

FOR REFERENCE

THE HOSPITALIZATION EXPERIENCE AND STATE-TRAIT ANXIETY AMONG DIFFERENT DIAGNOSTIC GROUPS

NOT TO BE TAKEN FROM THIS ROOM

by

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ABSTRACT

This study investigated the state-trait anxiety levels of psychiatric inpatients in relation to the concept of hospitalization. 60 subjects; 20 neurotics, 20 psychotics and 20 substance abusers were given The State-Trait Anxiety Inventory at the time shortly after hospitalization and at the time before discharge from the hospital.

The subjects were inpatients from Erenkoy Social Security Assosiation Psychiatric Hospital and were between 25 to 45 years old. The subjects had at least elementary school education.

The first group of hypotheses was about the differences between neurotics and psychotics. The hypotheses stated that neurotics will have higher state and trait anxiety levels both at the time shortly after hospitalization and before discharge from the hospital.

The second group of hypotheses was about the differences within subjects, that is about the change between evaluations shortly after hospitalization and before discharge from the hospital of the same subjects. The hypotheses stated that neurotics will have lower and psychotics higher state anxiety scores before discharge from the hospital while trait anxiety scores of both groups were expected to remain stable. Findings about the case of substance abusers were presented although there was no hypothesis stated about their condition.

The most general finding was that all of the three groups showed a decrease in their anxiety levels and this decrease was most significant in the neurotic group, reflected both in state and trait anxiety scores.

The other important finding was that neurotic and psychotic subjects could be differentiated according to their state and trait anxiety scores at the time shortly after hospitalization only. The measurement of state and trait anxiety at the of discharge from the hospital did not indicate any difference between these two groups of subjects.

The results were discussed in the light of our theoretical expectations and in terms of the effects of the hospitalization experience.

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INTRODUCTION

The concept of anxiety is interpreted in different ways by various psychological theories; however, they all assign to it a central importance in understanding a wide range of personality and behavior problems. Anxiety which takes place in everyday life situations of normals is also a key symptom in psychopathological syndroms. In fact, changes in the level of anxiety are often regarded as an index of the progress of psychopathological processes, that is, a significant amount of increase or decrease in the level of anxiety may indicate improvement in the condition of the person depending on the syndrome.

The purpose of this study is to measure the changes that occur in the level of anxiety as a result of hospitalization. The concept of hospitalization in this study includes both the medical treatment that patients receive and also the effects of interaction with the doctor, psychologist, other ward staff and the fellow patients. Thus, hospitalization stands for the general effect of being in the hospital with everything it includes, as well as being away from the everyday conditions of the person.

THEORIES OF ANXIETY

EARLY VIEWS

The first psychological interest in anxiety started with William James (1884). Lange published his findings about the same time (1885). The so-called James-Lange theory emphasizes the interaction between emotions and physiological variables. According to this theory, the perception of exciting conditions in the environment brings about some physiological changes in the person. The experience of these changes as they occur are called emotions.

Cannon (1927) opposed this approach; he stressed the importance of bodily changes. Following a series of physiological experiments, he asserted that, first, physiological changes occur as a direct result of environmental conditions and the perception of the changes by the person brings about the feeling of emotions.

The theories mentioned above carry mostly historical value and psychoanalytic, behavioral, existential and cognitive theories seem to be more influential in psychological circles today.

PSYCHOANALYTICAL VIEW OF ANXIETY

Freud first investigated anxiety in the 1920's. According to him, anxiety is a characteristic of the ego, that is, anxiety is felt by the ego. The conflict between the immediate impulses of the id and the standards of the superego together with the realistic limitations of the environment as perceived by the ego, give rise to anxiety. The ego's inability to satisfy id impulses and having to suppress them are the major factors in the development of anxiety. This way Freud (1926) distinguishes three kinds of anxiety: reality anxiety, neurotic anxiety and moral anxiety. When the ego is forced to acknowledge its weakness in the face of the external world, it experiences reality anxiety. Neurotic anxiety is the fear that the instincts of the id will get out of control and will cause the person to perform acts for which punishment is expected. Moral anxiety is fear of the conscience, the person feels guilty

when he performs acts or thinks of performing acts that are contrary to his moral codes dictated by the superego.

Anxiety as a state of tension acts as a signal to the ego that it has to take appropriate measures in order to maintain the person's integrity. When the ego cannot cope with anxiety in effective ways, it falls back to the unrealistic ways of dealing with it and these are the defense mechanisms of the ego. These do not solve the conflicts which caused anxiety but they help to relieve the pressure the ego experiences. Defense mechanisms have two common characteristics; first, they distort reality so that it does not contain anxiety-arousing conditions and second, they are unconscious so that the person is not aware of this distortion.

Freud was also interested in differentiating the characteristics of anxiety-arousing conditions, that is how they differ from person to person. Namely, the unique quality of anxiety in symptom formation.

BEHAVIORISTIC VIEW OF ANXIETY

The behaviorists, starting with Watson, approached emotions within their general theoretical framework. Thus, as a kind of fear, anxiety is a generalized conditioned response (Dollard and Miller, 1950). Watson's followers perceive anxiety as carrying drive properties and differentiate it from fear (Taylor, 1956). Anxiety then is not only a generalized conditioned response but is itself a stimulus which brings about a change in behavior. That is, if it is unpleasant to be anxious for the organism, any behavior which brings anxiety reduction is reinforcing. Thus, the organism can learn to perform instrumental responses to reduce anxiety just as they do in order to obtain food or water (Miller, 1948).

COGNITIVE THEORY AND ANXIETY

Cognitive theory accentuates the processes of knowing, interpretation and evaluation in human experience. This way, any stimu-

lus depending on these processes may carry different meanings for different persons. Thus, an objectively non-threatening stimulus may become anxiety-arousing for a particular person.

The concept of cognitive appraisal (Lazarus and Alfert, 1964) clarifies this point, indicating that a person's reactions depend on what he believes is happening or is about to happen regardless of the objective foundation of this belief. Therefore, the subjective evaluation of inner and environmental conditions brings about the feeling of anxiety almost independantly from the objective conditions. The individual with high anxiety perceives his surrounding as potentially more dangerous and also as uncontrollable.

EXISTENTIAL VIEW OF ANXIETY

This theory perceives anxiety as a central theme connected to the person's existence. Anxiety is then, "the apprehension cued off by a threat to some value which the individual holds essential to his existence as a personality" (May, 1950 in Spielberger, 1966) The experience of anxiety is innate while the anxiety-arousing stimuli for each person depend largely upon learning. May differentiates neurotic anxiety from a normal expression of anxiety when the experienced unpleasant state is not proportionate to the objective conditions of the environment and involves the use of neurotic defenses and repression.

