

ANXIETY LEVELS OF PSYCHIATRIC PATIENTS
DURING HOSPITALIZATION AND AT
TIME OF DISCHARGE

by

Carol Campbell Willhite

A thesis submitted to the faculty of the University
of Utah in partial fulfillment of the requirements
for the degree of

Master of Science

Department of Nursing

University of Utah

June, 1964

This Thesis for the
Master of Science Degree
by
Carol Campbell Willhite

has been approved
May, 1964

Chairman, Supervisory Committee

Reader, Supervisory Committee

Reader, Supervisory Committee

Head, Major Department

Dean, Graduate School

532430

ACKNOWLEDGMENTS

The investigator wishes to express her sincere thanks to all the members of her committee for their assistance on the format, design, data analysis and special problems that presented themselves as the project was planned.

Appreciation is expressed to the faculty of the Nursing Department who helped clarify the items for the questionnaire and added their suggestions, and to the medical staff, the head nurse, and auxiliary personnel at the Salt Lake General Hospital Psychiatric Division for allowing the use of their facilities and for the help provided in the conduct of the study. Without their cooperation, interest, and support, the study could not have been accomplished.

Special thanks are offered to the investigator's family, parents, and husband's parents who gave much needed support during the time of planning, data collection, and writing. Her husband and children deserve the greatest appreciation for enduring a great deal of pressure during the entire preparation of the thesis.

The investigator wishes all who assisted in the preparation and completion of the thesis to know that their contributions were valued and appreciated.

TABLE OF CONTENTS

| | Page |
|--|------|
| ACKNOWLEDGMENT | iii |
| TABLE OF CONTENTS. | iv |
| LIST OF TABLES | v |
| CHAPTER | |
| I. INTRODUCTION TO THE PROBLEM | 1 |
| II. REVIEW OF LITERATURE | 8 |
| III. METHOD | 16 |
| IV. RESULTS | 24 |
| V. DISCUSSION | 32 |
| VI. SUMMARY | 41 |
| BIBLIOGRAPHY | 45 |
| APPENDIX A | 49 |
| APPENDIX B | 52 |
| APPENDIX C | 58 |

LIST OF TABLES

| <u>Table I</u> | Page |
|--|------|
| Primary Diagnosis of the Sample Patients | 19 |
| <u>Table II</u> | |
| Test Re-test Time Interval for the 30 Patients in the Anxiety Study. | 20 |
| <u>Table III</u> | |
| Differences in Scores on MAS, L, and K Scales from Test to Re-test | 25 |
| <u>Table IV</u> | |
| Patient's Response to Structured Interview | 27 |
| <u>Table V</u> | |
| Chi Square Tables with MAS Scores | 30 |
| <u>Table VI</u> | |
| Differences Between Test Re-test of MAS Scale. | 34 |
| <u>Table VII</u> | |
| Test Re-test Correlations for MMPI Scales. | 36 |
| <u>Table VIII</u> | |
| Correlations Between MAS, L, and K Scales in the Present and Matarazzo Studies. | 36 |

CHAPTER I

INTRODUCTION TO THE PROBLEM

Anxiety levels depend upon two principal sources of stress. These are of different origin. The two types are situational and basic. Situational anxiety, according to White, is the earliest premonition of danger that may be barely conscious and entirely free from feelings of anxiety. The person is merely more vigilant than usual and less at ease. With the increase of danger, feelings of anxiety make their appearance. If these are not too intense, the person will successfully maintain outward calm and control. His normal functions will be carried on with little impairment; however, the struggle to maintain control will prove increasingly costly. It will demand extreme concentration and meticulousness, or perhaps it will show itself in a suspiciously exaggerated display of confidence. Attention moves from the free floating to the concentrated, spontaneity is lost, and certain features are exaggerated in order to maintain control. A small amount of danger such as speaking in front of an audience is often experienced as a stimulus and challenge that causes a person to extend himself. Beyond this, the effects of anxiety are, for a while, uniformly in the direction of less flexibility.¹ Situational anxiety is that temporary overlay of anxiety which appears to interfere with the subject's ability to solve a new problem

¹White, Robert, The Abnormal Personality (New York: Ronald Press Company, 1948), pp. 219-220.

or adapt to a novel experience.

Basic anxiety is defined by Horney as the feeling of isolation and helplessness toward a world that is potentially hostile. The principle of the pride system influences human relationships and reinforces the basic anxiety. In adults we identify basic anxiety, not in its original form, but modified by the accretions required through the years from the intrapsychic process.² Basic anxiety reduces the subject's ability to relate to people and to assimilate experience and impairs the individual's orientation to reality by forcing him to develop a chronic self-protection adjustment which tends to insulate him from experience.

