the sample groups were "Emotionality" and Nervousness". Half of the original Emotionality items appears in one factor called "Emotionality", the other half in the "Nervousness" factor. Thus, the Turkish T.A.I seemed to have three factors rather than two as demonstrated in the orginal English form, the Dutch and Eygption editions (Öner,1986). In the statistical analyses of this study, "Worry" "Emotionality" and Nervousness" subscales of T.A.I-T were analysed seperately and evaluated as three independent measures besides the T.A.I-T(General).

To test the stability of the inventory, Turkish students from three levels of education, junior high, senior high, and university, also covering three S.E.S levels (high, middle and low) were administered the test twice with five different intervals, ranging from the same day to three weeks. Results of the test re-test correlations varied between .93 (for one day), .81 (for two weeks), and .72 (for three weeks).

The internal consistency and homogeneity of the inventory were assessed by Cronbach's alpha and item remainder correlations.

The alpha coefficients for the entire sample T.A.I-T Total scale was .87, ranging between .82 and .92 for specific school samples. For the 'worry' and 'emotionality' subscales, the total sample coefficients were .74 and .79 respectively.

The item remainder correlations for the entire sample T.A.I-T Total scale varied between .35 and .62, and varied between .37 and .59 for the 'worry' and .47 and .59 for the 'emotionality' subscales.

Together with the alpha coefficients these item-remainders indicate the adequacy of the internal consistency and homogeneity of the experimental T.A.I-T (Öner, 1986).

In the validation process of the inventory, where heterogeneous monolingual Turkish student samples were utilized, the criterion and construct validities of the T.A.I-T were

assessed. Moderate significant correlations between the T.A.I-T and various personality measures as well as academic achievement were obtained and provided support for the concurrent, predictive and construct validity of the instrument (Öner, 1986)

Similar to the original, T.A.I-T, uses four-point likert scale ((1) almost never, (2) sometimes, (3) often, and (4) almost always).

The scoring weights for each item are one through four. Only the first item is scored in the reverse direction. Respectively the minimum T.A.I-T Total score can be 20, while the maximum is 80 (See Appendix A).

b. State Anxiety Scale

Spielberger, Gorsuch, and Lushene's State Anxiety Scale (1970) adopted to the Turkish culture by Öner and Le Compte (1982), was administered to each subject at pre and post treatment assessments. State Anxiety Scale has 20 items (some scored in positive, some scored in negative directions), and uses a four point likert type scale (i.e., almost none, little, much, very much). For positive sentences that(are indicating no anxiety, the values four, three, two and one are given respectively and for negative sentences which indicate anxiety, the points are valued as one, two, three and four. Thus, the maximum score on this scale is

80, (indicating extreme anxiety), while the minimum score is 20 (See Appendix B).

The internal consistency and homogeneity of the scale were assessed by Kuder Richardson 20 (alpha coefficients), "Item Remainder" correlations and test re-test techniques.

The alpha coefficients ranged between .94 and .96 whereas itemremainder correlations varied between .42 and .85, which indicate the adequacy of the internal consistency of the 'state anxiety scale'.

To test the stability of the scale students from Hacettepe, Military School and M.E.T.U were tested twice with five different time intervals (10,15,30,120 and 365 days).

Results of the test re-test correlations varied between .26 and .68 indicating the stability of the scale overtime (Öner and Le Compte, 1976, cited in Öner and Le Compte, 1982).

For the validation process of the scale, construct validity and criterion related validity techniques have been used. All the results have supported the criterion related validity and construct validity of the 'state anxiety scale' (Öner and Le Compte, 1976, cited in Öner and Le Compte, 1982).

c. Self-Efficacy Questionaire

A questionaire on perceived self-efficacy on not feeling anxious related to test taking was developed and applied to all Ss

participating in the pre, post and follow-up assessments.

The format of the questionairre was modeled on Nicki et all's Self Efficacy Questionairre for Smoking (1984). The subjects were required to rate their assurance, on a seven point scale (one indicating no assurance, seven indicating complete assurance) that he/she would not feel anxiety in that given situation.

The questionnaire consisted of 40 items which were selected from the Suinn Test Anxiety Behaviour Scale (STABS)(Suinn, 1969) which originally composed of 50 items. The situations were reduced to 40, by taking into account cultural and educational differences of Turkish universities (especially M.E.T.U). In scoring, the mean of these 40 items were obtained. Thus, seven and one are respectively maximum and minimum scores on this questionaire. (See Appendix C)

While forming this questionaire, because of practical limitations, no validity and reliability data could be obtained, so this questionaire should just be considered as a tool which enables a comparison of pre, post and follow-up efficacy ratings of the present sample on these 40 situations.

d. Self-Rating of Anxiety

Just before an actual examination of a course (defined as important for him/her by the S previously) and an analogue test

situation (administration of Raven Proggressive Matrices), each subject was required to rate his/her anxiety on an 11 point scale where zero showing no anxiety and 10 showing extreme anxiety, at both pre and post assessments (See Appendix D).

e. Grade Point Average (G.P.A) Scores of Subjects

Ss' G.P.As for the terms before and after treatment were obtained as pre and post assessment scores.

II.3 PROCEDURE

At the beginning of the study, written advertisements, calling test anxious students (who perceived themselves as in need of help) to join a theraphy programme which aims to reduce "test anxiety" were posted on different boards of the campus, i.e., library, cafeteria, departments etc.

Within a two months period, 35 students responded to the announcements of the programme. Most of the respondents stated that, they were suffering from extreme levels of anxiety before and during the examinations which they perceived caused a decrement in their test performance and respectively a loss of self-esteem in their academic life.

While deciding how to choose the suitable subjects for the theraphy programme, a predetermined selection criteria such as a

certain score taken from a test anxiety scale or a questionairre was not required, but still the researcher tried to make a very carefull selection in order to eliminate those who were not suitable for the programme. Such that, the ones who perceived joining such a theraphy programme as an intellectual hobby or merely wanted to attend out of curiosity etc... were strictly kept out of the selection.

The researcher also held a detailed interview with each subject in order to get information about their educational history and the effectiveness of their studying skills, and tried to select individuals whose prior study habits were relatively effective (well prepared) before the examinations, but suffered from interfering anxiety which caused poor performance during the tests. The researcher had taken past research as a reference point while deciding on such a selection. Covington and Omelich (1987) states that, for such a blockage(interference) to occur, the anxious student must have been reasonably well prepared to begin with. Thus, the students who are ineffectual in study habits or unwilling to study are unlikely to be victimized by test anxiety reactions.

Besides, high test anxious individuals, do not experience problems only at the cognitive level (interfering thoughts etc..). In order to define them as "high test anxious" heightened somatic reactions also have to be seen (Mariett, N., & Watson, D., 1968). Thus the researcher, finally selected 21 of the 35 attendants who

could be defined as "test anxious" by referring to all of the definitions of research mentioned above.

Each of the selected subject had suffered both from somatic complaints (headaches, stomach ache, perspiration, dizziness before and during the exams etc..). and from problems at the cognitive level (interfering thoughts, fear of failure, loss of self-esteem etc..).These are all recorded on the interview forms of each subject which were previously prepared by the researcher (See Appendix E).

II.3.1 Pretreatment Assessment

The pretreatment assessment composed of two phases.

a. First Phase : Each subject was required to fill in the state anxiety scale just before (five or 10 minutes) an actual examination of the target course which was determined by the subject and the researcher during the interviews. (The Ss were required to record all the courses they take and rank them subjectively according to their importance and difficulty level. The one which the subject ranked in the first or second order (most threatening ones for him/her) was selected as a target course). This examination of the target course was decided to be a mid-term both for the pre and post treatment assessments considering the different weights of the midterm and final exams to the final grade.

Also an 11 point self-Rating Anxiety scale was attached to these State Anxiety Scale forms and the Ss were required to rate their anxiety between zero (no anxiety) and 11 (extreme anxiety), on this scale immediately after filling the State Anxiety Scales.

Finally, each subject completed this task in the required way and had a score of "state anxiety" and a "self rating of anxiety" which represented the subject's anxiety level, preceding an actual midterm of a target course, before the treatment.

Selection of the subjects and the first phase of the pretreatment assessment mentioned above took three months.

b. Second phase : After the half year holiday, the researcher called on each subject informing that the programme was beginning and invited all of them to participate in further pretreatment assessment. This phase of the pretreatment assessment took place at the Solmaz İzdemir Conferance Hall of the library, which was reserved for this programme for a period of 10 weeks (being once a week, on Saturdays).

Although each subject had received general information about the programme before, in this session (being the first) a review was made by the researcher, giving an overall view about the theraphy, it's content and requirements. Following this introduction, the Ss were instructed to fill in the Self-Efficacy Questionairre.

After the completion of the questionaire, the advanced Progressive Matrices, Sets I and II (Raven, 1962) were administered to each subject subsequently with an aim of creating an analogue test taking situation; (Raven Progressive Matrices are used in order to assess a person's total capacity for observation and clear thinking without a time limit and when used with a time limit in order to assess the efficiency of his/her intellectual work (Raven, 1965). The first part of Raven Matrices which was photocopied for each subject was handed out and the researcher informed the Ss that this was the first part of a test which would help to determine the intellectual efficiency of an individual and aimed to measure the present performance. Additionally they were informed that, the first part intended to show the method of working thus the real test was set II. To provide an example, the researcher solved the first problem.

Before going on to solve the matrices, Ss were instructed to fill in the State Anxiety Scale and the Self-Rating of Anxiety Scale which were handed out at the beginning of the session. After each subject completed the scales, the researcher asked them to start and gave a 10 minutes time for completion.

When the period was over, the second part (Set II) of the Raven Matrices which included 36 problems were distributed and the Ss were instructed again that the problems in this set were similar to those they've just completed, except that there were more of them and that the time limit was 40 minutes.

The pretreatment session ended up by the end of this 40 minutes and an announcement was made to inform them to come next week for the first session of the relaxation training.

During this session, the researcher tried to avoid giving clues about the rationale of administering the Raven Matrices Test, yet, she promised to report the test results expressed in performance percentages at the end of the theraphy programme.

Also, the Turkish edition of Test Anxiety Inventory (T.A.I-T) was planned to be administered in the preteatment assessment, but it was not possibble to receive it from Bhosphorus University at the requested date. So administration of T.A.I-T took place on the fourth session of the relaxation training. All these assessments were caried out by the researcher herself.

II.3.2 Posttreatment Assessment

The posttreatment assessment was conducted on the week following the completion of the treatment. The procedure used in the pretreatment assessment were exactly replicated with two exceptions one is that, most of the students filled in the State Anxiety Scale and Self Rating Anxiety Scales before the final examination of a target course (The target courses were the same (prerequisite) for some of the subjects with the pretreatment assessment) since the midterms were almost over by the end of the treatment, and the second exception is that in order to create the analogue test taking situation successfully, another female

research assistant administered the Raven Progressive Matrices instead of the researcher, considering that the Ss had got used to the researcher during the the theraphy programme.

II.3.3 Follow-Up Assessment

The follow-up assessment was held after the summer holiday (four months later). Out of 16 Ss who completed the programme only 14 had come to the follow-up assessment (The other two Ss couldn't be conducted because of the adress changes).

The identical pre and post assessment procedures could not be followed in the follow-up assessment because of practical and time limitations. However the Self-Efficacy Questionaire and T.A.1-T were administered to the Ss and the whole assessment procedure ended up by the completion of these two scales.

Number of Ss in each group at different phases of the study can be seen in Appendix.F.

II.3.4 Treatment Procedure

Pre-Treatment (preperation) :

a. Preparation of a general item hierarchy :

Firstly, 40 test related situations which are derived from the previously prepared self-efficacy questionaire was worded as a

40 item list, only by changing the structure of the sentences and leaving the content exactly the same (item pool)(See Appendix G).

The maximum item number, for the systematic desensitization for both of the treatment groups was planned to be 30, so it was decided to eliminate 10 items. In order to make this reduction, the item list was administered to 18 of the subjects (three were absent out of 21 Ss at that session) who were selected for the present study and they rated each item according to the subjective unit of discomfort (SUD) it elicited ranging from zero to 100.(zero:no anxiety, 100:extreme anxiety).

Than for each of the 40 items, the mean rating and standart deviations were calculated. The analyses indicated that the mean ratings of SUDS ranged between 46.1 and 100. Following this, each item was placed into a corresponding 10 SUD points interval according to it's mean rating (e.g.,40-49; 50-59; 60-69 and so on). From each interval, some of the items were eliminated because of their higher standart deviations and as a result among these potential 40 items, 19 were selected.

As noted above, there was no item which had a mean rating below 46.1. Because of the rationale of the item hierarchy in systematic desensitization proposed by Wolpe, some less anxiety provoking items were needed. For this purpose 11, presumably less anxiety provoking items were prepared and added to previously chosen 19 items. Finally, a total of 30 items were constructed as

the systematic desensitization item list (See Appendix H).

b. Preperation of individualized item hierarchies:

In the present study an individualy tailored item hierarchy, unique for each subject was used both for the classical S.D and the modified S.D groups.