MEASUREMENT OF ANXIETY

It is important to be aware of anxiety indicating communication and behavior, especially in clinical work. The Rorschach Test and The Thematic Apperception Test appear to be highly valuable in individual cases, but because of their partly subjective evaluation and the need for highly qualified interpreters, there is a need for objective psychological measurement of anxiety for research purposes.¹

1. This discussion will not cover physiological measurement of anxiety

Taylor (1951, 1953) first utilized a self report technique in order to measure subjects' anxiety level by introspection. She developed The Manifest Anxiety Scale for the assessment of individual differences in anxiety among adults, that is, the anxiety aptness of individuals. Taylor's scale measures general anxiety level; it can be utilized under various conditions to assess the anxiety level of individuals. On the other hand, another approach utilizes scales with specific content in order to measure specific aspects of anxiety, the most popular of which is test anxiety (Sarason, 1972).

The third approach is exemplified by Catell and Scheier (1958, in Oner, 1977). Following a series of factor analytic studies, they formulated two kinds of anxiety. These were called state and trait anxiety. State anxiety was defined as transitory emotional reactions and trait anxiety was defined as a stable personality dimension reflecting the individuals perception of environmental stimuli and events. Studies indicated that while these are different entities, they are correlated (Catell and Scheier, 1961, in Oner, 1977). Catell and Scheier developed The IPAT (Institute for Personality and Ability Testing) Anxiety Scale (1963, in Oner, 1977) containing two different scales in order to measure the two different kinds of anxiety, in line with their theoretical approach to anxiety.

Spielberger (1970) followed and developed this approach to bring forth the two factor measurement of anxiety.

A STATE-TRAIT CONCEPTION OF ANXIETY

Spielberger, who is cognitive-behavioral oriented, proposed the state versus trait conceptualization of anxiety (Spielberger, 1966). Spielberger calls dangerous external stimuli stressors. Stressors have to be perceived and appraised by the individual and may be assessed as being threatening. In reaction to the perception of threat the individual undergoes unpleasant cognitive, behavioral and emotional changes. If the person's appraisal of threat is realistic, that is the stressor is objectively dangerous, his

reaction is called fear. However, if the danger is either objectively non-existent but personally significant, or the emotional response is much stronger than the objective conditions require, then the reaction is called anxiety.

Spielberger attributes to the concept of anxiety a double dimension; state and trait anxiety. State anxiety refers to transitory feelings of stress and fear which are perceived consciously in varying degrees of anxiety. Trait anxiety, on the other hand, is a personality predisposition to react to environmental stimuli in a personal manner under different conditions, independent from the objective surrounding (Spielberger, 1972). We can assume that while state anxiety is a series of responses to environmental conditions and refers to transitory feelings of the person, trait anxiety is a continuous and general personality variable. These two concepts, although they differ from each other, they are not completely independent. That is, a person who has a high level of trait anxiety as a personality trait will react with a much higher level of state anxiety to anxiety provoking conditions than a person who has a lower level of trait anxiety. We can also reason that if an anxiety-arousing stimulus has a distinctive individual content and meaning, the state anxiety level of the person cannot be estimated from his trait anxiety level only. For instance, phobic persons will react with much higher state anxiety under the phobic involving conditions than a non-phobic person with the same trait anxiety level.

RESEARCH WITH THE STATE - TRAIT ANXIETY INVENTORY

The publication of The State - Trait Anxiety Inventory is followed by a large number of studies utilizing this new tool. It seems to be especially convenient for research conditions and we can assume that further findings will pave the way for its use as a clinical tool, such as placing an individual in an appropriate anxiety hierarchy. Also, we may be able to assess anxiety arousing environmental conditions.

Experimental findings relevant to the present research will be stated below:

Experimental findings in conditions involving minimal physical danger, such as dental treatment, show that before and after ratings on state anxiety have the same amount of difference for high and low trait anxiety subjects. That is, although high trait anxiety subjects have higher state anxiety scores, the absolute difference between before and after ratings remains the same (Lamb, 1976).

Experiments conducted on different subject groups indicate that normal, neurotic and psychotic subjects have different trait anxiety scores (Endler and Okada, 1972). In harmony with the expectations of personality theories and psychopathology, the neurotics had the highest and the psychotics the lowest trait anxiety scores with the normals in between. These findings were independent from such variables as age and education. It is assumed that neurotics are attempting to cope with threatening situations while psychotics are out of touch of reality and unaware of the potential threats in their conditions.

Öner (1977) has similar findings for Turkish subjects. According to her findings normals, physically ill patients and psychiatric inpatients reveal three different levels of anxiety. Both in state and trait anxiety scores, psychiatric inpatients represented the highest anxiety levels.

Since throughout the present study we will refer to Öner's (1977) findings, we shall summarize this study here. The study included 597 normal and patient subjects. The eight groups of subjects were high school and university students, dental clinic, psychiatry, heart and general surgery patients, dialysis (artificial kidney machine) patients and the parents of university students. The subjects' ages, sex, profession, education and socioeconomic status were not controlled in order to preserve

the natural characteristics of the population. The subjects were 381 females and 216 males aged from 15 to 72 years old. Their level of education differed from illiterate farmers and construction workers to university professors.

The concept of stress was an important experimental variable of the study. According to the experimental design of the study subjects were tested once under stress conditions and once under regular conditions that did not contain stress elements. The aim was to investigate the effects of stress conditions on anxiety. The stress condition, included students graduating from high school, for they had university entrance examinations ahead, and patients awaiting treatment or surgery. The normal condition included the remaining group of students and parents who were tested only once. Psychiatric patients also, were tested only once before discharge from the hospital.

The results of the study indicated that, state anxiety scores of the subjects demonstrated a significant amount of increase under stress conditions. Trait anxiety remained stable under stress and regular conditions. A significant correlation between state and trait anxiety scores was also found. Under regular conditions, the psychiatric patients showed the highest trait anxiety scores, followed by physically ill patients and normals. The state anxiety scores of the physically ill patients and normals did not indicate a significant amount of difference, while psychiatric patients' state anxiety scores were significant higher than the scores of the other two groups.

Under stress conditions the physically ill patients had the lowest and the psychiatric patients had the highest state anxiety scores with the normals in between. As for trait anxiety scores, the normals had the lowest and psychiatric patients had the highest trait anxiety scores with the physically ill patients in between. The differences between the state and trait anxiety scores were significant under stress conditions.

The findings of the study are summarized as follows:

Normals and physically ill patients demonstrated similar levels of anxiety under regular conditions while they differed under stress conditions.

Psychiatric patients' anxiety levels differed significantly from normals' and physically ill patients', both under regular conditions and stress conditions. The psychiatric patients had higher anxiety levels under all conditions.

Le Compte (1982), also working with psychiatric inpatients found that trait anxiety shows an inverse relationship with the subjects' self esteem. The more anxious subjects had significantly lower self esteem than the less anxious subjects. This result did not hold for state anxiety, affirming the dispositional fixed nature of trait anxiety versus the transitory, situational meaning of state anxiety.

SUMMARY AND RATIONALE OF THIS STUDY

As we find different levels of anxiety scores between groups, with different characteristics, we may also expect to find differences of anxiety scores on the same subjects according to changes in environmental conditions and time.

Effective psychotherapy is considered as one of the most efficient means of bringing about a change in a person's anxiety level. Gallagher (1953) tested college students before and after they had psychotherapy, with anxiety scores being significantly lower after therapy.

Öner's (1977) findings show that normals, physically ill patients and psychiatric inpatients groups of subjects had significant amounts of increase in their state anxiety scores under stress conditions as was stated above.

The purpose of the present study is to investigate and compare the condition of psychiatric inpatients just after hospitalization and before discharge from the hospital. We may conventionally call these conditions before and after "treatment", keeping in mind that the aim is not so much to see the effect of a specific form of treatment as to observe the effect of being hospitalized and the feeling of having done with it afterwards. The concept of hospitalization is taken to include staying in the hospital, following the hospital routine and receiving whatever treatment is decided upon by the doctors. The second variable is the diagnostic group of the patients, namely; neurotics, psychotics and substance abusers (mostly alcoholics and drug addicts). The present study investigated the effects of hospitalization on different syndroms represented by the diagnostic groups mentioned above. We were interested in observing the differences that occur in subjects' state and trait anxiety levels in the beginning and at the end of hospitalization.

We can assume that hospitalization, especially for neurotic patients, represents the peak of maladjustment and stress. Both the cognition of the label "mentally ill" and the objective physical inconveniences of the hospital conditions are important in increasing anxiety. On the other hand, most hospitalized psychotics are out of contact with reality and only partly involved in what is really happening to them. The alert condition that some psychotics demonstrate may be manifestations of confusion or disorientation (Colemann, 1976) and does not contain the same elements of anxiety as the panic the neurotics experience.

In psychoanalytic terminology, we may claim that neurotics are facing the conflict between the ego versus the id and the super ego. Thus, as a result of this conflict neurotics would be expected to be highly anxious. In the case of psychotics the id has already overcome the ego and the primary process is in action operating with the pleasure principle in order to obtain wish fulfillment. Hence, the function of anxiety as a signal is not

operational anymore (Hall and Lindzey, 1970). We can differentiate the ego of the neurotic facing reality and feeling extreme anxiety from the psychotic who has solved this problem by withdrawal from reality and thus, does not experience anxiety.

At the time of discharge from the hospital, both the treatment which is mainly medical in our study, and the feeling of freedom from the hospital inconveniences plus the mere passage of time may bring the neurotics' and the psychotics' anxiety levels to resemble normals more or less. That is, the neurotics may calm down and feel less anxious and the psychotics may start to get in touch with reality which includes a certain amount of anxiety elevation.

We do not have clear cut theoretical guidelines about the change that may occur in substance abusers' anxiety level at the time of discharge from the hospital. We may say that this group contains subjects with different characteristics including psychopaths, inadequate personalities and neurotic personalities. So that they may either show an increase in anxiety level after a period of abstinence ("What will happen now after I leave the shelter and face the world again"); or a decrease in anxiety level because they feel they are treated and free of the habit. We do expect to find a certain amount of difference in these subjects' state anxiety level after a period of hospitalization but because of the considerations mentioned above, we are not able to state the direction of this change beforehand.

In the case of trait anxiety, we do not expect to find a significant amount of change for any of the three groups of subjects. The assertion that trait anxiety is a stable personality disposition prevents us from claiming that a significant amount of personality change may occur after a relatively short period of hospitalization.

HYPOTHESES

I. The first hypothesis is about the differences between neurotics and psychotics:

1. Neurotics will have higher state anxiety scores than psychotics both at the time shortly after hospitalization and before discharge from the hospital.

2. Neurotics will have higher trait anxiety scores than psychotics both at the time shortly after hospitalization and before discharge from the hospital.

II. The second hypothesis is about the differences within subjects, that is about the change between evaluations shortly after hospitalization and before discharge from the hospital of the same subjects.

1. Neurotics will have lower state anxiety scores at the time before discharge from the hospital than at the time shortly after hospitalization.

2. No significant amount of change will be found for trait anxiety scores of neurotics in the evaluations between shortly after hospitalization and before discharge from the hospital.

3. Psychotics will have higher state anxiety scores at the time before discharge from the hospital than at the time shortly after hospitalization.

4. No significant amount of change will be found for trait anxiety scores of psychotics in the evaluations between shortly after hospitalization and before discharge from the hospital.

A separate hypothesis about the condition of the substance abusers is not stated because we are not able to point the direction of the expected difference in their state anxiety scores. As we have stated above, this group contains subjects with different psychological characteristics, so that the direction of the change in anxiety scores may be in both ways or they may even cancel each other out. Thus, although we do not include a hypothesis about this group of subjects, we will apply statistical analyses to the data in order to find out the characteristics of this group and discuss the results.

METHOD

SUBJECTS

60 male inpatients from The Erenkoy Social Security Association Psychiatric Hospital, between 25 and 45 years old were assigned to three groups: 20 neurotics, 20 psychotics and 20 substance abusers. The basis of assignment will be discussed in the procedure section. The median age was 33 for neurotics, 32 for psychotics and 38 for substance abusers.

The substance abusers were included for the following reason theoretical interest. They form an important part of the patient population treated in the hospital, so that it was decided to observe their condition also. Another large group of patients, which are the epileptics, were not included because of the biological nature of their illness.

The subjects were mostly blue collar workers with at least elementary school education (see table I). The patients came from all the regions of Turkey, because it is The Social Security Association's only psychiatric hospital.

Table 1 - The Educational Level of the Subjects

	Neurotics	Psychotics	Substance Abusers
Elementary School	16	12	9
Some Secondary School Education	3	4	6
Secondary School Completed	-	1	2
Some High School Education	1	1	3
High School Completed	-	2	-
Total	20	20	20

19 of the neurotics, 15 of the psychotics and 18 of the substance abusers were married. 17 of the neurotics, eight of the psychotics and 14 of the substance abusers were admitted for the first time to this hospital. The rest have either been hospitalized in different hospitals previously, or have received outpatient treatment. Seven of the substance abusers have been hospitalized for esperal implantation operation against alcohol consumption.

The avarage duration of hospitalization was 13 days for neurotics, 22 days for psychotics and 18 days for substance abusers. The duration of hospitalization for neurotics ranged from six to 24 days, for psychotics from seven to 37 days and for substance abusers from eight to 34 days. The differences in the duration of hospitalization was not statistically significant for neurotic and psychotic subjects ($t=1,27$ $p>0.05$ $df=38$). Since the duration of hospitalization for substance abusers falls between the other two groups, that also is not statistically different from them.