So, each subject was administered the 30 item list and required to rate each item according to the SUD it elicited ranging from zero to 100. Following this, each S's items were ranked beginning from the least anxiety provoking item to the most anxiety provoking one. When a subject rated two or more items as having the same SUD, the researcher used random numbers list in ranking them. Appendix I shows the ordering of the items for each subject.

Number of item presentation was decided by taking Nawas, Fishman and Pucel's (1970) standardized desensitization programme as a reference point. The distribution of items over sessions and their number of presentation can be seen in Appendix J (Numbers one to 30 represents a different item for each individual.

c. Preparation of "coping-statements" for the self-instructional group:

For the self-instructional group, individualized hierarchies were used in order to develop coping statements. In an extra "training session", the item lists were administered to each subject in the form of fill in the blanks across each item and they

were required to imagine each situation as vividly as possible for that moment and try to remember and to record what they usually say to themselves in such a situation that may increase their anxiety.

By this method, all Ss' anxiety provoking self-statements for some of the 30 situations were recorded. Subsequently, these self statements were examined and Ss were encouraged to provide a substitute coping self-statement to replace the original anxiety provoking statement. The researcher helped the subjects by providing examples of constructive coping statements. Then, the Ss were given a homework assignment to identify and record their usual self-statements for the rest of the items, and also to provide a coping self-statement for each item.

Finally, when the researcher received the lists, the negative self-statements and the alternate coping statements were examined. If the alternative coping statements that the Ss provided were appropriate, they were retained for the treatment, however, if they were not, the researcher replaced a more appropriate coping statement.

So, each S of the "self-instructional group" had their unique hierarchic item list, like the classic SD group, but also had a coping statement for each situation. Two of the SS'hiearchic item lists and the coping statements which are generated for eachitem can be seen in Appendix K.

d. Preparation of booklets for treatments:

For both of the groups, the researcher prepared little booklets unique for each subject in which a predetermined number of items were written and numbered according to the number of items decided to be administered for each session (as shown in Appendix J). The booklets included both the items and related coping statements for the "self-instructional" group and only the items for the "classical SD group". This procedure was selected, since the hierarchies during the sessions were individualized and the Ss had to read the situations (and the coping statements) silently to themselves. The presentations of items were made only by giving the item number and instructing the Ss to read it.

II.4 TREATMENT

A. Procedure (General):

The 21 Ss selected for the study were randomly assigned to one of the two treatment conditions, initially 11 in "self-instructional group" and 10 in the "classic SD group".

The treatment continued for eight weeks. One hour sessions per week were held at Solmaz İzdemir Conferance Hall of the library of the Middle East Technical University. The "classical SD group" met at 11 a.m in the morning while the second group (self-instructional group) met at 13 p.m each saturday. However

due to some schedule conflicts some extra sessions were held during the week at 17.30 p.m.

In the first four weeks, Ss were trained in Jacobson's Proggressive Muscular Relaxation. The remaining four weeks were spent for the six "systematic desensitization" and "modified systematic desensitization" sessions. The first five to 10 minutes of each treatment session was spent for a shortened relaxation. Ss were instructed to relax by using their skills learned in the relaxation training without tensing their muscles seperately (See Appendix L).

Jacobson's Muscular Relaxation Training which lasted 25-30 minutes was administered from a standart tape recorded by a female research assistant whose tone of voice was found to be suitable and relaxing, also during the "classic SD" and "modified SD" sessions, again taped instructions were used which was again recorded by the same research assistant and prepared by the researcher.

In the last treatment session, after the completion of the last "systematic desensitization" and "modified SD", the Ss were administered a two item questionairre. In the first item, Ss were asked to rate the "usefulness" of the treatment that they participated for themselves, on a seven point scale (one indicating "no useful at all" seven indicating "very much useful"). The question was formed to inquire the relative effectiveness of the programme for each S.

In the second item, they were asked to rate the " recommendability" of the treatment for one of their close friends having the same problem, again on a seven point scale (one indicating "no recommendability", seven indicating "high recommendability") (See Appendix M).

For the "classic SD group" in addition to these two items, the Ss were also asked whether they've used any other coping strategies except the relaxation skills they've been thought, in order to cope with their anxiety (See Appendix N).

B. The Two Treatment Conditions:

I. Self Instructional Condition :

Instead of mere presentations of items, Ss in this condition were instructed to imagine as vividly as possible the situations they were required to read and to repeat their coping statements to themselves.

In other words, the subjects were instructed to read carefully the item (by giving the item number) and the coping statement which aimed at reducing the anxiety provoked by that situation. A 15 second period was given for the Ss to read the item and the coping statement. Then the Ss were instructed to imagine themselves at the situation they've already read as vividly as possible and suggested to repeat the coping statement to

themselves. 35 seconds were given for this period. Following these suggestions Ss were instructed to relax as much as possible. This relaxation period lasted 10 to 15 seconds.

This condition can be figurized as :

I	II	III
15"	35"	10"
Reading period	Imagine(exposure) + coping statement	Relaxation

The same procedure was repeated for each presentation of the 30 items (See Appendix O)

II. Classic SD Condition :

Following the traditional approach, the anxiety eliciting scene (the item) presentation was paired with a relaxed state. Such that, after the presentation of an item, no instructions to use coping statements were given in this condition.

In other words, the Ss in this condition were instructed to read a given situation (presented by the item number) carefully.

Again 15 seconds was given for the reading period. Then a second instruction comes which requires the Ss to imagine

themselves in the situations that they've just read. Following the 35 seconds given for imagination, the instruction to relax comes and this period lasted 10 to 15 seconds.

This condition can be figurized as such :

I	II	III
15"	35"	10"
Reading period	Imagine (exposure)	relaxation

The same procedure was repeated for each presentation of the 30 items (See Appendix P).

SECTION III

RESULTS

III. OVERVIEW OF THE ANALYSES

The results of the study are presented in three different subsections. The first subsection includes t-test comparisons of groups prior to treatment on all the assessment measures; state anxiety (actual exam), 'state anxiety' (Raven), 'self-ratings of anxiety '(actual exam), self-rating of anxiety'(Raven), G.P.A, 'self efficacy','test anxiety inventory; T.A.I-T (general)' and 'emotionality', 'worry' and 'nervousness' subscales of T.A.I-T (general).

Correlations among the pre and post treatment measures are also presented in this section except the three subscales of T.A.I-T (general).

In the second subsection, analyses of therapeutic change are documented.

First part includes the results of groups by periods (2x2) repeated measures Analysis of Variance (ANOVA) conducted on the

measures that could only be administered at pre and post treatment assessment phases (state anxiety scale (administered before an actual exam), state anxiety scale (administered before Raven Matrices), self-rating of anxiety (before an actual exam), self rating of anxiety (before Raven Matrices) and G.P.A).

The second part of this subsection presents the results of (2x3) Analysis of Variance and Covariance on the measures that could be administered at all three assessment phases (pre, post, follow-up) of the study (self-efficacy,T.A.I-T(general) and it's three subscales).

Tables of Descriptive Statistics (Means, Ranges and Standart Deviations of Measures) were also presented prior to the results of statistical analyses for each of the treatment groups.

Finally, the third subsection is devoted to t-test analyses of usefulness and recommendability ratings of the Ss in each group.

III.1 COMPARISON OF THE GROUPS PRIOR TO TREATMENT, CORRELATIONS AMONG PRE AND POST TREATMENT MEASURES

III.1.1 Comparison of the Groups Prior to Treatment

Table 1

The Pre-treatment Means, Standart Deviations and "t" test Values for the Two Treatment Groups

Measure	Group	M	SD	df	t
State Anxiety (Actual Exam)	SI6	66.62	7.43	14	1.212
	CSOG	61.25	10.09		
State Anxiety (Before Raven)	SIG	50.50	10.09	14	0.593
	CSDG	46.62	11.54		
Self-Rating of Anxiety (Actual Exam)	SIG	7.62	0.85	14	0.08
	CSDG	7.25	2.10		
Self-Rating of Anxiety (Before Raven)	SIG	6.25	2.33	14	1.281
	CSDG	4.62	2.73		
G.P.A	SIG	1.71	0.40	12	0.410
	CSDG	1.82	0.59		
Self-Efficacy	SIG	2.68	0.55	14	1.080
	CSDG	2,99	0.59		
Test Anxiety Inventory (General) T.A.I-T	SIG	64.25	5.67	14	1.581
	CSDG	59.87	5.39		
Emotionality Subscale of T.A.I-T	SIG	23.50	1.93	14	0.886
		22.50	2.54		
Worry sub-sale of T.A.I-T	SIG	24.37	2.39	14	0.681
	CSDG	23.62	1.99		
Nervousness Subscale of T.A.I-T	SIG	16.12	2.08	14	2.291*
	CSDG	13.62	2.28		

*p < .05

SIG Self Insructional Group
CSDG Classical SD Group

Prior to analyzing therapeutic changes, in order to ensure group equivalance, t-test were performed on all of the ten measures taken at pretreatment assessment. As can be seen from Table 1, these analyses revealed that the treatment groups only differed from one another significantly, on the "nervousness" subscale of T.A.I-T.

III.1.2 Correlations Among Measures

In tables 2 and 3 correlations among measures (variables) at pretreatment and posttreatment are given respectively.

Table 2

Correlations Among Measures at Pretreatment Assessment

Variables		1	2	3	4	5	6	7
Self-Efficacy	1	-						
T.A.I-T	2	-0.5377**	-					
State Anxiety (Actual Exam)	3	-0.1616	0.4399**	-				
State Anxiety (Raven)	4	-0.3828	0.3645	0.1398				
Self-Rating of Anxiety (Actual,Exam)	5	-0.4041	0.1436	0.6924***	0.0068	-		
Self Rating of Anxiety(Raven)	6	-0.4848*	0.3066	0.0376	0.7658***	0.1148	-	
G.P.A.	7	-0.2466	0.1115	- 0.0776	0.2135	0.2353	0.2887	-

* $p < .05$
** $p < .01$
*** $p < .001$

df= 14

As can be seen from Table 2, significant correlations have been obtained between some of the measures. T.A.I-T and self-efficacy are negatively correlated. Similarly self-efficacy has significant negative correlations with self-rating of anxiety (Raven). State anxiety (actual exam) and state anxiety (Raven) were both positively correlated with self-ratings of anxiety (Raven), while T.A.I-T has been positively correlated only with state anxiety (actual exam).

Table 3

Correlations Among Measures at Posttreatment Assessment

Variables		1	2	3	4	5	6	7
Self Efficacy	1	-						
T.A.I-T	2	-0.8453***	-					
State Anxiety (Actual Exam)	3	-0.6591**	0.6182***	-				
State Anxiety (Raven)	4	-0.4544*	0.5691	0.5722**	-			
Self Rating of Anxiety(Actual, Exam)	5	-0.5181*	0.5488**	0.8750***	0.5048*	-		
Self Rating of Anxiety (Raven)	6	-0.6110**	0.6934***	0.5389**	0.8398***	0.5079*	-	
G.P.A	7	-0.0872	0.0733	- 0.2899	-0.3471	-0.1367	0.1395	-

* $p < .05$
** $p < .01$
*** $p < .001$

df=14

Table 3 indicates significant negative correlations between self-efficacy and the other five measures; T.A.I-T, state anxiety (actual), state anxiety (Raven), self-rating of anxiety (actual exam), self- rating of anxiety (Raven). While these five measures have significant positive correlations with each other, only the G.P.A did not correlate with any of the measures.

III.2 ANALYSES OF THERAPEUTIC CHANGE

III.2.1 ANOVA'S for Pre and Posttreatment Assessment Measures of the Self-Instructional And The Classic SD Groups

Means, standart deviations and ranges of the scores for each measure at two assessment phases for the two experimental groups are given in Table 4. The results of the analyses of variance for each measure are summarized in Tables 5,6,7,8 and 9.