MATERIAL

The testing material was the Turkish adaptation of The State-Trait Anxiety Inventory (Le Compte and Öner, 1976). The STAI A-Trait scale consists of 20 statements that ask people to describe how they generally feel (see Appendix A). Subjects respond to each item by rating themselves on the following four point scale: (1) Almost never, (2) Sometimes, (3) Often, (4) Almost always. The STAI A-State scale consists of 20 statements that ask people to describe how they feel at a particular moment (see Appendix B). Subjects respond to each item by rating themselves on the following four point scale: (1) Not at all, (2) Somewhat, (3) Moderately so, (4) Very much so.

Item characteristics that were sought in the development of the STAI scales were high internal consistency as measured by item remainder correlations and alpha coefficients, and, ease and brevity

of administration (Spielberger, 1972).

Both English and Turkish forms have high internal consistency and test - retest reliability (Spielberger et. al., 1970; Le compte and Öner, 1976). The A-Trait scale items were selected on the basis of concurrent validity of each item to previously accepted A-Trait measures such as The Taylor Manifest Anxiety Scale and IPAT Anxiety Scale. Construct validity was the major criterion for including each A-State item in this scale. The items selected for the A-State scale had higher mean scores in a priori stressful situations than in neutral situations and lower mean scores in a relaxed situations.

Le Compte and Öner's (1976) adaptation of the STAI in Turkey for high school and university students shows high degrees of internal consistency (alpha coefficients of 0.90 to 0.96 for the A-State and 0.81 to 0.90 for the A-Trait). Test - retest reliability also has a high coefficient of 0.74 to 0.86.

The Turkish form of STAI was developed using 200 male and female American College students. The four experimental forms were as follows: Code A English form, Code B Turkish form, Code C and Code D were mixed language forms with items selected randomly both from Turkish and English forms. The items that were in English in Code C were in Turkish in Code D and the items that were in Turkish in Code C were in English in Code D. These four different forms of the inventory were administered to four random groups of students. Two weeks later, the forms were administered for the second time and this time the subjects who had answered the English form at the first time received the Turkish form and the subjects who had answered the Turkish form at the first time received the English form. This way every subject read and answered every item both in Turkish and in English. The results did not indicate a significant amount of difference between English and Turkish forms. Thus, the Turkish and English forms of the STAI were accepted as equivalents.

The Turkish adaptation of STAI was then administered to another sample of 950 high school and university students with different socioeconomic status levels and ages. The results indicated that while trait anxiety scores remained stable for test - retest evaluations within intervals up to a year, the state anxiety scores showed a certain amount of variation at test - retest evaluations. The stable nature of trait anxiety scores against the variation of state anxiety scores reflected the theoretical expectation from the concepts of state and trait anxiety. Thus, these results were accepted as confirming the construct validity of The STAI scales. The test was found applicable to Turkish student groups. In order to enlarge the application of The STAI to different groups of subjects, Öner (1977) in the above summarized study, administered the Turkish form of The STAI scales to normal adults, physically ill patients, general surgery patients and psychoneurotic inpatients

The item selection and validation procedures of The STAI are described in detail in Spielberger et. al. (1970) and in Le Compte and Öner (1976) for the Turkish form.

The STAI has proven to be useful in both clinical work and research. The A-Trait scale provides a mean for screening patient and normal populations. This scale has been used also as a research tool for selecting subjects who differ in anxiety proneness (Spielberger, 1972).

In recent years The STAI has been widely employed on various groups of subjects. In Turkey too we have reference groups of normals, surgery patients and psychiatric patients (Öner, 1977). This study will provide additional data about psychiatric patients and substance abusers.

PROCEDURE

In the spring of 1981 while the experimenter was on internship in The Erenköy Social Security Association Psychiatric Hospital, a pilot study on 30 subjects (ten neurotics, ten psychotics

and ten substance abusers) was conducted to check the feasibility of the study. In this pilot study there was no age restriction. The research itself was conducted in the academic year 1981/1982.

With the permission of the hospital administration, the experimenter visited the doctors in charge of the wards in order to explain the aim of the study and to ask for their help in selecting subjects. The criterion for placing the subjects in each of the three groups was written down as follows:

"Psychotics: An important degree of malfunction in reality testing and perception, withdrawal from interpersonal relationships, visual and/or auditory hallucinations.

Neurotics: Maladaptive living style characterized with anxiety, depression and excessive use of defense mechanisms, to discriminate them from psychotics these patients should be aware of their condition and unhappy with it.

Substance Abusers: A history of at least five years of addiction (alcohol or drugs), free of psychotic symptoms."

It was also mentioned that the subjects will be seen twice, first, within two or three days after hospitalization and second, before a day or two before discharge from the hospital. Subjects were seen within two or three days after hospitalization because organizational difficulties in placing and locating subjects did not permit seeing them on the day of hospitalization. For practical considerations also, the subjects were reevaluated in some cases a day or two before discharge, because otherwise the subjects were discharged from the hospital before the experimenter could reach and had the chance to see them.

It was also stressed that the aim of the study was not to investigate the effects of any treatment applied to the patients but of hospitalization in general, and to see the patients' condition

at the time of hospitalization and before discharge from the hospital.

Each subject's name was taken from the doctor in charge or the names of the newly admitted patients were collected and the doctor's diagnosis was asked about each patient.

Every subject was taken to The Psychology Department of the hospital and in a private room The State - Trait Anxiety Inventory was administered by the same experimenter, after a short interview about his family, work and history of the illness.

It was observed in the pilot study that when the subjects marked the answers by themselves they either did not answer most of the questions or it took too much time. Thus, the experimenter read the instructions and the statements to the subjects and marked their choice. It was explained to the subjects that the aim of the psychologist was to understand how they felt and that another meeting would take place before their discharge from the hospital. Afterwards the experimenter followed the subjects' condition in the hospital and applied the same procedure a day or two before discharge from the hospital. Prior to this second application of the tests, the experimenter told the subjects that their doctor had decided to discharge them from the hospital in a day or two.

None of the subjects showed a marked degree of disorientation or active hallucination at the time of testing so that every subject manifested at least a minimum degree of cooperation in receiving the tests.

RESULTS

The general appraisal of the results indicate that all of three groups (neurotics, psychotics and substance abusers) show a decrease in their state and trait anxiety levels at the time of discharge from the hospital. We can evaluate the general trend of anxiety decrease as an indication to the fact that discharge from the hospital carries an important meaning for all subjects.

The results will be presented in two steps, first, mean scores of the three groups for state and trait anxiety will be presented, then, the hypothesis will be evaluated.

Neurotics' A-Trait mean anxiety score for the after hospitalization rating was 53.15 and this dropped to 43.90 at the time of discharge from the hospital. Psychotics' A-Trait mean anxiety score for the after hospitalization rating was 47.35 and this dropped to 43.60 at the time of discharge from the hospital. Substance abusers' A-Trait mean anxiety score for the after hospitalization rating was 47.20 and this dropped to 45.50 at the time of discharge from the hospital (see table II).