Table 4

Pre and Posttreatment Means, Standart Deviations and Ranges of Each Measure for the Two Experimental Groups

Measure	Group	Pre-treatment	Posttreatment
State Anxiety (Actual Examination)	SIG	M=66.62 (SD=7.43;R=54-74)	M=42.37 (SD=13.97;R=25-65)
	CSDG	M=61.25 (SD=10.09;R=48-76)	M=40.5 (SD=5.56;R=34-49)
State Anxiety (Before Raven)	SIG	M=50.50 (SD=10.09;R=25-68)	M=34.75 (SD=9.07; R=20-54)
	CSDG	M=46.62 (SD=11.54;R=25-63)	M=30.60 (SD=3.70;R=22-35)
Self Rating of Anxiety (Actual Examination)	SIG	M=7.62 (SD=0.85;R=6-9)	M=3.75 (SD=2.43;R=1-8)
	CSDG	M=7.25 (SD=2.10;R=5-10)	M=3.18 (SD=1.22;R=1-5
Self Rating of Anxiety (Before Raven)	SIG	M=6.25 (SD=2.33;R=1-9)	M=2.56 (SD=1.64;R=0-5)
	CSDG	M=4.62 (SD=2.73;R=0-9)	M=2.43 (SD=0.98;R=0-3)
G.P.A	SIG	M=1.71 (SD=0.40;R=1.05-2.16)	M=1.94 (SD=0.61;R=0.83-3.10)
	CSDG	M=1.82 (SD=0.59;R=0.60-2.50)	M=2.24 (SD=0.31;R=1.74-2.56)

SIG = Self-Instructional Group
CSDG = Classic Systematic Desensitization Group

Table 5

Results of Groups by Periods (2x2) Repeated Measures Analysis of Variance of State Anxiety Scores(Actual Examination)

Source	SS	df	MS	F
A(Group)	105.125	1	105.125	1.075
Error	1368.750	14	97.767	
B(Time)	4050	1	4050	33.382***
AB	24.500	1	24.500	0.200
Error	1698.500	14	121.320	
Total	7246.875	31		

*** $p \leq 0.001$
df : 1/14

Table 6

Results of Groups by Periods (2x2) Repeated Measures Analysis of Variance of State Anxiety Scores (Raven)

Source	SS	df	MS	F
A(Group)	128	1	128	0.770
Error	2326.500	14	166.178	
B(Time)	2016.125	1	2016.125	24.068***
AB	0.125	1	0.125	1.492
Error	1172.750	14	83.767	
Total	5643.500	31		

*** $p \leq 0.001$
df : 1/14

Table 7

Results of Groups by Periods (2x2) Repeated Measures Analyses of Variance of Self-Rating of Anxiety (Actual Exam)

Source	SS	df	MS	F
A(Group)	0.781	1	0.781	0.31
Error	34.938	14	2.495	
B(Time)	136.125	1	136.125	31.701***
AB	0.500	1	0.500	0.116
Error	60.125	14	4.294	
Total	232.469	31		

*** $p \leq .001$
df:1/14

Table 8

Results of Groups by Periods (2x2) Repeated Measures Analysis of Variance of Self-Rating of Anxiety (Raven)

Source	SS	df	MS	F
A(Group)	6.125	1	6.125	0.946
Error	90.594	14	6.471	
B(Time)	69.031	1	69.031	22.896***
AB	4.499	1	4.499	1.492
Error	42.219	14	3.015	
Total	212.469	31		

*** $p \leq .001$
df:1/4

Table 9

Results of Groups by Periods (2x2) Repeated Measures Analysis of Variance of G.P.A's

Source	SS	df	MS	F
A (Group)	0.296	1	0.296	0.850
Error	4.185	12	0.348	
B(Time)	0.711	1	0.711	3.064
AB	0.064	1	0.064	0.275
Error	2.790	12	0.232	
Total	8.046	27		

As the Tables 5,6,7,8 and 9 show, 'time main' effects reached significance for the measures, 'state anxiety' (actual examination), 'state anxiety' (Raven), 'self-rating of anxiety' (actual exam) and 'self-rating of anxiety' (Raven) and no significant effects have been obtained for the G.P.A scores. Neither 'group' nor 'interaction' effects could be obtained for any of these measures.

Overall means, standart deviations and ranges of each measure at pre and post treatment assessments are presented in Table 10.

Table 10

Overal Means, Standart Deviahons and Ranges of Each Measure at Pre and Posttreatment Assessment Periods

Measure	Pretreatment	Posttreatment
State Anxiety (Actual Exam)	M=63.93 (SD=9.26;R=48-76)	M=41.43 (SD=10.67;R=25-65)
State Anxiety (Raven)	M=48.56 (SD=13.20;R=25-68)	M=32.68 (SD=7.23;R=20-54)
Self-Rating of Anxiety (Actual Exam)	M=7.59 (SD=1.49;R=5-10)	M=3.46 (SD=1.94;R=1-8)
Self-Rating of Anxiety(Raven)	M=5.43 (SD=2.66;R=0-9)	M=2.50 (SD=1.35;R=0-5)
G.P.A	M=1.76 (SD=0.47;R=0.60-2.16)	M=2.04 (SD=0.49;R=0.83-3.10)

As can be seen from Table 10, the 'time main' effects indicate significant decreases in 'state anxiety' (actual exam), 'state anxiety'(Raven), 'self-rating of anxiety' (actual exam) and 'self rating of anxiety' (Raven) measures from pre to post treatment assessments for all Ss.

III.2.2 Analyses of Pre, Post and Follow-up Assesment Measures

Table 11 presents means, standart deviations and ranges of 'self efficacy', 'test anxiety inventory (general)' and 'worry', 'emotionality' and 'nervousness' subscales of T.A.I-T scores of 14 Ss (seven from each group) at three assessment phases (pre, post and follow-up). Analyses of variance for the first four measures and covariance for the 'nervousness' subscale of T.A.I-T, which was the only measure indicating a significant pre-treatment difference between the groups, are summarized in Tables 12,13,14,15 and 16 respectively.

Table 11

Pre, Post and Follow-up Means, Standart Deviations and Ranges of Each Measure for the Two Experimental Groups

Measure	Group	Pre-treatment	Posttreatment	Follow-up
Self Efficacy	SIG	M=2.65 (SD=0.58;R=1.60-3.42)	M=4.90 (SD=1.08;R=3.07-6.32)	M=5.19 (SD=1.08;R=3.52-6.70)
	CSDG	M=2.91 (SD=0.60;R=1.92-3.92)	M=4.78 (SD=1.18;R=2.00-5.87)	M=5.23 (SD=1.19;R=2.50-6.07)
T.A.I-T	SIG	M=65.42 (SD=5.06;R=56-72)	M=40.42 (SD=10.15;R=22-54)	M=37.71 (SD=10.72;R=22-58)
	CSDG	M=60.57 (SD=5.42;R=51-69)	M=42.00 (SD=10.62;R=26-61)	M=35.85 (SD=5.82;R=30-45)
Emotionality Subscale of T.A.I-T	SIG	M=23.50 (SD=1.93;R=2026)	M=15.25 (SD=3.34;R=12-20)	M=14.42 (SD=4.03;R=9-17)
	CSDG	M=22.50 (SD=2.54;R=19-27)	M=15.25 (SD=3.34;R=10-25)	M=14.57 (SD=2.71;R=10-19
Worry Subscale of T.A.1-T	SIG	M=24.37 (SD=2.39;R=20-29)	M=15.50 (SD=4.15;R=12-22)	M=14.42 (SD=4.30;R=11-21)
	CSDG	M=23.62 (SD=1.99;R=21-26)	M=16.50 (SD=3.70;R=10-23)	M=13.28 (SD=2.60;R=10-17)
Nervousness Subscale of T.A.I-T	SIG	M=16.12 (SD=2.08;R=12-19)	M=8.75 (SD=2.72;R=5-14)	M=8.85 (SD=2.89;R=5-15)
	CSDG	M=13.62 (SD=2.28;R=11-17)	M=9.37 (SD=2.44;R=6-13)	M=8.14 (SD=1.24;R=6-10)

Table 12

Results of Groups by Periods (2x3) Repeated Measures Analyis of Variance of Self-Efficacy

Source	SS	df	MS	F
A(Group)	0.040	1	0.040	0.016
Error	28.707	12	2.390	
B(Time)	47.991	2	23.995	46.410**
AB	0.239	2	0.1195	0.231
Error	12.408	24	0.517	
Total	89.385	41		

** $p < .01$

df= 2/24

Table 13

Results of Groups by Periods (2x3) Repeated Measures Analysis of Variance of T.A.I-T (general)

Source	SS	df	MS	F
A(Group)	30.857	1	30.857	0.192
Error	1928.476	12	160.706	
B(Time)	5513.285	2	2756.6425	204.225**
AB	72.429	2	36.2145	2.682
Error	323.953	24	13.4980	
Total	7869.003	41		

**P < .01

df = 2/24

Table 14

Result of Groups by Periods (2x3) Repeated Measures
Analysis of Variance T.A.I-T "Worry" Subscale

Source	SS	df	MS	F
A(Group)	2.380	1	2.380	0.09
Error	333.428	12	27.785	
B(Time)	874.904	2	437.452	79.37***
AB	7.476	2	3.738	0.68
Error	132.285	24	5.511	
Total	1350.476	41		

*** $P < .001$
df= 2/24

Table 15

Results of Groups by Periods (2x3) Repeated Measures
Analysis of Variance T.A.I-T "Emotionality" Subscale

Source	SS	df	MS	F
A(Group)	0.095	1	0.095	0.00
Error	397.714	12	25.642	
B(Time)	630.428	2	315.214	50.92***
AB	6.333	2	3.166	0.51
Error	148.571	24	6.190	
Total	1093.142	41		

*** $p < .001$
df=2/24

Table 16

Results of Groups by Periods (2x3) Repeated Measures Analysis of Covariance of "Nervousness"Subscale of T.A.I-T

Source	SS	df	MS	F
A(Group)	0.914	1	0.914	0.07
1-st COVAR	4.698	1	4.698	0.37
Error	141.443	11	12.858	
B(Time)	4.321	1	4.321	2.05
AB	2.892	1	2.892	1.37
Error	25.285	12	2.107	
Total	179.553	27		

As Summarized in Tables 12,13,14,15 and 16, significant 'group' and 'group x time' interaction effects could not be found for any of the measures. However a significant 'time main' effect was observed for the measures, 'self-efficacy', T.A.I-T (general) and for it's 'worry' and 'emotionality' subscales. No significant effects have been observed for the "nervousness" subscale of T.A.I-T.

Overall means, standart deviations and ranges of each measure at three phases of the study are presented in Table 17.

Table 17

Overall Means, Standart Deviations and Ranges of Each Measure at Pre, Post and Follow-up Assessments

Measure	Pre-treatment	Posttreatment	Follow-up
Self-Efficacy	M=2.78 (SD=0.60;R=1.60-3.92)	M=4.84 (SD=1.13;R=2.00-6.32)	M=5.21 (SD=1.13;R=2.50-6.70
T.A.I-T (General)	M=63.00 (SD=5.78;R=51-72)	M=41.20 (SD=10.42;R=22-61)	M=36.78 (SD=8.70;R=22-58)
"Worry" Subscale of T.A.I-T	M=24.00 (SD=2.23;R=20-29)	M=16.18 (SD=3.98;R=8-23)	M=13.85 (SD=3.60;R=8-21)
Emotionality" Subscale of T.A.1-T	M=23.00 (SD=2.31;R=19-27)	M=15.56 (SD=3.75;R=9-25)	M=14.50 (SD=3.43;R=9-22)
"Nervousness" Subscale of T.A.I-T	M=14.87 (SD=2.52;R=11-19)	M=9.06 (SD=2.60;R=5-14)	M=8.5 (SD=2.25;R=5-15)

As can be observed from Table 17, the 'time main' effects indicate significant increases in 'self-efficacy' and significant decreases in T.A.I-T (general), and 'worry' and 'emotionality' subscales of it from pre-treatment to post-treatment and to follow-up periods.

Further analyses were conducted to investigate the source of this time main effect with respect to pre, post and follow-up phases.

"t-tests" conducted on this data showed that while there were significant differences between the pre and post-treatment self-efficacy scores ($t(26)=6.00$; $P<.001$) and pre and follow-up mean self-efficacy scores ($t(26)=7.08$; $P<.001$), no significant differences were obtained between the means of post and follow-up self-efficacy scores ($t(26)=0.86$).

Similar results have been obtained for the test-anxietyinventory scores. Significant differences could be observed between pre-post mean T.A.I-T scores ($t(26)=6.84$; $p<.001$) and pre and follow-up mean T.A.I-T scores ($t=(26)-9.39$; $p<.001$). However comparison of post and follow-up T.A.I-T scores showed no significant difference between the mean scores ($t(26)=1.220$). "t-tests" conducted on the "worry" subscale of T.A.I-T yielded significant differences between pre and post-treatment mean scores

($\underline{t}(30)=6.52$, $\underline{p}<.001$) and pre-treatment and follow-up mean scores ($\underline{t}(28)=9.22$; $\underline{p}<.001$), whereas no significant difference has been obtained between the means of post-treatment and follow-up scores of this subscale ($\underline{t}(28)=1.68$).

Similarly, t-test comparisons of the mean scores on the three different treatment phases for the "emotionality" subscale of T.A.I-T demonstrated a significant difference between pre and post-treatment ($\underline{t}(30)=12.19$;$\underline{p}<.001$),and pre-treatment and follow-up phases ($\underline{t}(28)=7.87$;$\underline{p}<.001$). Post treatment and follow-up mean scores on the "worry" subscale did not significantly differ from each other ($t(28)=0.81$).

All these indicate that there was a significant increase in mean self-efficacy scores and significant decreases in mean "test anxiety", "worry" and "emotionality" scores of all the subjects from pre to post and from pre to follow-up assessment periods, but no difference between post-treatment and follow-up periods.

III.3 ANALYSES OF USEFULNESS AND RECOMMENDABILITY RATINGS

Means, standart deviations and ranges of usefulness and recommendibility ratings of the two groups are presented in Table 18.

Table 18

Means, Standart Deviations and Ranges of Usefulness and Recommendability Ratings

	Usefulness			Recommendability		
GROUP	M	SD	R	M	SD	R
Self-Instructional Group (S.I.G)	5.875	1.053	4-7	6.375	0.992	4-7
Classical SD Group(C.S.D.G)	6.000	0.707	5-7	6.625	0.484	6-7

Note: Maximum scores = seven, indicating high usefulness and recommendability of the treatments

"t-tests" revealed that two groups did not differ significantly in their ratings of usefulness ($t(14)=0.279$, $p > .05$), and recommendability ($t(14)=0.642$, $p > 0.5$) of the treatment programme at the end of the treatment.

SECTION IV

DISCUSSION

The main aim of the present study was to compare the differential effectiveness of a modified systematic desensitization procedure (i.e., the usage of self-instructional coping statements during imagination) with the classic systematic desensitization procedure in the alleviation of "test anxiety". Specifically, it was hypothesized that, this modified procedure would result in greater improvements in perceived self-efficacy, in greater decreases in measures of test anxiety and would lead to a better academic performance when compared to the classic systematic desensitization procedure.

The analyses of pretreatment measures showed that the two treatment groups were initially similar interms of all of the measures, except the 'nervousness' subscale of T.A.I-T indicating that "self-instructional group's nervousness score was significantly higher than the classic SD group's preceeding the treatment. Therefore, this situation was controlled statistically while dealing with the results.

Contrary to the expectations of differential treatment effectiveness, the two treatment groups did not differ

significantly from one another in their response to treatment and thus the main hypothesis of the present study was not supported.

However, significant 'time main' effects were obtained for all the measures except the 'G.P.A' and 'nervousness' subscale of T.A.I-T. Specifically, for all subjects there were significant decreases in 'state anxiety' (both given before an actual examination and Raven Matrices), 'self-rating of anxiety' (actual exam) and 'self-rating of anxiety' (before Raven) from pre to post treatment assessments.

Similar results have been obtained for the analyses of the pre, post and follow-up measures. 'Time main' effects indicated significant increases in 'self-efficacy' and significant decreases in T.A.I-T (general) and in 'worry' and 'emotionality' subscales of T.A.I-T from pre to post treatment which was maintained at the follow-up period. Thus, it seems that both of the treatments have significant favourable impacts on self-efficacy and anxiety which seems to be durable at least for the period covered by the follow-up.

The significant 'time main' effects observed for most of the measures may also be related to the individually tailored item hierarchies used in the present study, which are specific to each subject and expected to contribute to the efectiveness of both types of SD procedures.

This possibility can be confirmed by investigating the differential effectiveness of a standart group hierachy and an individually tailored item hierarchy on systematic desensitization, procedure in the future research.

Only the increment seen in G.P.A measure (for all Ss) from pre to post assessment did not reach to significance in statistical analyses. However, previous test anxiety research has witnessed the frequent occurance of the same result as well. Smith (1989), arques that, G.P.A reflects in part heterogenous courses and appeared to exhibit considerable intrasubject variability. This may be a major reason why G.P.A as the performance outcome measure have yielded highly inconsistent results, therefore G.P.A is not referred as a reliable measure of performance outcome. In this study, Raven Matrices test which used to create an analogue exam situation, could have been taken as a more reliable performance outcome measure than G.P.A, however because of the dual administration of the same test which may cause a possible practice bias, it was not used as a second performance measure. This may be considered as one of the shortcomings of this study. In future research administration of two different aptitude tests at pre and post assessments, or employing a control group for assessing the, practice effect
may provide a more reliable measure for the effects of such programmes on performance.

The present study failed to show a differential effectiveness between the two therapies in creating the predicted changes in self-efficacy and other measures of test anxiety which may be related to several shortcomings of the present study that were mainly due to practical limitations. One of them is that, the present study was conducted with very small treatment groups. Only 21 out of 35 applicants were selected, since only volunteers were included, no more Ss were available at that time. Drop-outs during the treatment further decreased the number of subjects in each group. Thus, the study need to be replicated on a larger sample in order to obtain more reliable results. Another weakness of the study was the absence of a follow-up procedure identical to pre and post assessments. The pre and post assessments had some requirements out of a single session i.e., filling the 'state anxiety' scales before actual examinations etc... Thus, they took quite a long time, so due to the time limitation and difficulty to meet with the Ss after the summer holiday, a follow-up procedure identical to pre and post assessments could not be conducted. Therefore, the follow-up data available was only for 'self-efficacy' and 'T.A.I-T (general)' and for it's 'worry', 'emotionality' and 'nervousness' subscales.

Although the study needs to be replicated in the future by considering the above shortcomings, there is an increasing body of evidence in the literature reporting the absence of differential effectiveness among different forms of therapies or treatments which leads the clinicians of various persuasions te seek a

rapprochement of various systems and an integration of therapeutic interventions. There's a growing number of clinicians who, while maintaining their own theoretical identities, are nonetheless willing to explore potential sources of enrichment and convergence. In other words working on the development of 'systematic eclecticism'(Norcross, 1986).

Norcross (1986), delineated six interacting and mutually reinforcing factors which can be considered as facilitators for the development of eclecticism in the past decade, which are the proliferation of therapies, inadequacies of any one specific theraphy, absence of differential effectiveness among therapies, growing recognition that patient characteristics and the helping relationship are the most efficacious components of successful treatment, resultant search for common components of effective treatment and external sociopolitical contingencies.

The present study's results seem as an additional data supporting the third factor above. More explicitly, Norcross (1986) claims that there are few conditions in which the theraphy system leads to differential success in outcome and with a couple of exceptions there's little evidence to show that one therapeutic approach is clearly superior to another. As empirical studies and comprehensive reviews are unable to show differential outcomes attributable to theraphy systems, it seems reasonable that the field has slowly departed on a new direction to determine factors common to successful treatments. At this point, it seems reasonable

to mention Frank's (1973) view on psychotherapies. He stated that, on clear inspection, certain aspects of the therapeutic scene strongly suggests that the features shared by psychotherapies far outweight their differences.

Another contributor to the rise of eclecticism comes with the recognition that, the particular method appears to have no discernible influence on therapeutic success; about one third of treatment outcome is due to the therapist and two thirds to the client. Less than 10% of outcome variance is generally accounted for by technique variables (Norcross, 1986).

This claim is supported by Bergin and Lambert (1978) concluding that, the largest variation in theraphy outcome is accounted for by preexisting client factors, such as motivation for change and the like. Therapist personal factors account for the second largest proportion of change, with technique variables coming in a distant third. Consequently, it would appear that singular attempts to improve techniques within one orientation would have negligible effect on the therapeutic outcome.

Also Miller and Berman's (1983) study seems to be crucial in this respect. After reviewing 48 studies, they argued that although there's a clear evidence that cognitive behaviour therapies are more effective than no treatment, there exists little evidence that they are more effective than other widely practiced psychotherapies like SD.

These line of studies in the previous literature and the present study which have failed to find clear differences between two active treatments form a body of evidence which suggests to search for commonalities across therapies instead of comparing the effectiveness of different techniques within different therapies.

The analysis of 'usefulness' and 'recommendability' ratings of the two groups, in the present study, also seemed to support this view i.e., the two treatment conditions were not found to differ significantly from one another in ratings of'usefulness' and 'recommendability'. Furthermore, the mean scores for these two measures were very close to the maximum positive evaluation for both groups which indicated that subjects irrespective of their group found the programmes favourable.

Although , all the above cited evidence seems to suport this emerging view, a recent "meta-analysis" which is conducted by Hembree (1988) to show the nature, effects and treatments of academic test anxiety seems to slightly contradict the above arguments. The results of 562 studies which are integrated by this analysis have shown that, the "purely cognitive treatment, group counseling" did not appear effective in TA reduction, but purely behavioral treatments and cognitive-behavioral treatments were considerably more effective and both resulted in TA reduction. While purely behavioral treatments proved their efectiveness in reducing TA, they reduced not only emotionality, but also the 'worry' component as well.

Contrary to the previous arguments, these recent findings clearly supports the superiority of one form of treatment over another and discusses the specific effects of different treatments on the nature of TA.

Thus, although Hembree's study demonstrated that some forms of treatment are not effective for reducing TA, it lended support to the lack of differential effectivenes between cognitive behavioral and purely behavioral techniques.

For this reason, at this point a discussion specific to the contents of the two therapies concerned in the present study can be made; In the present study, stemming from self-efficacy theory which claims that 'treatments alleviate phobias by instilling and strengthening self-perception of coping efficacy, a modified SD was attempted to be developed and compared with classic form of SD in helping test anxious students who all volunteered for the study. Perceptions of coping efficacy were tried to be increased by providing unique self-instructional coping statements in anxiety provoking situations in imagination.

Contrary to the expectations, such a manipulation did not create an additional improvement on self-efficacy expectations in the self-instructional group. Although, the main hypothesis of the study was not confirmed, the results seem to give support to the

assumptions of the self-efficacy theory; the theory suggests that self-efficacy expectations are predictive of therapeutic improvement. In the present study, at pretreatment assessment, self-efficacy was found to have significant negative correlations with self-rating of anxiety (Raven) and T.A.I-T (general). Similarly, at post assessment, self-efficacy again had significant negative correlations with self-rating of anxiety (Raven), T.A.I_T (general), self-rating of anxiety (actual exam) and state anxiety (Raven) measures. Although these findings indicate a correlational rather than a causal relationship between the self-efficacy expectations and TA of Ss they lend some support to Bandura's assumption. These correlations also partly support the validity of the self-eficacy questionairre used in the present research.

The mechanism in SD that produces an equivalent increase to the SIG, in self-efficacy expectations may constitute a question that can be adressed at this point. This critical question accompanies a curiosity about the possibility of the Ss using any idiosyncratic cognitive coping strategies, during imagination in SD, even in the absence of direct instruction from the experimenter.

In the present study, an extra question which aimed to investigate this possibility was presented to the SD group in postassessment session. Among the answers given to this question five out of eight seemed to validate this presumption. Five of the Ss have mentioned that they've also used some kind of cognitive

coping strategies besides the relaxation skills they've learned before, in order to cope with their anxiety during imaginations.i.e., imagining themselves engaging in pleasent activities and making positive (encouraging) self-statements.

Another challenging finding and a related discussion appears in Hembree's (1988) 'meta analysis': TA is considered to possess two primary factors, cognitive concern about one's performance (W), and autonomic reactions to test situations (E). If it should be the case that both components occur at once with neither needing triggering from the other, than TA would appear to have relatively autonomous cognitive (for worry) and behavioral (for emotionality) components. However, if there is a cause-effect relationship between the two components, TA would appear to be essentially unidimensional. Hembree examined this cause and effect relation interms of treatment results on TA and found that the purely behavioral treatments reduced not only 'emotionality'; but they also reduced the 'worry' component. These findings seem to suggest that 'emotionality' may be a trigger for the 'worry' component. Thus, TA may seem to be primarily a behavioral construct.

Similarly, in the present study's pre-post-follow up analyses on 'worry' subscale of T.A.I-T; the 'worry' scores of the "classic SD group" decreased significantly from pre to post treatment and follow up and this decrease was not different from the

"self-instructional" group. A purely behavioral technique, SD, which is more likely to have an impact on the emotional component, also seems to be effective in reducing the 'worry' component of TA. Thus, 'emotionality' triggers 'worry', may be quite a plausible explanation, which needs to be examined in the future research by assessing various components of TA at different points during treatment, in order to determine the patterns of change in these components.

Two alternative forms of SD in imagination proved to enhance efficacy expectations, significantly. This result have a contribution to Bandura's theory which does not have a direct assumption on imaginal process of SD. However as Bandura suggested, efficacy expectations can be increased additionally only under performance accomplishment condition, in which the person is able to get first hand information about his/her capabilities, this may also be a plausible reason for not obtaining differences between the groups.

In conclusion, the present study failed to show a differential effectiveness between the two therapies in creating expected changes in self-efficacy and other measures of TA. However,this study confirmed that a purely behavioral theraphy (SD) and a cognitive-behavioral theraphy is equally effective in reducing TA and in increasing self-efficacy expectations. Further research by using a larger sample, making a cotract with all Ss to prevent dropout and having a follow-up assessment identical to pre

and post ones is still needed to obtain more reliable results. It may also be fruitful to examine changes in the "emotionality" and "worry" components of TA at multiple assessment periods during treatment in order to understand the relationship of these components.

Also, the general sentence structure of the self-efficacy questionairre used in the present study seemed difficult to understand by some of the subjects which might cause possibble misunderstandings and errors in scoring. Thus, a further modification in the item structure is suggested, in order to obtain a more understandable and a reliable questionairre.

Finally, it's worth stressing that, test anxious students comprise a sizable number. Hill and Wigfield (1984) projected an incidence near 10 millon at precollege levels, and the condition seems pervasive in college as well, and these students' IQs, aptitude and progress are consistently misinterpreted and undervalued in various circumstances (cited in Hembree, 1988). These implications appear to demand that TA be confronted, and noticed as a significant clinical issue and effective clinical procedures for its remediation be investigated.