Table II. - Means and Standard Deviations of A-Trait Scores for After Hospitalization and Before Discharge Ratings for All Subjects

	After Hospitalization	Before Discharge	F
Neurotics	X = 53.15 s = 8.04	X = 43.90 s = 10.15	18.80**
Psychotics	X = 47.35 s = 9.68	X = 43.60 s = 11.39	4.22
Substance Abusers	X = 47.20 s = 11.04	X = 45.50 s = 12.90	4.20

* $p < 0.05$

** $p < 0.01$

In the case of A-State, neurotics' A-State mean anxiety score for the after hospitalization rating was 56.85 and this dropped to 40.40 at the time of discharge from the hospital. Psychotics' A-State mean anxiety score for the after hospitalization rating was 50.00 and this dropped to 40.25 at the time of discharge from the hospital. Substance abusers' A-State mean anxiety score for the after hospitalization rating was 49.10 and this dropped to 41.45 at the time of discharge from the hospital. (see table III).

The hypotheses were evaluated using t-test for independent samples and analysis of variance with repeated measures on a single factor.

Hypothesis I. 1. stated that " Neurotics will have higher state anxiety scores than psychotics both at the time shortly after hospitalization and before discharge from the hospital."

This hypothesis was partly confirmed. Neurotics had higher state anxiety scores than psychotics at the time shortly after hospitalization only ($t = 2.41, p < 0.05, df = 38$). Before discharge t-surveys of these two groups do not indicate a significant amount of difference for state anxiety scores ($t = 0.03, p > 0.05, df = 38$).

Hypothesis I. 2. stated that " Neurotics will have higher trait anxiety scores both at the time shortly after hospitalization and before discharge from the hospital."

This hypothesis also was partly confirmed. Neurotics had higher trait anxiety scores than psychotics at the time shortly after hospitalization ($t = 2.07, p < 0.05, df = 38$). Before discharge t-surveys of these two groups do not indicate a significant amount of difference for trait anxiety scores ($t = 0.08, p > 0.05, df = 38$).

Hypothesis II. 1. stated that " Neurotics will have lower state anxiety scores at the time before discharge from the hospital than at the time shortly after hospitalization."

Table III - Means and Standard Deviations of A-State Scores for After Hospitalization and Before Discharge Ratings for All Subjects

	After Hospitalization	Before Discharge	F
Neurotics	X = 56.85 s = 15.19	X = 40.40 s = 14.90	26.16**
Psychotics	X = 45.70 s = 13.90	X = 40.25 s = 15.64	3.10
Substance Abusers	X = 49.10 s = 12.80	X = 41.45 s = 15.20	7.15**

* p < 0.05

**p < 0.01

This hypothesis was confirmed ($F= 26.16$, $df= 1 ; 19$, $p < 0.01$). The results of the analysis of variance are presented in table IV.

Hypothesis II. 2. stated that " No significant amount of change will be found for trait anxiety scores of neurotics in the evaluations between shortly after hospitalization and before discharge from the hospital".

This hypothesis was not confirmed. On the contrary the results indicated that trait anxiety scores, similar to state anxiety scores, show a significant amount of decrease before discharge from the hospital ($F= 18.80$, $df= 1 ; 19$, $p < 0.01$). The results of the analysis of variance are presented in table V.

Hypothesis II. 3. stated that " Psychotics will have higher state anxiety scores at the time before discharge from the hospital than at the time shortly after hospitalization".

This hypothesis was not confirmed. The results indicated a certain amount of anxiety decrease in psychotics, contrary to our assumption, but this decrease was not statistically significant ($F= 3$, $df= 1 ; 19$, $p > 0.05$). The results of the analysis of variance are presented in table VI.

Hypothesis II. 4. stated that " No significant amount of change will be found for trait anxiety scores of psychotics in the evaluations between shortly after hospitalization and before discharge from the hospital".

This hypothesis was confirmed, that is, although there was some anxiety decrease in trait anxiety scores of psychotic patients, it was not statistically significant ($F= 4.22$, $df= 1 ; 19$, $p > 0.05$). The results of the analysis of variance are presented in table VII.

The evaluation of the results indicate that at the time of hospitalization, that is according to the shortly after hospitalization

Table IV - Analysis of Variance with Repeated Measures on a Single Factor Between After Hospitalization and Before Discharge Ratings of A-State for Neurotics

Source of Variation	SS	df	MS	F
Between Subjects	6671.87	19		
Within Subjects	4671.50	20		
Treatments	2706.02	1	2706.02	26.16**
Residual	1965.47	19	103.44	
Total	11343.37	39		

* p < 0.05

**p < 0.01

**F_{0.99} (1, 19) = 8.18

Table V - Analysis of Variance with Repeated Measures on a Single Factor Between After Hospitalization and Before Discharge Ratings of A-Trait for Neurotics

Source of Variation	SS	df	MS	F
Between Subjects	2323.47	19		
Within Subjects	1720.50	20		
Treatments	855.62	1	855.62	18.80**
Residual	864.87	19	45.51	
Total	4043.97	39		

* $p < 0.05$

** $p < 0.01$

** $F_{0.99}(1, 19) =$

Table VI - Analysis of Variance with Repeated Measures on a Single Factor Between After Hospitalization and Before Discharge Ratings of A-State for Psychotics

Source of Variation	SS	df	MS	F
Between Subjects	6552.47	19		
Within Subjects	2112.50	20		
Treatments	297.02	1	297.02	3.10
Residual	1815.47	19	95.55	
Total	8664.97	39		

* p < 0.05

**p < 0.01

**F_{0.99}(1, 19)=8.18

*F_{0.95}(1, 19)=4.38

Table VII - Analysis of Variance with Repeated Measures on a Single Factor Between After Hospitalization and Before Discharge Ratings of A-Trait for Psychotics

Source of Variation	SS	df	MS	F
Between Subjects	3616.47	19		
Within Subjects	773.50	20		
Treatments	140.62	1	140.62	4.22
Residual	632.87	19	33.30	
Total	4389.97	39		

* $p < 0.05$

** $p < 0.01$

** $F_{0.99}(1, 19) = 8.18$

* $F_{0.95}(1, 19) = 4.38$

assessments, the neurotic and psychotic subjects can be differentiated with the obvious high anxiety level of the neurotic subjects. However, at the time of discharge, that is according to the before discharge measurements, these two groups of subjects become much similar and demonstrate almost the same level of state and trait anxiety. A possible explanation of this finding will be considered in the Discussion section.

The data about substance abusers is in accordance with our formal expectations. This groups' state anxiety scores showed a significant amount of difference between shortly after hospitalization and before discharge from the hospital measurements ($F= 7.15, df= 1 ; 19, p < 0.05$). The direction of this change is towards decrease at the time of discharge from the hospital and this is in line with the general trend of the findings. The results of the analysis of variance are presented in table VIII.