APPENDICES

APPENDIX A

SINAV TUTUMU ENVANTERİ

İSİM : ..... YAŞ:..... TARİH:..... CİNSİYET: (E)(K)

YÖNERGE : Aşağıda, insanların kendilerini tanımlamak için kullandıkları bir dizi ifade sıralanmıştır. Bunların herbirini okuyun ve **genel olarak** nasıl hissettiğinizi gösteren ifadenin sağındaki boşluklardan uygun olanın içini karalayın. Burada doğru ya da yanlış yanıt yoktur. İfadelerin hiçbiri üzerinde fazla zaman harcamayın, ancak yazılı ve sözlü sınavlarda genel olarak nasıl hissettiğinizi gösteren yanıtı işaretleyin.

		Hemen Hiçbir Zaman	Bazen	Çoğu Zaman	Hemen Her Zaman
E	1.Sınav sırasında kendimi güvenli ve rahat hissederim.....	(1)	(2)	(3)	(4)
W	2.O dersten alacağım notu düşünmek, sınav sırasındaki başarımı olumsuz yönde etkiler.....	(1)	(2)	(3)	(4)
W	3.Önemli sınavlarda donup kalırım..	(1)	(2)	(3)	(4)
W	4.Sınavlar sırasında,birgün okulu bitirip bitiremeyeceğimi düşünmekten kendimi alamam.....	(1)	(2)	(3)	(4)
W	5.Bir sınav sırasında, ne kadar çok uğraşırsam kafam o kadar çok karışır.....	(1)	(2)	(3)	(4)
N	6.Sınavlarda kendimi huzursuz ve rahatsız hissederim.....	(1)	(2)	(3)	(4)
N	7.Önemli bir sınav sırasında kendimi çok sinirli hissederim.....	(1)	(2)	(3)	(4)
W	8.Başarısız olma düşünceleri, dikkatimi sınav üzerinde taplamama engel olur.....	(1)	(2)	(3)	(4)
N	9.Bir sınava çok iyi hazırlandığım zamanlar bile kendimi oldukça sinirli hissederim.....	(1)	(2)	(3)	(4)

N 10.Önemli sınavlarda sinirlerim öylesine gerilir ki midem bulanır.. (1) (2) (3) (4)

E 11.Bir sınav kağıdını geri almadan hemen önce çok huzursuz olurum... (1) (2) (3) (4)

W 12.Önemli sınavlarda kendimi adeta yenilgiye iterim..... (1) (2) (3) (4)

N 13.Sınavlar sırasında kendimi çok gergin hissederim..... (1) (2) (3) (4)

E 14.Önemli bir sınav sırasında paniğe kapılırım..... (1) (2) (3) (4)

E 15.Sınavların beni bu kadar rahatsız etmemesini isterdim..... (1) (2) (3) (4)

E 16.Önemli bir sınava girmeden önce çok endişelenirim(kurarım)..... (1) (2) (3) (4)

W 17.Sınavlar sırasında, başarısız olmanın sonuçlarını düşünmekten kendimi alamam..... (1) (2) (3) (4)

E 18.Önemli sınavlarda kalbimin çok hızlı attığını hissederim..... (1) (2) (3) (4)

E 19.Sınav sona erdikten sonra endişelenmemeye(kurmamaya) çaşırım, fakat yapamam..... (1) (2) (3) (4)

W 20.Sınavlar sırasında öylesine sinirli olurum ki aslında bildiğim şeyleri bile unuturum.....(1) (2) (3) (4)

E: "Emotionality" item **W:** "Worry" item **N:** "Nervousness" item

APPENDIX B

KENDİNİ DEĞERLENDİRME ANKETİ

İsim : **Cinsiyet:** **Tarih:**
Sınıf: **Yaş:**

YÖNERGE : Aşaıda kişilerin kendilerine ait duygularını anlatmada kullandıkları birtakım ifadeler verilmiştir. Her ifadeyi okuyun, sonra da **o anda** nasıl hissettiğinizi, ifadelerin sağ tarafındaki alternatiflerden en uygun olanını işaretlemek suretiyle belirtin. Doğru ya da yanlış cevap yoktur. Herhangi bir ifadenin üzerinde fazla zaman sarfetmeksizin **şu anda** nasıl hissettiğinizi gösteren cevabı işaretleyin.

	Hemen hiç	Biraz	Oldukça	Tamamıyla
1. Kendimi sakin hissediyorum....	(1)	(2)	(3)	(4)
2. Kendimi emniyette hissediyorum.	(1)	(2)	(3)	(4)
3. Huzursuzum.....	(1)	(2)	(3)	(4)
4. Pişmanlık duygusu içindeyim....	(1)	(2)	(3)	(4)
5. Kendimi rahat hissediyorum.....	(1)	(2)	(3)	(4)
6. İçimde bir sıkıntı hissediyorum.	(1)	(2)	(3)	(4)
7. İlerde olabilecek kökü olayları düşünerek üzülüyorum.....	(1)	(2)	(3)	(4)
8. Kendimi dinlenmiş hissediyorum.	(1)	(2)	(3)	(4)
9. Kendimi kaygılı hissediyorum...	(1)	(2)	(3)	(4)
10. Kendimi rahatlık içinde hissediyorum.....	(1)	(2)	(3)	(4)
11. Kendime güvenim olduğunu hissediyorum.....	(1)	(2)	(3)	(4)
12. Kendimi sinirli hissediyorum...	(1)	(2)	(3)	(4)
13. İçimde bir huzursuzluk var.....	(1)	(2)	(3)	(4)
14. Çok gergin olduğumu hissediyorum				
15. Sükunet içindeyim.....	(1)	(2)	(3)	(4)
16. Halimden memnunum.....	(1)	(2)	(3)	(4)
17. Endişe içindeyim.....	(1)	(2)	(3)	(4)
18. Kendime fazlasıyla heyecanlı ve şaşkın hissediyorum.....	(1)	(2)	(3)	(4)
19. Kendimi neşeli hissediyorum....	(1)	(2)	(3)	(4)
20. Keyfim yerinde.....	(1)	(2)	(3)	(4)

APPENDIX C

İsim-Soyadı :
Tarih :

Aşağıda belirtilen koşullarda **kaygılanmıyacağınızdan** ne derece emin olduğunuzu işaretleyiniz. Ne derece emin olduğunuzu I'den 7'ye kadar derecelendirilmiş ölçekten uygun sayıyı yuvarlak içine alarak belirtebilirsiniz.

Eğer **hiç kaygı duymayacağınızdan** kesinlikle **emin** iseniz 7 numarayı, eğer kaygı duymayacağınızdan hiç **emin değilseniz** ve bu konuda kendinize hiç güvenmiyorsanız I numarayı işaretleyiniz. Emin olma dereceniz I ile 7 numaralar arasında ise aradaki uygun bir sayıyı işaretleyiniz.

1. Bir sınavda kağıdımı geri vermeden önce cevaplarımı gözden geçirirken.
   Hiç emin değilim I 2 3 4 5 6 7 Çok eminim

2. Tamamlamış olduğum sınav kağıdını teslim ederken.
   Hiç emin değilim I 2 3 4 5 6 7 Çok eminim

3. Bir derste, ileride yapılacak olan bir sınavın tarihi ilan edilirken.
   Hiç emin değilim I 2 3 4 5 6 7 Çok eminim

4. Bir finalde soru kağıdını alıp ilk soruyu okurken.
   Hiç emin değilim I 2 3 4 5 6 7 Çok eminim

5. Sınav kağıdında cevabından emin olmadığım bir soru gördüğümde.
   Hiç emin değilim I 2 3 4 5 6 7 Çok eminim

6. Sınavın yapılacağı yere girmek üzere dışarıda beklerken.
   Hiç emin değilim I 2 3 4 5 6 7 Çok eminim

7. Bana oldukça zor gelen bir dersin hocası, sınıfta bir soruyu cevaplandırmamı istediğinde.
   Hiç emin değilim I 2 3 4 5 6 7 Çok eminim

8. Sınav sonuçlarının açıklanacağı günü beklerken.
   Hiç emin değilim I 2 3 4 5 6 7 Çok eminim

9. Bir hocayla benim doğru olduğuna inandığım, ancak onun yanlış olarak değerlendirdiği bir cevap üzerinde tartışırken.
   Hiç emin değilim I 2 3 4 5 6 7 Çok eminim

10. Tüm sınıfın sınav sonuçlarına bakarak, kendi durumumu diğer öğrencilerin durumuyla karşılaştırırken.
    Hiç emin değilim I 2 3 4 5 6 7 Çok eminim

11.Benim için önemli olan bir dersten yapılacak olan quiz'e çalışırken.
Hiç emin değilim I 2 3 4 5 6 7 Çok eminim

12.Bir mid-term'e çalışırken.
Hiç emin değilim I 2 3 4 5 6 7 Çok eminim

13.Bir finale çalışırken.
Hiç emin değilim I 2 3 4 5 6 7 Çok eminim

14.Bir iki hafta önce, arkadaşlarımla, yaklaşmakta olan bir sınav hakkında tartışırken.
Hiç emin değilim I 2 3 4 5 6 7 Çok eminim

15.Sınavdan sonrna, arkadaşlarımdan onların verdikleri cevapları öğrenirken.
Hiç emin değilim I 2 3 4 5 6 7 Çok eminim

16.Bir sınav esnasında, ne kadar sürem kaldığını anlamak için saate baktığımda.
Hiç emin değilim I 2 3 4 5 6 7 Çok eminim

17.Soru kağıdını elime alıp, kaç soru olduğuna bakarken.
Hiç emin değilim I 2 3 4 5 6 7 Çok eminim

18."Essay" türü bir sınavda, cevaplandıramıyacağım bir soru ile karşılaştığımda.
Hiç emin değilim I 2 3 4 5 6 7 Çok eminim

19."Çoktan seçmeli" bir sınavda cevaplandıramıyacağım birkaç soru gördüğümde.
Hiç emin değilim I 2 3 4 5 6 7 Çok eminim

20.Bir arkadaşım yaklaşmakta olan önemli bir sınava hazır olup olmadığımı sorduğunda.
Hiç emin değilim I 2 3 4 5 6 7 Çok eminim

21.Bir sınavı ilk ben bitirip, kağıdımı teslim ederken.
Hiç emin değilim I 2 3 4 5 6 7 Çok eminim

22.Bir arkadaşım bir dersteki genel durumumu sorduğunda
Hiç emin değilim I 2 3 4 5 6 7 Çok eminim

23.Bir arkadaşım çok kötü geçen bir sınavımdan kaç beklediğimi sorduğunda.
Hiç emin değilim I 2 3 4 5 6 7 Çok eminim

24.Okuldan atılmama neden olucak bir dersin finalinden A yada B almam gerektiğini anladığımda.
Hiç emin değilim I 2 3 4 5 6 7 Çok eminim

25.Bir dersten geçebilmek için, bir sonraki sınavdan A yada B almam gerektiğinde.
Hiç emin değilim I 2 3 4 5 6 7 Çok eminim

26.Sınavdan birkaç saat önce arkadaşlarla sınava dahil olan konular hakkında tartışırken.
Hiç emin değilim I 2 3 4 5 6 7 Çok eminim

27.Bir sınavda en son bitiren ve kağıdını en son verecek kişi durumunda olduğumda.
Hiç emin değilim I 2 3 4 5 6 7 Çok eminim

28.Bir sınav için çalışırken, aklıma daha önce çalıştıklarımı tekrar ederken.
Hiç emin değilim I 2 3 4 5 6 7 Çok eminim

29.Bir dersin bütünleme sınavından bir gece önce çalıştıklarımı tekrar ederken.
Hiç emin değilim I 2 3 4 5 6 7 Çok eminim

30.Bir dersin ilk gününde, hoca dersin mid-term ve final tarihlerini verirken.
Hiç emin değilim I 2 3 4 5 6 7 Çok eminim

31.Hoca sınıfta dersin konusuyla ilgili bir soru sorup bakışlarını bana doğru çevirdiğinde.
Hiç emin değilim I 2 3 4 5 6 7 Çok eminim

32.Önemli bir dersimden üç hafta sonra girecek olduğum sınavı düşündüğümde.
Hiç emin değilim I 2 3 4 5 6 7 Çok eminim

33.Bir dersten, bir hafta sonra girecek olduğum bir sınavı düşündüğümde.
Hiç emin değilim I 2 3 4 5 6 7 Çok eminim

34.Bir dersten iki sonra yapılacak olan bir sınavı düşündüğümde.
Hiç emin değilim I 2 3 4 5 6 7 Çok eminim

35.Bir gün sonra yapılacak olan bir sınavı düşündüğümde.
Hiç emin değilim I 2 3 4 5 6 7 Çok eminim

36.Bir aat sonra gireceğim önemli bir sınavı düşündüğümde.
Hiç emin değilim I 2 3 4 5 6 7 Çok eminim

37.Hocasından çekindiğim bir dersin mid-term'üne çalışırken.
Hiç emin değilim I 2 3 4 5 6 7 Çok eminim

38.5-10 dakika sonra asılacak olan sınav sonuçlarını beklerken.
Hiç emin değilim I 2 3 4 5 6 7 Çok eminim

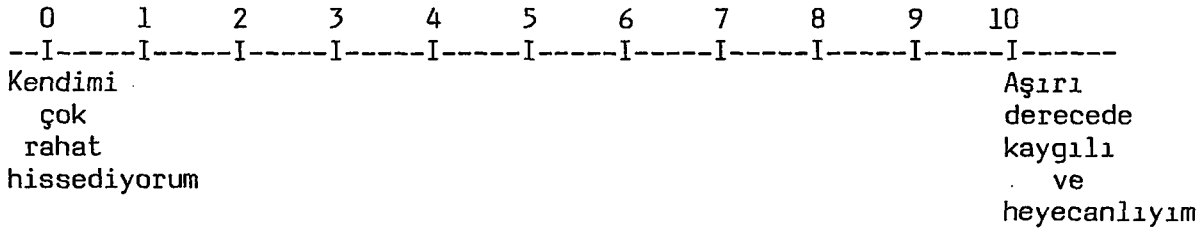
39.Bir gece önce daha önce fazlaca çalışmadığım bir dersin mid-term'üne çalışırken.
Hiç emin değilim I 2 3 4 5 6 7 Çok eminim

40.Sınav öncesi soru kağıtlarının dağıtılmasını beklerken.
Hiç emin değilim I 2 3 4 5 6 7 Çok eminim

APPENDIX D

Self-Rating of Anxiety Scale

Şu an içinde bulduğunuz durumu gözönüne alarak 0-10 arasında bir derecelendirme yapınız.



APPENDIX E

Interview Form

İsim-soyadı :
Cinsiyeti :
Yaşı :

Ev adresi :
Ev telefonu :
İş telefonu :

Okuduğu bölüm :
Sınıfı(senesi):
G.P.A :

HANGİ DERSLERİ ALDIĞI VE KREDİLERİ :

1)
2)
3)
4)
5)
6)

BU DERSLERDEN BİRİ DİĞERLERİNE ORANLA DAHA FAZLA **SINAV KAYGISI** YARATIYORMU ?
HANGİSİ :
(EVETSE)

BİR MİD-TERM VEYA FİNAL TARİHİ VERİLDİKTEN SONRA, FARKLI ZAMANLARDA "SINAV KAYGISI" NE BOYUTLARI OLUYOR ?

SINAV SONUÇLARINDA BİR ETKİSİ OLUYOR MU ?
EVETSE, NASIL BİR ETKİ ?

SINAV KAYGISI SİZCE PERFORMANSINIZI NE KADAR ETKİLİYOR ?

0 %10 %20 %30 %40 %50 %60 %70 %80 %90
I-----I------I------I------I------I------I------I------I------I-----

APPENDIX E

Sınava girme düşüncesi veya eylemi sizde belirgin bir **kaygı, heyecen** ve **gerginlik** duygusu yaratıyor mu ?

Örneğin : Çalıştığınız halde, yapılacak olan bir sınavın düşüncesi bile sizi rahatsız ediyor mu ?

Evet ..... Hayır .....

Yanıtınız evet ise, lütfen aşağıdaki soruları cevaplayınız.

Genellikle bu kaygı sınav tarihinden ne kadar zaman önce başlıyor ?

.....

Bu sınav kaygısı aşağıdaki farklı durumlara göre sizde ne gibi **sorunlar yaratıyor** ve bu sorunlar **ne gibi belirtilerle ortaya çıkıyor ?**

a) Sınav gününden önce

.....

.....

b) Sınav günü

.....

.....

c) Sınav için sınıfta beklerken

.....

.....

d) Sınav esnasında

.....

.....

APPENDIX F

Number of Ss in Each Treatment Group at

Different Phases of the Study

	PHASES			
GROUP	At the beginning of the theraphy	At the last session	At the post assessment	At follow-up
Self-Instructional Group	11	8	8	7
Classic SD Group	10	8	8	7

APPENDIX G

İsim,Soyadı :
Tarih :

Aşağıdaki durumları düşündüğünüzde, sizde bu durumlar ne kadar kaygı yaratıyor 0-100 arasında bir değer vererek belirleyiniz.

.----------.
0 100
Hiç kaygılı değilim Çok fazla kaygılıyım

1) Bir sınavda kağıdınızı geri vermeden önce cevaplarınızı gözden geçiriyorsunuz.
( )
2) Tamamlamış olduğunuz sınav kağıdını teslim ediyorsunuz.
( )
3) Bir derste ileride yapılacak olan bir sınavın tarihi ilan ediliyor.
( )
4) Bir finalde soru kağıdınızı aldınız, ilk soruyu okuyorsunuz.
( )
5) Sınav kağıdında cevabından emin olmadığınız bir soru görüyorsunuz.
( )
6) Sınavın yapılacağı yere girmek üzere dışarıdna bekliyorsunuz.
( )
7) Size oldukça zor gelen bir dersin hocası sınıfta onun yanlış olarak değerlendirdiği bir cevap üzerinde tartışıyorsunuz .
( )
8) Sınav sonuçlarının açıklanacağı günü bekliyorsunuz.
( )
9) Bir hocayla sizin doğru olduğuna inandığınız ancak onun yanlış olarak değerlendirdiği bir cevap üzerinde tartışıyorsunuz.
( )
10) Tüm sınıfın sınav sonuçlarına bakıp, kendi durumunuzu, diğer öğrencilerin durumuyla karşılaştırıyorsunuz.
( )
11) Sizin için önemli olan bir dersten yapılacak olan quize çalışıyorsunuz.
( )
12) Bir mid-terme çalışıyorsunuz.
( )
13) Bir finale çalışıyorsunuz.
( )
14) Bir iki hafta önce, arkadaşlarınızla, yaklaşmakta olan bir sınav hakkında tartışıyorsunuz.
( )

15) Sınavdan sonra, arkadaşlarınızdan onların verdikleri cevapları öğreniyorsunuz.
( )
16) Bir sınav esnasında ne kadar süreniz kaldığını anlamak için saate bakıyorsunuz.
( )
17) Soru kağıdını elinize alıp, kaç soru olduğuna bakıyorsunuz.
( )
18) Essay türü bir sınavda, cevaplandıramıyacağınız bir soru ile karşılaşıyorsunuz.
( )
19) "Çoktan seçmeli" bir sınavda cevaplanndıramıyacağınız birkaç soru görüyorsunuz.
( )
20) Bir arkadaşınız yaklaşmakta olan önemli bir sınava hazır olup olmadığınızı soruyor.
( )
21) Bir sınavı ilk siz bitirip, kağıdınızı teslim ediyorsunuz.
( )
22) Bir arkadaşınız bir dersteki genel durumunuzu soruyor.
( )
23) Bir arkadaşınız, çok kötü geçen bir sınavınızdan kaç beklediğinizi soruyor.
( )
24) Okuldan atılmanıza neden olacak bir dersin finalinden A yada B almanız gerektiğini anlıyorsunuz.
( )
25) Bir dersten geçebilmek için, bir sonraki sınavdan A yada B almanız gerektiğini anlıyorsunuz.
( )
26) Sınavdan birkaç saat önce arkadaşlarınızla sınava dahil olan konular hakkında tartışıyorsunuz.
( )
27) Bir sınavda en son bitiren ve kağıdını en son vericek olan kişi durumundasınız.
( )
28) Bir sinav için çalışırken, aklınıza daha önce sınav durumlarında yaşadıklarınız geliyor.
( )
29) Bir dersin bütünleme sınavından bir gece önce çalıştıklarınızı tekrar ediyorsunuz.
( )
30) Bir dersin ilk gününde, hoca dersin mid-term ve final tarihlerini veriyor.
( )
31) Hoca sınıfta dersin konusuyla ilgili bir soru soruyor ve bakışlarını size doğru çeviriyor.
( )
32) Önemli bir dersinizden üç hafta sonra girecek olduğunuz sınavı düşünüyorsunuz.
( )
33) Bir dersinizden, bir hafta sonra girecek olduğunuz bir sınavı düşünüyorsunuz.
( )

34) Bir dersinizden, iki gün sonra yapılacak olan bir sınavı düşünüyorsunuz.
( )
35) Bir gün sonra yapılacak olan bir sınavı düşünüyorsunuz.
( )
36) Bir saat sonra gireceğiniz önemli bir sınavı düşünüyorsunuz.
( )
37) Hocasından çekindiğiniz bir dersin mid-term'üne çalışıyorsunuz.
( )
38) 5-10 dakika sonra asılacak olan sınav sonuçlarını bekliyorsunuz.
( )
39) Bir gece önce, daha önce fazlaca çalışamadığınız bir dersin mid-term'üne çalışıyorşunuz.
( )
40) Sınav öncesi soru kağıtlarının dağıtılmasını bekliyorsunuz.
( )

APPENDIX H

(SD Item List)

1. Sizin için fazla önemli olmayan bir dersten bir hafta sonra yapılacak olan quize çalışıyorsunuz.

2. Bir sınava girmeden birkaç saat önce, kantinde arkadaşlarınızla çay içiyorsunuz.

3. Bir saat sonra gireceğiniz önemli bir sınavı düşünüyorsununz.

4. Bir finale çalışıyorsunuz.

5. Ders yılı başında hoca, dönem boyunca yapılacak olan quizlerin tarihini ilan ediyor.

6. Bir dersinizden, iki gün sonra yapılacak olan bir sınavı düşünüyorsunuz.

7. Bir finalde soru kağıdınızı aldınız, ilk soruyu okuyorsunuz.

8. Kredisiz bir dersten (Tarih, Türkçe, vb) bir hafta sonra yapılacak olan sınavı düşünüyorsunuz.

9. Essay türü bir sınavda, cevaplandıramıyacağınız bir soru ile karşılaşıyorsunuz.

10. Bir derste, ileride yapılacak olan bir sınavın tarihi ilan ediliyor.

11. İsteyerek aldığınız bir seçmeli dersten, bir hafta sonra quiz yapılacağını öğreniyorsunuz.

12. Bir dersinizden, bir hafta sonra girecek olduğunuz bir sınavı düşünüyorsunuz.

13. 5-10 dakika sonra asılacak olan sınav sonuçlarını bekliyorsunuz.

14. Bir sınav için çalışırken, aklınıza daha önce sınav durumlarında yaşadıklarınız geliyor.

15. Size göre oldukça iyi geçen bir sınavda, sınıfta kağıdını ilk teslim edenlerdensiniz.

16. Bir mid-terme çalışıyorsunuz.

17. Sınav sonuçlarının açıklanacağı günü bekliyorsunuz.

18. Bir gece önce,daha önce fazlaca çalışamadığınız bir dersin mid--term'üne çalışıyorsunuz.

19.Sınavdan birkaç saat önce arkadaşlarınızla sınava dahil olan konular hakkında tartışıyorsunuz.

20.Bir dersten mid-term yerine geçecek bir dönem ödevi hazırlıyorsunuz.

21.Tüm sınıfın sınav sonuçlalrına bakıp, kendi durumunuzu diger öğrencilerin durumu ile karşılaştırıyorsunuz.

22.Bir mid-term'de soru kağıdınızı aldınız, ilk soruyu okuyorsunuz.

23.Hocasından çekindiğiniz bir dersin mid-term'üre çalışıyorsunuz.

24.Bir arkadaşınız, bir dersteki genel durumunuzu soruyor.

25.Bir arkadaşınızla iki hafta sonra yapılacak bir sınav hakkında konuşuyorsunuz.

26.Bir gün sonra yapılacak olan bir sınavı düşünüyorsunuz.

27.Bir dersten geçebilmek için,bir sonraki sınavdan A yada B almanız gerektiğini anlıyorsunuz.

28.İlk mid-term'ünden çok iyi bir not aldığınız dersin, bir hafta sonra yapılacak olan ikinci mid-term'üne çalışıyorsunuz.

29.Önemli bir dersinizden üç hafta sonra girecek olduğunuz sınavı düşünüyorsunuz.

30.Sınavdan sonra, arkadaşlarınızdan onların verdikleri cevapları öğreniyorsunuz.