The trait anxiety scores of the substance abusers stayed almost the same at the time of discharge from the hospital, pointing to the fixed nature of trait anxiety of these subjects. The difference between after hospitalization and before discharge measurements was not statistically significant ($F= 4.20, df= 1 ; 19, p > 0.05$). The results of the analysis of variance are presented in table IX.

We can summarize the findings of this study as follows:

1. Neurotics had higher state and trait anxiety scores than psychotics shortly after hospitalization.
2. There was no difference between neurotics and psychotics in state and trait anxiety scores before discharge from the hospital.
3. There was a general trend toward decreased state anxiety scores before discharge from the hospital both in neurotic and psychotic subjects.

Table VIII - Analysis of Variance with Repeated Measures on a Single Factor Between After Hospitalization and Before Discharge Ratings of A-State for Substance Abusers

Source of Variation	SS	df	MS	F
Between Subjects	5707.50	19		
Within Subjects	2470.00	20		
Treatments	675.75	1	675.75	7.15*
Residual	1794.25	19	94.43	
Total	8177.50	39		

* p < 0.05

**p < 0.01

**F_{0.99}(1, 19)=8.18

*F_{0.95}(1, 19)=4.38

Table IX - Analysis of Variance with Repeated Measures on a Single Factor Between After Hospitalization and Before Discharge Ratings of A-Trait for Substance Abusers

Source of Variation	SS	df	MS	F
Between Subjects	4172.40	19		
Within Subjects	1164.00	20		
Treatments	213.40	1	213.40	4.20
Residual	949.80	19	49.90	
Total	5336.40	39		

* p < 0.05

**p < 0.01

**F_{0.99}(1, 19)=8.18

*F_{0.95}(1, 19)=4.38

4. There was a decrease in the trait anxiety scores of neurotic subjects before discharge from the hospital while the psychotic subjects' trait anxiety scores remained stable.

5. The state anxiety scores of the substance abusers showed a decrease at the time of discharge from the hospital, but their trait anxiety scores remained stable.

DISCUSSION

The evaluation of the results seems to be in line with our theoretical expectations in general. Neurotic patients demonstrated higher state and trait anxiety levels than psychotic patients, indicating that they do face the hospitalization experience with a marked high degrees of anxiety than psychotic patients. In the case of psychotic patients, we may say that as it was assumed, their anxiety levels remained relatively unaffected from hospitalization experience. This finding supports the previously stated assertion that psychotic patients are only partly in touch with reality and are less sensitive to the environmental variations. The findings of the study also, reconfirmed the relatively stable nature of trait anxiety versus the transitory nature of state anxiety.

However, there are two points which are in contradiction to our hypothesis. The first is the slight degree of state anxiety decrease (40.25 vs. 45.70) at the before discharge ratings of psychotic patients contrary to the direction of the hypothesis. The second is the significant amount of trait anxiety decrease at the before discharge ratings of psychotic patients. There may be different

reasons for these results, some of which will be discussed below and some that will need further investigation.

We may claim that the slight state anxiety decrease that the psychotic patients demonstrate may be an artifact of the "discharge effect". The explanation of this situation can only be speculative at this point. We were expecting, theoretically, that psychotic patients should have higher state anxiety scores at the time of discharge due to a better awareness of reality and their conflicts. However, it appears that all subjects seem to experience a relief at leaving the hospital, thus, showing lower state anxiety scores. In the case of psychotic patients, this relief may have been contaminated with their increased awareness of the conflicts facing them. This mixture of relief and worry over their situation may have been the cause of the relatively small amount of decrease in state anxiety manifested by psychotic patients. That is, the general trend of state anxiety decrease at the time of discharge from the hospital may have impaired the theoretically expected state anxiety increase in this group of subjects, resulting in an overall small amount of state anxiety decrease. In other words, the general trend of state anxiety decrease at the time of discharge may have cancelled some of the state anxiety elevation of these subjects so that they are manifesting a picture of being slightly less anxious or remaining the same. Hence, if our speculation is in fact accurate, this result does not necessarily invalidate our reasoning in expecting state anxiety increase at the before discharge ratings of psychotic subjects.

Another explanation for the state anxiety decrease of psychotic patients, which seems much simple, is that the relatively short duration of hospitalization did not result any significant change in these subjects' condition, at least from the anxiety point of view, so that they demonstrate an anxiety level which is much similar to their anxiety level at the beginning of hospitalization.

In the case of neurotic patients, the unexpected significant amount of trait anxiety decrease of these subjects brings to mind the question of whether these subjects are trying to present a front of complete good health before discharge from the hospital. This way they may be answering all of the questions, without discriminating state and trait anxiety contexts, that they are feeling good. It may be that the neurotic patients experienced a "halo effect" at the time of discharge and the good feeling they reported on the state anxiety scale was transferred over to the trait anxiety scale. They may also have believed that they must answer all questions in a positive way, otherwise they may have to stay in the hospital for a longer period of time, despite the fact that the experimenter tried to assure them that discharge from the hospital was not in any way dependent on the results of the questionnaires. We may speculate further that this process may be operating unconsciously.

In order to evaluate the results further, three groups of subjects from Öner's (1977) study which seemed relevant to this study were taken for comparison. These were normals, general surgery patients representing the physically ill patients and psychoneurotics as psychiatric inpatients.

If we compare the mean state anxiety scores of neurotic and psychotic subjects at the time shortly after hospitalization to Öner's normals' state anxiety scores under stress conditions, we can observe that the neurotics' mean anxiety score is higher while psychotics' is lower than the normals'. This result supports our previously stated assertion that the neurotics manifest the highest and the psychotics the lowest anxiety levels with the normals in between.

The substance abusers seem to be quite similar to normals under stress conditions in their shortly after hospitalization state anxiety scores. We may say that these subjects act as normals under stress conditions and resemble the normals more than the psychiatric patients.

If we compare Öner's psychiatric inpatients (psychoneurotics) to the neurotic subjects of the present study at the time of discharge, they seem to be more anxious. This may be due to the fact they were tested before discharge from the hospital only (see table X). These comparisons are not statistically evaluated since, only the mean scores and standard deviations of Öner's groups were available and not sufficient to make calculations. In any case, these comparisons are used as supplementary evidence and are not part of the experimental hypotheses requirements.

The mean state anxiety scores at the time of discharge from the hospital indicate that, the neurotic, psychotic and substance abuser subjects all become somewhat similar to each other and are close to normals' state anxiety mean scores under regular conditions. This comparison also, supports our assertion that neurotic and psychotic subjects' state anxiety scores will change and resemble normals'.

We can perform the same comparisons for trait anxiety scores. Here, although neurotic subjects differ significantly from psychotic and substance abuser subjects in their after hospitalization trait anxiety scores, they all have trait anxiety scores that are higher than normals' trait anxiety scores under stress conditions. Moreover, neurotic subjects', psychotic subjects' and substance abusers' before discharge trait anxiety scores are still higher than normals' trait anxiety scores under stress conditions. This emphasizes that hospitalized mentally ill patients have higher trait anxiety than normals. However, Öner's psychiatric patients which are psychoneurotics, have higher trait anxiety scores than the present study's neurotic subjects. Here too, this may be due to the fact that they were tested before discharge from the hospital only.

General surgery patients, even though they had an objective source of fear under stress conditions (before operation), still manifest lower trait anxiety scores than neurotics at the time shortly after hospitalization (see table XI). This is to be expected

Table X - A-State Mean Scores of the Subjects of This Study
 Compared to A-State Mean Scores of Oner's Subjects

	Oner's Subjects			Subjects of This Study		
	Normals	Gen.Sur. Patients	Psy. Pat.	Neurotic Subjects	Psychotic Subjects	Sub. A Subj.
Stress Con. Mean Score	49.32	52.13	63.56	-	-	-
Reg. Con. Mean Score	35.84	37.80	52.38	-	-	-
Af. Hosp. Mean Score	-	-	-	56.85	45.70	49.10
Bef. Dis. Mean Score	-	-	-	40.40	40.25	41.45

Table XI - A-Trait Mean Scores of the Subjects of This Study Compared to A-Trait Mean Scores of Oner's Subjects

	Oner's Subjects		Subjects of This Study			
	Normals	Gen.Sur. Patients	Psy. Pat.	Neurotic Subjects	Psychotic Subjects	Sub.A. Subj.
Stress Con. Mean Score	36.40	47.93	61.50	-	-	-
Reg. Con. Mean Score	36.33	42.44	52.31	-	-	-
Af. Hosp. Mean Score	-	-	-	53.15	47.35	47.80
Bef. Dis. Mean Score	-	-	-	43.90	43.60	45.50

since these subjects are not mentally ill and preserve realistic trait anxiety levels. In fact, we can see the difference between normals and psychiatric inpatients, best, while comparing their trait anxiety scores.

As for the limitations of the study, the most important point that might affect the results was whether our placing the subjects in different diagnostic groups was a reliable way. We may say that some border-line schizophrenics could be perceived as neurotics or some of the neurotics were in fact latent schizophrenics. Also, although we tried to include substance abusers free of psychotic symptoms, some of them might have paranoid characteristics which they succeed in hiding. We were not able to eliminate these subjects from our groups because the circumstances did not allow us to administer a complete battery of psychological tests to each subject. Thus, we had mainly the responsible doctor's first opinion about the subject to rely upon. The cross validation of the diagnosis for each subject between doctors was not possible either, since only one doctor was responsible for each patient. Still, the examination of patients' records revealed that different doctors that treated the patient at various times, agreed with each other about the diagnostic character of the patient in general terms. In any case, possible diagnostic misplacement of the subjects may have confounded the results.

If we accept the results of the present study as they appear, we may say that the neurotics benefit most from hospitalization, that is, they left the hospital much different and "improved" at least from the anxiety point of view. However, neurotics are the smallest group of patients treated in the hospital because their condition is not perceived as urgent as psychotics'. Neurotics also have a relatively shorter duration of hospitalization. This leads one to offer the idea of Day Hospitals that both supply the hospital services that the neurotics seem to benefit from and does not drastically separates them from their environment. Further, it leads one to question whether any purpose is served in automatically hospitalizing psychotics for relatively short periods of time, if we

consider the small change that is established at least from the anxiety point of view, and their return to the hospital within a short interval. In any case, these issues need to be considered seriously from the public health viewpoint.

In the case of substance abusers, these patients resemble Oner's (1977) general surgery patients in their anxiety levels. Substance abusers are given intravenous serum treatment for the first four or five days of hospitalization and must stay in bed for most of this time. Afterwards, they either have a brief operation of esperal implantation against alcohol consumption, for which they are taken to a separate general hospital, or are discharged from the hospital. We may assume that this procedure differentiates these subjects from mentally ill patients. They are able to perceive themselves as not belonging with the rest of the patients and keep a self image of an average person under stress.

In summary, the general trend of state anxiety decrease at the time of discharge from the hospital and the relatively stable nature of trait anxiety are the most outstanding results of this study. The important point is that, although one may claim that this general trend can be found in every group of hospitalized patients, it carries a different characteristic for each of the three group of patients. It also shows that The STAI is a useful and applicable instrument with this kind of population. Hence we believe that this is a worthwhile topic of investigation that may help to differentiate various groups of hospitalized psychiatric patients. However, for further studies of this kind, the issue of diagnostic reliability needs to be carefully evaluated and there is a need for a reliable procedure of diagnosis in order to be able to generalize the findings of the study.

BIBLIOGRAPHY

- Cannon, W.B.: The James-Lange Theory of Emotion. American Journal of Psychology, 1927, 39, 106-124.
- Catell, R.B., and Scheier, I.H.: The Nature of Anxiety: A review of thirteen multivariate analyses comprising 814 variables. Psychological Report, 1958, 4, 351-388.
- Catell, R.B., and Scheier, I.H.: The Meaning and Measurement of Neuroticism and Anxiety. New York: Ronal Press, 1961.
- Catell, R.B., and Scheier, I.H.: Handbook for The IPAT Anxiety Scale (2nd. ed.) Champaign, Ill: Institute for Personality and Ability Testing, 1963.
- Colemann, J.C.: Abnormal Psychology and Modern Life. (5th ed.) Glenview Ill: Scott, Foresman and Company, 1976.
- Dollard, J., and Miller, N.E.: Personality and Psychotherapy. New York: Mc Graw Hill, 1950.
- Endler, N.S., and Okada, M.: A Multidimensional Measure of Trait Anxiety The S-R Inventory of General Trait Anxiousness. In. Spielberger, C.D. (ed.) Anxiety: Current Trends in Theory and Research, Vol. 1. New-York: Academic Press, 1972.

- Freud, S.: Inhibitions, Symptoms and Anxiety. In Standard Edition Vol. 20 London: Hogart Press, 1959 (First German edition, 1926).
- Freud, S.: New Introductory Lectures on Psychoanalysis. In Standard Edition Vol. 22 London: Hogart Press, 1964 (First German edition, 1933).
- Gallagher, J.J.: Manifest Anxiety Changes Concomitant with Client Centered Therapy. Journal of Consulting Psychology, 1953, 17, 443-446.
- Hall, C.S., and Lindzey, G.: Theories of Personality (2nd ed.) New York: John Wiley and Sons, 1970.
- James, W.: What is Emotion? Mind, 19, 188-205
- Lamb, D.H.: On the Distinction Between Psychological and Physical Stressors. Psychological Reports, 1976, 3, 797-798.
- Lange, C.C., and James, W.: The Emotions. Baltimore: Williams and Wilkins, 1922
- Lazarus, R.C., and Alfert, E.: The Short Circuiting of Threat by Experimentally Altering Cognitive Appraisal. Journal of Abnormal and Social Psychology. 1964, 69, 195-205.
- Le Compte, W.A., and Oner, N.: Development of The Turkish Edition of The State-Trait Anxiety Inventory. Hacettepe University, Ankara, Turkey, 1976.
- Le Compte, W.A.: Self-Esteem and Trait Anxiety in Turkey. A New Bottle for Some Rare Old Wine. Unpublished Manuscript, Bogazici University, Istanbul, Turkey, 1982.
- May, R.: Meaning of Anxiety. New York: Ronal Press, 1950.