APPENDIX İ

Individual Item Hierarchies for each S for the two treatment groups

1 st Grp.(SELF-INSTRUCTIONAL GROUP)

Ss(subject numbers)

Item numbers		1	2	3	4	5	6	7	8	9	10	11
(least anxiety) provoking	1	8	8	15	11	8	29	11	5	25	1	
	2	29	1	30	15	9	15	5	11	8	8	
	3	5	5	1	20	1	25	1	29	15	20	
	4	10	20	17	5	10	1	10	30	28	28	
	5	28	11	29	1	11	5	8	12	10	5	
	6	1	15	24	10	17	8	6	1	16	10	
	7	15	21	25	8	24	24	20	25	5	24	
	8	11	17	10	25	15	10	12	8	11	25	
	9	25	28	5	6	20	12	7	16	14	11	
	10	12	25	8	24	25	21	25	6	12	29	
	11	17	10	28	17	16	16	24	15	1	15	
	12	4	2	12	2	29	11	29	24	29	6	
	13	6	24	11	29	21	6	2	2	22	12	
	14	21	16	16	12	12	4	15	22	17	30	
	15	16	12	13	30	6	20	3	10	20	21	
	16	9	6	23	19	3	28	28	21	24	2	
	17	20	29	21	7	7	26	4	20	2	14	
	18	14	19	6	16	2	23	30	9	13	16	
	19	30	7	14	26	13	17	9	19	26	26	
	20	24	13	20	13	14	3	19	7	21	17	

21	19	22	27	14	18	13	16	3	6	22
22	18	3	9	22	22	22	26	14	18	3
23	2	26	4	21	30	2	13	18	27	18
24	23	9	26	3	28	7	23	26	30	23
25	26	30	19	27	19	30	21	28	23	27
26	27	18	2	28	27	27	17	13	9	19
27	7	14	7	9	9	19	14	17	7	4
28	13	4	3	4	23	9	22	23	19	9
29	3	27	22	18	26	18	18	27	3	13
30 (Most anxiety provoking)	22	23	18	23	4	14	27	4	4	7

APPENDIX I

2nd Group (Classic S.D Group)

Subject numbers

Item numbers		1	2	3	4	5	6	7	8	9	10	11
(least anxiety) provoking	1	1	20	11	1	1	11	1	25	5	1	
	2	11	25	1	8	8	8	8	28	8	8	
	3	20	8	28	5	11	5	12	8	10	15	
	4	5	11	10	11	5	25	19	1	29	28	
	5	8	5	25	15	12	1	15	10	11	7	
	6	10	10	21	25	6	17	10	5	1	10	
	7	28	1	16	10	16	28	4	15	28	19	
	8	12	29	5	28	29	10	2	12	15	30	
	9	15	16	19	12	10	15	28	16	25	12	
	10	24	14	12	20	25	6	25	6	16	20	
	11	29	24	29	21	2	16	29	24	30	2	
	12	22	17	15	29	28	12	20	3	24	5	
	13	21	9	24	6	20	2	11	16	12	13	
	14	6	12	30	24	4	18	5	4	17	16	
	15	17	28	17	16	15	24	16	2	2	6	
	16	30	30	2	30	24	30	21	30	23	21	
	17	25	4	26	22	3	29	30	29	14	17	
	18	9	15	20	4	30	20	26	14	20	26	
	19	13	2	8	2	26	13	14	9	9	11	
	20	19	26	13	17	17	21	6	22	21	3	

	21	27	6	22	13	21	19	17	7	26	25
	22	23	13	6	14	27	9	24	19	6	14
	23	2	21	14	23	7	14	18	21	4	24
	24	3	23	9	7	23	3	3	13	13	18
	25	16	19	27	19	9	22	27	26	18	9
	26	26	18	7	3	19	26	23	17	22	4
	27	7	7	3	9	7	27	7	23	3	26
	28	4	22	23	27	22	4	9	18	19	23
	29	18	3	18	26	13	23	22	20	27	29
(Most anxiety) provoking	**30**	14	27	4	18	14	7	13	27	7	27

APPENDIX J

Test Anxiety Hierarchy item no.		No of presentations
1		1
2	First session	1
3		1
4		1
5		2
6		2
7		2
	Second session	
8		2
9		2
10		2
11		2
12		2
13		2
	Third session	
14		3
15		3
16		3
17		3
18		3
19		3
	Fourth session	
20		3
21		4
22		4
23		4
	Fifth session	
24		4
25		4
26		4
27		4
	Sixth session	4
28		5
29		5
30		5

APPENDIX K

A Ss hierarchic item list and the coping statements for each item (for the self-instructional group)

Subject No: 6

1. Bir gün sonra yapılacak olan bir sınavı düşünüyorsunuz.
   CS: Önemli konulara bakmak için zamanım var. Bu zamanı endişelenerek geçirmek yerine bir tekrar yapabilirm.

2. Size göre oldukça iyi geçen bir sınavda, sınıfta kağıdını ilk teslim edenlerdensiniz.
   CS: Yaptıklarımın doğruluğundan emin olduğuma göre kaygılanmama gerek yok.

3. İlk midterm'ünden çok iyi bir not aldığınız dersin, bir hafta sonra yapılacak olan ikinci mid-term'üne çalışıyorsunuz.
   CS: İlkinden iyi not alabildiğime göre, çalışınca yapabiliyorum. Önümdeki zamanı iyi kullanarak ikincisinden de iyi bir not alabilirim.

4. Sizin için fazla önemli olmayan bir dersten bir hafta sonra yapılacak olan quiz'e çalışıyorsunuz.
   CS: Bir hafta içinde rahatlıkla çalışıp, başarabilirim.

5. Ders yılı başında hoca, dönem boyunca yapılacak olan quizlerin tarihini ilan ediyor.
   CS: Diğer sınavlarla birlikte bir pogram yapıp, planlı çalışırsam, ne quizlerde, ne de mid-termlerde sorunum olmaz.

6. Kredisiz bir dersten (tarih,türkçe vb) bir hafta sonra yapılacak olan sınavı düşünüyorsunuz.
   CS: Bu sınavın son şansım olduğunu düşünmemin başarıma hiç katkısı yok, en iyisi bu durumu unutup, sakin olarak çalışmak. Sonucu ancak böylelikle değiştirebilirim.

7. Bir arkadaşınız bir dersteki genel durumunuzu soruyor.
   CS: İyi çalışıcağıma karar verirsem, arkadaşımla konuşurken daha rahat olurum. Bu kararı almak bile, kaygımı azaltabilir.

8. Bir derste, ileride yapılacak olan bir sınavın tarihi ilan ediliyor.
   CS: Süre oldukça fazla, sakin ve programlı çalışırsam, kaygım mutlaka azalacaktır.

9. Bir dersinizden, bir hafta sonra girecek olduğunuz bir sınavı düşünüyorsunuz.
   CS: Bir hafta süre az sayılmaz, ancak paniğe kapılmak çalışmamı engelleyebilir. Sakin olmalı ve hangi konulara ağırlık vereceğimi iyi saptamalıyım.

10. Tüm sınıfın sınav sonuçlarına bakıp, kendi durumunuzu, diğer öğrencilerin durumu ile karşılaştırıyorsunuz.
    CS: Benden iyilerin olması bana yapılan bir haksızlık değil. Ben performansımı iyi kullanamamış olabilir. Diğer sınava daha verimli çalışmalıyım.

11. Bir mid-term'e çalışıyorsunuz.
    CS: Kendimi yetersiz gördüğüm konuları sakince tekrarlamalıyım. Kaygılanarak zaman kaybetmemeliyim.

12. İsteyerek aldığınız bir seçmeli dersten, bir hafta sonra quiz yapılacağını öğreniyorsunuz.
    CS: Sevdiğim bir derse çalışırken kaygılanmama gerek yok. Bu durum çalışmamı daha zevkli hale getirecektir, önemli olan zamanımı iyi kullanmak.

13. Bir dersinizden iki gün sonra yapılacak olan bir sınavı düşünüyorsunuz.
    CS: İki günü paniğe kapılmadan değerlendirmeliyim, gereksiz düşüncelerin sonuca faydası değil, zararı var. Sadece çalışmaya konsantre olarak kaygımı azaltabilirim.

14. Bir finale çalışıyorsunuz.
    CS: Finalin sonuçları hakında yorum yapmak sadece vakit kaybına neden olur, kendimi çalışmaya vermeliyim.

15. Bir dersten mid-term yerne geçicek ir dönem ödevi hazırlıyorsunuz.
    CB: Bu fırsatı iyi değerlendirip, notumu yükseltebilirm. Zevkle ve sakin olarak hazırlayacağım bir ödev bana mutlaka iyi bir not getirecektir.

16. Bir arkadaşınızla iki hafta sonra yapılacak bir sınav hakkında konuşuyorsunuz.
    CB: Kendimi başkalarıyla kıyaslamamın sonuca hiç faydası yok. Önemli olan kendi zamanımı ve performansımı iyi kullanmam.

17. Önemli bir dersinizden üç hafta sonra girecek olduğunuz sınavı düşünüyorsunuz.
    CS: Kendime güvendiğim ve sakin olduğum sürec, üç haftada çok şey öğrenip sonucu değiştirebilirim. Önce buna inanmalıyım.

18. Hocasından çekindiğiniz bir dersin mid-term'üne çalışıyorsunuz.
    CS: Yeterli ve düzenli çalışmaktan başka birşey düşünmek yersiz. Hocanın kim olduğunun sonuca etkisi yok. Önemli olan benim performansım.

19. Sınav sonuçlarının açıklanacağı günü bekliyorsunuz.
    CS: Sınav sonrasındaki kuruntularımın sonucu değiştirmeyeceğine inanmalıyım. Sukunet içinde olmalıyım.

20. Bir saat sonra gireceğiniz önemli bir sınavı düşünüyorsunuz.
    CS: Bu ana kadar elimden gelini yaptım. Geriye sadece kendime güvenmek ve birikimimi en iyi şekilde kullanmaya çalışmak kalıyor. Kötü not alma paniğine kapılmak, bana bu noktada çok zarar verebilir.

21. 5-10 dakika sonra asılacak olan sınav sonuçlarlını bekliyorsunuz.
    CS: İyi not alamamış olsamda, bu herşeyin sonu değil. Ne yapmam gerektiğine notumu öğrenince karar veririm. Sonuçları görmeden kaygılanmam gereksiz.

22. Bir mid-term'de soru kağıdınızı aldınız, ilk soruyu okuyorsunuz.
    CS: Sınav esnasında durum değerlendirmeyi yaparak dikkatimi dağıtmak yerine, soru üzerine yoğunlaşmam daha akıllıca olur. Kaygılanmak sadece zaman kaybına neden olucaktır.

23. Bir sınava girmeden birkaç saat önce, kantinde arkadaşlarınızla çay içiyorsunuz.
    CS: Arkadaşlarımın rahat görünmesi onların hazır olduğunu, benim kaygılı olmam da hazır olmadığımı göstermez. Gerektiği kadar çalıştım, şimdi sakınleşip çayımı içebilirim.

24. Bir finalde soru kağıdınızı aldınız, ilk soruyu okuyorsunuz.
    CS: Sınav süresi içinde yalnızca sorularla ilgilenmeliyim. Başka şeyler düşünmek kaygımı arttırır ve bana zaman kaybettirir. Yeterince çalıştığıma göre bu sınav "final"de olsa başarabilirim.

25. Bir dersten geçebilmek için, bir sonraki sınavdan A yada B almanız gerektiğini anlıyorsunuz.
    CS: Böyle bir durumla ancak soğukkanlı olup, düzenli çalışarak başa çıkabilirim. Kaygılanmadığım sürece, çalışmam mutlaka verimli olacaktır.

26. Sınavdan sonra, arkadaşlarınızdan onların verdikleri cevapları öğreniyorsunuz.
    CS: Doğruluğundan emin olduğum cevaplar için endişelenmeme gerek yok. Onların yanıtları benim için bir ölçü olmamalı. Kendimden emin olmam beni rahatlatacaktır.

27. Sınavdan birkaç saat önce arkadaşlarınızla sınava dahil olan konular hakkında tartışıyorsunuz.
    CS: Aslında bunu yapmamın başarıma pek katkısı olmıyacaktır. Ancak kaygımı arttırarak bildiklerimide karıştırmama neden olabilir. Sakince sınavı beklemek daha olumlu sonuç verecektir.

28. Essay tipi bir sınavda cevaplandıramıyacağınız bir soru ile karşılaşıyorsunuz.
    CS: Bu soru ile fazla zaman kaybetmemeliyim, bu soruya daha sonra dönebilirim. Zamanımı diğer sorular açısından iyi kullanarak moralimi düzeltebilirim.

29. Bir gece önce daha önce fazlaca çalışamadığınız bir dersin mit-term'üne çalışıyorsunuz.
    CS: Kendimi suçlayarak, endişelenmek yerine, zamanımı en iyi şekilde kullanmalıyım. Dikkatimi toplayarak, önemli yerlere çalışırsam kaygım giderek azalıcaktır.

30. Bir sınav için çalışırken, aklınıza daha önce sınav durumlarında yaşadıklarınız geliyor.
    CS: Daha öncekilerde heyecanlanmış olmam, bu seferde aynı şeyi yaşayacağımı göstermez. Kendimi nasıl sakinleştireceğimi artık biliyorum.

APPENDIX K

A S's hierarchic item list ant the coping statements for each item (for the self-instructional group)

Subject No:4

1. İsteyerek aldığınız bir seçmeli derstne, bir hafta sonra quiz yapolacağını öğreniyorsunuz.
   CS: Programlı çalışırsam, konuları bu süre içinde rahatça toparlayabilirim.

2. Size göre oldukça iyi geçen bir sınavda, sınıfta kağıdını ilk teslim edenlerdensiniz.
   CS: Sınav düşündüğümden iyi geçti, yaptıklarımın doğruluğundan emin olduğuma göre, kaygılanmama gerek yok.