- Miller, N.E.: Studies of Fear as an Acquirable Drive: Fear as Motivation and Fear-Reduction as Reinforcement in the Learning of New Responses. *Journal of Experimental Psychology*, 1948, 38, 89-101.
- Dner, N.: Durumluk-Surekli Kaygi Envanterinin Turk Toplumunda Gecerlilikligi. Docentlik Tezi, Hacettepe Universitesi, Ankara, 1977.
- Sarason, I.G.: Experimental Approaches to Test Anxiety, Attention and the Uses of Information. In: Spielberger, C.D. (ed.) *Anxiety: Current Trends in Theory and Research*. Vol. 2. New York: Academic Press, 1972.
- Spielberger, C.D.: *Anxiety and Behavior*. New York: Academic Press, 1966
- Spielberger, C.D., Gorsuch, R.L., and Lushene, R.E.: *Manual for State-Trait Anxiety Inventory*. California: Consulting Psychologists Press, 1970.
- Spielberger, C.D.: *Anxiety: Current Trends in Theory and Research*. Vol. 1. New York: Academic Press, 1972.
- Taylor, J.A.: The Relationship of Anxiety to the Conditioned eyelid response. *Journal of Experimental Psychology*, 1951, 41, 81-92.
- Taylor, J.A.: A Personality Scale of Manifest Anxiety. *Journal of Abnormal and Social Psychology*, 1953, 48, 285-290.
- Taylor, J.A.: Drive Theory and Manifest Anxiety. *Psychological Bulletin*, 1956, 53, 303-320.

KENDİNİ DEĞERLENDİRME ANKETİ
STAI FORM A

İsim: Cinsiyet: Yaş: Tarih:

Yönerge: Aşağıda kişilerin kendilerine ait duygularını anlatmada kullandıkları bir takım 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	Tamami
1. Kendimi sakin hissediyorum... (1)	(1)	(2)	(3)	(4)
2. Kendimi emniyette hissediyorum(1)	(1)	(2)	(3)	(4)
3. Huzursuzum.....(1)	(1)	(2)	(3)	(4)
4. Pişmanlık duygusu içindeyim...(1)	(1)	(2)	(3)	(4)
5. Kendimi rahat hissediyorum....(1)	(1)	(2)	(3)	(4)
6. İçimde bir sıkıntı hissediyorum.....(1)	(1)	(2)	(3)	(4)
7. İlerde olabilecek kötü olayları düşünerek üzülüyorum.....(1)	(1)	(2)	(3)	(4)
8. Kendimi dinlenmiş hissediyorum(1)	(1)	(2)	(3)	(4)
9. Kendimi kaygılı hissediyorum..(1)	(1)	(2)	(3)	(4)
10.Kendimi rahatlık içinde hissediyorum.....(1)	(1)	(2)	(3)	(4)
11.Kendime güvenim olduğumu hissediyorum.....(1)	(1)	(2)	(3)	(4)
12.Kendimi sinirli hissediyorum..(1)	(1)	(2)	(3)	(4)
13.İçimde bir huzursuzluk var....(1)	(1)	(2)	(3)	(4)
14.Çok çergin olduğumu hissediyorum.....(1)	(1)	(2)	(3)	(4)
15.Sükunet içindeyim.....(1)	(1)	(2)	(3)	(4)
16.Halimden memnunum.....(1)	(1)	(2)	(3)	(4)
17.Endişe içindeyim.....(1)	(1)	(2)	(3)	(4)
18.Kendimi fazlasıyla heyecanlı ve şaşkın hissediyorum.....(1)	(1)	(2)	(3)	(4)
19.Kendimi neşeli hissediyorum...(1)	(1)	(2)	(3)	(4)
20.Keyfim yerinde.....(1)	(1)	(2)	(3)	(4)

KENDİNİ DEĞERLENDİRME ANKETİ
STAI FORM B

İsim: Cinsiyet: Yaş: Tarih:

Yönerge: Aşağıda kişilerin kendilerine ait duygularını anlatmada kullandıkları bir takım ifadeler verilmiştir. Her ifadeyi okuyun, sonra da genel olarak 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 genel olarak nasıl hissettiğinizi gösteren cevabı işaretleyin.

	Nadiren	Bazen	Çoğu zaman	Hemen zaman	her
21. Keyfim yerindedir.....(1)		(2)	(3)	(4)	
22. Çabuk yoruluyorum.....(1)		(2)	(3)	(4)	
23. Olur olmaz hallerde ağlayacak gibi olurum.....(1)		(2)	(3)	(4)	
24. Diğerleri kadar mutlu olmayı isterdim.....(1)		(2)	(3)	(4)	
25. Çabuk karar veremediğim için fırsatları kaçıtırırım... (1)		(2)	(3)	(4)	
26. Kendimi zinde hissederim. (1)		(2)	(3)	(4)	
27. Sakin, kendime hakim ve soğukkanlıyım.....(1)		(2)	(3)	(4)	
28. Güçlüklerin yenemeyeceğim kadar biriktiğini hissederim (1)		(2)	(3)	(4)	
29. Gerçekte çok önemli olma- yan şeyler için endişelenirim (1)		(2)	(3)	(4)	
30. Mutluyum.....(1)		(2)	(3)	(4)	
31. Herşeyi kötü tarafından alırım.....(1)		(2)	(3)	(4)	
32. Kendime güvenim yok.....(1)		(2)	(3)	(4)	
33. Kendimi emniyette hissederim.....(1)		(2)	(3)	(4)	
34. Sıkıntı ve güçlük veren durumlardan kaçınırım.....(1)		(2)	(3)	(4)	
35. Kendimi hüznü (kederli) hissederim.....(1)		(2)	(3)	(4)	
36. Hayatımdan memnunum.....(1)		(2)	(3)	(4)	
37. Aklımdan bazı önemsiz dü- şünceler geçer ve beni rahat- sız eder.....(1)		(2)	(3)	(4)	
38. Hayal kırıklıklarını öyle- sine ciddiye alırım ki unuta- mam.....(1)		(2)	(3)	(4)	
39. Son zamanlarda beni düşün- düren konular yüzünden ger- ginlik ve huzursuzluk içinde- yim.....(1)		(2)	(3)	(4)	