3. Bir dersten middterm yerine geçecek bir dönem ödemi hazırlıyorsunuz.
   CS: Planlı bir çalışma ile ortaya iyi bir ödev çıkarabilirim. Bu bir sınavdurumu olmasada, zamanımı iyi kullanmalıyım.
4. Ders yılı başında, hoca dönem boyunca yapılacak olan quizlerin tarihini ilan ediyor.
   CS: Yeterli zamanım var ancak bu zamanı iyi kullanırsam başarılı olurum.

5. Sizin için fazla önemli olmayan bir dersten bir hafta sonra yapılacak olan quiz'e çalışıyorsunuz.
   CS: Dersin benim için önemli olmaması, çalışma tarzımı değiştirmemeli, alacağım notun genel ortalamama etkisi olacaktır. Konuları toparlamaya başlamalıyım.

6. Bir derste, ileride yapılacak olan bir sınavın tarihi ilan ediliyor.
   CS: Kendime bir çalışma programı yaparsam, herşey daha iyi olacak. Planlı çalışırsam, kaygım azalacaktır.

7. Kredisiz bir desten (tarih,türkçe, vb) bir hafta sonra yapılacak olan sınavı düşünüyorsunuz.
   CS: Bu derslerden hoşlanmamam, çalışmamı engellemez. Başarısız olup, sıkıntı duymak yerine, düzenli çalışarak dersi vermek, beni çok rahatlatacaktır.

8. İlk mid-ter'ünden çok iyi bir not aldığınız dersin,bir hafta sonra yapılacak olan ikinci mid-term'üne çalışıyorsunuz.
   CS: İyi notlar alabildiğine göre, kendime güvenmemem için hiç bir neden yok, yeterki zamanımı ve performansımı iyi kullanabileyim.

9. Bir dersinizden iki gün sonra yapılacak olan bir sınavı düşünüyorsunuz.
   CS: Endişelenirsem tempom düşübelir, oysa bu tempoyu sakin olmaya gayret ederek koruyabilir ve konuları bitirebilirim.

10. Bir arkadaşınız bir dersdeki genel durumunuzu soruyor.
CS: Durumu düzeltmenin kendi elimde olduğunu düşünerek rahatlayabilir ve onun bu rahatlık içinde konuşabilirim. Önemli olan çalışınca düzeltebilecğime inanmam.

11. Sınav sonuçlarının açıklanacağı günü bekliyorsunuz.
CS: Kaygılanmam sonucu hiçbir şekilde değiştirmeyecek, sınavda elimden geleni yapmıştım. Sakin olmalıyım.

12. Bir sınava girmeden birkaç saat önce, kantinde arkadaşlarınızla çay içiyorsunuz.
CS: Çalıştığıma göre geriye bir tek şey kalıyor, mümkün olduğunca sakin olmak ve çayımı içimek, ayrıca arkadaşlarımın sınav hakkındaki tutumlarından etkilenmemeliyim.

13. Bir gün sonra yapılacak olan bir sınavı düşünüyorsunuz.
CS: Paniğe kapılırsam zamanımın yarısını boşa harcarım, kendimi yetersiz bulduğum konuları iyi tesbit ederek, sakince çalışmalıyım.

14. Bir dersinizden bir hafta sonra girecek olduğunuz bir sınavı düşünüyorsunuz.
CS: Sınıvın sonuçlarını düşünmeden, sadece çalışmalıyım, tabiiki mümkün olduğunca sakin olarak.

15. Bir dersten geçebilmek için, bir sonraki sınavdan A yada B almanız gerektiğini anlıyorsunuz.
CS: Planlı çalışırsam başarabileceğim, vaktimi iyi kullanmalıyım. Artık sınavın doğuracağı neticeler üzerine değil, sınav konularına yoğunlaşsam çok iyi olacak.

16. Sınavdan birkaç saat önce arkadaşlarınızla sınava dahil olan konular hakkında tartışıyorsunuz.
CS: Bu şekilde, bildiklerimi karıştırabilirim buda kaygımın artmasına neden olacaktır. Bu bir iki saati başka bir şekilde değerlendirebilirim, nasıl olsa bundan sonra yapılacak birşey yok.

17. Bir finalde soru kağıdınızı aldınız, ilk soruyu okuyorsunuz.
CS: Sınav süresi içinde yalnızca sorularla ilgilenmeliyim. Başka şeyler düşünmek kaygımı artırır ve bana zaman kaybettirir. Yeterince çalıştığıma göre, bu sınav "final" de olsa başarabilirim.

18. Bir mid-term'e çalışıyorsunuz.
CS: Sınavın sonucunu düşünmeden, sadece sınava dahil olan konulara konsantre olmalıyım. Zamanımı gereksiz şeyler düşünerek değil, çalışarak kullanmalıyım.

19. Önemli bir dersinizden üç hafta sonra girecek olduğunuz sınavı düşünüyorsunuz.
CS: Oldukca yeterli bir süre ancak panige kapılırsam bir ay bile yetersiz olabilir. Sakin olmaya çalışarak programlı çalışırsam hiç kaygım kalmayacaktır.

20. 5-10 dakika sonra asılacak olan sınav sonuçlarını bekliyorsunuz.
CS: Endişelenmek sonucu değiştirmeecek. Rahatlamaya çalışmalıyım, ne yapmam gerektiğine sonucu öğrenince karar veririm.

21. Bir sınav için çalışırken, aklınıza daha önce sınav durumlarında yaşadıklarınız geliyor.
CS: Kendimi nasıl sakinleştireceğimi artık biliyorum, bence eskiye oranla birçok şey değişti. Herşeyin benim elimde olduğuna inanıyorum.

22. Bir mid-term'de soru kağıdını aldınız, ilk soruyu okuyorsunuz.
CS: Sadece sorulara konsantre olmayı amaçlamalıyım, bu vaktimi iyi kullanmama yardımcı olacaktır. Kısa bir süreyi gevşeyerek, sakinleşmeye ayırabiirm. Sakinleşince çalıştıklarım hemen aklıma gelecektir.

23. Tüm sınıfın sınav sonuçlarına bakıp, kendi durumunuzu, diğer öğrencilerin durumu ile karşılaştırıyorsunuz.
CS: Diğerlerinin durumlarını yorumlamak kaygımı gereksiz yere arttırmama yol açacaktır. Bunun yerine, kendi durumuma yönelik düşünmeliyim. İleriye dönük çalışma programları yaparak, kaygımı olumlu yönde kullanabilirim.

24. Bir saat sonra gireceğiniz önemli bir sınavı düşünüyorsunuz.
CS: Elimden geldiğince çalıştım, bilmeliyimki paniğe kapılmazsaz çalıştıklarımı en iyi şekilde kullanlabilirim. Önemli olan, bu aşamada sınav hakkında yorumlar yapmamak.

25. Sınavdan sonra, arkadaşlarınızdan onların verdikleri cevapları öğreniyorsunuz.
CS: Artık sınavı unutmalıyım, oruları tartışmak nasıl olsa sonucu değiştirmeyecek. Ne kadar başarılı olduğumu ancak sonuçlar belirleyecektir.

26. Bir arkadaşınızla iki hafta sonra yapılacak olan bir sınav hakkında konuşuyorsunuz.
CS: Önümde iyi kullanırsam çok zaman var, planlı çalışarak her şeyi toparlayacağıma inanıyorum.

27. Ebbay türü bir sınavda, cevaplandıramıyacağınız bir soru ile karşılaşıyorsunuz.
CS: Bu soruyla vakit kaybetmeden, hemen bildiğim bir soruyu cevaplandırarak sınava devam edersem, kaygım azalacaktır. Moralimi bozmamalıyım, vaktimi iyi kullanırsam bu soruya tekrak dönebilir.

28. Bir finale çalışıyorsunuz.
CS: Finalde başarılı olursam, benim için çok iyi olacağını düşünerek zevkle çalışabilirim. Önemli olan paniğe kapılmamak.

29. Bir gece önce daha önce fazlaca çalışamadığınız bir dersin mid-term'üne çalışıyorsunuz.
    CS: Çalışabildiğim kadar çalışmalıyım. Bu son şansım değil. Şimdilik zamanımı iyi kullanmayı hedeflemeliyim.

30. Hocasından çekindiğiniz bir dersin mid-term'üne çalışıyorsunuz.
    CS: Bu sınava kendim için giriyorum, hocanın kim olduğu sadece bir ayrıntı, sonucu belirlemede hocadan çok, kişisel performansım rol oynuyor.

APPENDIX L

Shortened Relaxation
5-10 minutes

Şimdi sizlerle gevşeme egzersinizi daha kısa ve farklı bir şekilde yapacağız. Egzersizin ana amacı olan gevşeme ve gerilme arasındaki farkı ve kaslarınızı kontrollü olarak gevşetebilmeyi öğrendiğiniz için, bugün yalnızca gevşemenizi istiyorum. Önce her zamanki gibi rahat bir şekilde uzanın ve gözlerinizi kapatın.

İlk önce el ve kol kaslarınıza dikkatinizi yoğunlaştırın. Herhangi bir gerginlik varsa, hemen ortadan kaldırın, gevşeyin ve rahatlayın... çok güzel. Şimdi bileklerinize geçin, gerginlik yok, kol ve bilek kaslarınızın gevşemesine izin verin, hiç gerginlik yok.. tamamen gevşeksiniz.

Omuzlarınıza geçiyoruz; omuzlarınız düşük, gevşek ve rahatsınız, omuzlarınızı serbest bırakmanın verdiği rahatlığı hissediyorsunuz.... Ve şimdi boyun kaslarınıza yoğunlaşıyorsunuz, evet onlarda gevşek, boynunuzdan hiçbir gerginlik yok, tamamen gevşek, tüm vücudunuza dikkat edin, hiç gerginlik yok.

Alnınıza geçiyorsunuz, alnınız düz, gerilme yok, kaşlarınızda, gözlerinizde hiç gerginlik yok... çeneniz kahat, dişleriniz hafifçe birbirinden ayrık, rahat, gerilme kasılma yok... rahat... gevşek.

Diliniz ve boğazınız rahat, diliniz ağzınızın içinde hareketsiz, gevşek. dudaklarınız hafifce birbirine değiyor.... Yüzünüzde hiç gerginlik yok.

Nefes alıp verişleriniz rahat, her defasında soluğunuzu biraz daha gevşek veriyorsunuz... Göğsünüzde hiç baskı yok,her nefes verişte biraz daha gevşediğinizi, rahatladığınızı hissedin.

Evet,... mide kaslarınızda hiç gerginlik yok, rahatsınız, çok güzel ... Kalçalarınızda kasılma yok, serbest, çok rahat...

Bacaklarınızı gevşetin, her ikisinde de hiçbir gerginlik yok, iki yana serbest bir şekilde uzatın. Tüm vücudunuz rahatlamış bir durumda. Rahatlamanın ve gevşemenin huzuru içindesiniz.

Şimdi bir süre için gözlerinizi açıp rahat bir şekilde oturmanızı istiyorum.

APPENDIX M

Credibility and Recommendibility Ratings

1. Bu programı, probleminize yönelik olarak ne kadar faydalı buldunuz?

```
     1       2       3       4       5       6       7
----I-------I-------I-------I-------I-------I-------I----------
Hiç faydalı                                          Çok faydalı
değildi.                                              idi.
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2. Böyle bir programı, benzer problemi olan yakın bir arkadaşınıza önerirmisiniz ?

```
     1       2       3       4       5       6       7
----I-------I-------I-------I-------I-------I-------I----------
Kesinlikle                                           Kesinlikle
önermem.                                             öneririm.
```

APPENDIX N

The Extra question asked to the
Classic SD group:

Belli "sınav durumlarını" hayal ederek ve ardından gevşeyerek kaygınızı azaltmaya gayret ettiğiniz seanslarda; "Gevşeyin, vücudunuzda herhangi bir gerginlik varsa, ortadan kaldırın vb." yönergelerde, rahatlamak amacı ile, daha önceden öğrenmiş olduğunuz "gevşeme" dışında kendinize özgü herhangi farklı bir yöntem kullandınızmı ? Kullandıysanız, kısaca açıklayınız.

.....

APPENDIX P

Instructions used for Self-Instructional Group

Evet, şimdi mümkün olduğunca gevşek kalarak, elinizdeki kartlardan 4. durumu (for e.q) ve yapıcı cümleyi dikkatlice okuyun.

15"

Şimdi gözlerinizi kapatıp, kendinizi okuduğunuz durumda mümkün olduğunca canlı hayal etmeye çalışın ve içinizden yapıcı cümleyi tekrarlayin.

35"

Şimdi hayal etmeyi bırakıp, tamamen gevşeyin, rahatsınız, hiçbir gerginlik yok.

10-15"

Bu rahatlığı bozmadan yavaşça gözlerinizi açın, ve 5.durumu ve yapıcı cümleyi dikkatlice okuyun.

15"

Evet, gözlerinizi kapatıp kendinizi okuduğunuz durumda mümkün olduğunca canlı hayal etmeye çalışın ve içinizden yapıcı cümleyi tekrarlayın.

35"

Şimdi hayal etmeyi bırakıp, gevşeyin.

10-15"

Şimdi aynı durumu ve yapıcı cümleyi yeniden okumanızı istiyorum.

15"

gibi devam etti.....

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