If one agrees with Sullivan, it can be said that people are all more alike than different. He sees anxiety experienced by an individual as a threat to security. Anxiety is first introduced to the infant through the mothering figure. The induced anxiety in the infant makes him more difficult and worrisome to care for, but the infant must be socialized and training in the functional activities utilizes anxiety as the child is being toilet trained. The toilet training, in almost all cases, is the field in which grades of anxiety first become of great importance in learning. Behavior of certain unsatisfactory types provokes increasing anxiety, and the infant learns to keep a distance from or to veer away from activities which are attended by increasing anxiety. Sullivan holds that the self is formed through the child's sensitivity to approval and disapproval.³ If one accepts this notion that the

²Horney, Karen, Neurosis and Human Growth (New York: W. W. Norton and Company, 1950), p. 297.

³Sullivan, Harry Stack, The Interpersonal Theory of Psychiatry (New York: W. W. Norton and Company, 1953), pp. 41-160.

personality is determined by interpersonal anxiety, then the qualitative gap between normal and abnormal behavior has closed.

Thus situational and basic anxiety are said to exist. Sullivan feels that "we are all more alike than we are different," and this includes psychiatric patients. The clinical manifestations of anxiety have been studied. Patients suffering from anxiety states have symptoms of uneasiness, apprehension, and a vague sense of impending doom or disaster, inner tension or tenseness of the gastro-intestinal tract, stimulation of the sympathetico adrenal system accompanying the anxiety attacks which last from a few seconds to as long as an hour or more during which time the patient subjectively experiences difficulty in breathing, palpitation, precordial discomfort, perspiration, vertigo, various complaints referable to the gastro-intestinal tract and feelings of weakness.⁴

As an example of another approach to anxiety, Eysenck has proven that there are two factors in anxiety "one factor of autonomic over-activity and one characterized by conditioned anxiety responses."⁵

In hospital settings, personnel are able to see manifestations of anxiety. The author has observed that many psychiatric patients appear to be more anxious at the time of discharge from a psychiatric hospital or psychiatric unit of a general hospital than they did during the course of their hospitalization. This anxiety is quite understandable in that the home and community conditions preceding hospitalization,

⁴Hodgins, D. R., "Clinical Manifestations of Anxiety," McGill Medical Journal (1951), pp. 12-15.

⁵Eysenck, H. J., The Handbook of Abnormal Psychology (New York: Basic Books, 1961), p. 21.

probably have not changed and thus the problems of the patient in the situation to which he is returning (his home, job, and family) have not changed either. The hospital offers protection from the outside world and the patient adapts to the environment in the hospital. There is a need to determine if there is, in fact, an increase in anxiety at the time of discharge. It is possible that the separation from the hospital or simply the change in returning to the community is responsible for the increase in anxiety and is unavoidable. Any new set of conditions such as a new job or a change of residence may increase the anxiety level.

On the basis of the research reviewed on anxiety and personal observation, it seems desirable to determine if there is an increase in anxiety at the time of discharge and if it can be measured.

I. PROBLEM

Statement of the Problem: This study was made to determine if there is an increase in anxiety levels of patients from the tenth day of hospitalization to the time of discharge. The Taylor Manifest Anxiety Scale (MAS) was used to measure anxiety, and a structured interview with each patient was given just prior to discharge.

II. HYPOTHESES

1. The anxiety level of a psychiatric patient will show a significant increase at the time of discharge over the level experienced during hospitalization.
2. There are extra-hospital factors such as his home situation, his job, and his family which increase anxiety levels of the patient and these can be determined at the time of discharge.

III. DEFINITION OF TERMS

Taylor Manifest Anxiety Scale: A scale developed by Janet Taylor to measure manifest anxiety.

Anxiety: As defined by Cameron and used by Taylor in developing her scale.

The chronic anxiety reaction is characterized by the presence of persistently heightened skeletal and visceral tensions which disturb a person's habitual rhythms of living and predispose him generally to give exaggerated and inappropriate responses on relatively slight provocation.⁶

The use of the anxiety scale in this connection was based on two assumptions: (1) variations in drive level (motivation of performance) of the individual is related to the level of internal anxiety or emotionality and (2) the intensity of this anxiety can be ascertained by a paper and pencil test consisting of items describing what have been called overt or manifest symptoms of this state.⁷

Taylor further divided this anxiety intensity into sub-traits which are intended to tap the extent to which the patient

- a. gave exaggerated and inappropriate reactions on slight provocation.
- b. gave general indications of fatigue not attributable to any physical condition.
- c. displayed difficulties in elimination not explainable by his physical condition.
- d. appeared to be easily upset.

⁶Cameron, Norman, The Psychology of Behavior Disorders, a Biosocial Interpretation (New York: Houghton Mifflin Company, 1947), p. 249.

⁷Taylor, Janet A., "A Personality Scale of Manifest Anxiety," Journal of Abnormal and Social Psychology, 48:2 (1953), pp. 284-290.

- e. showed indications of general restlessness.
- f. slept poorly.
- g. displayed symptoms of nausea or vomiting not attributable to his physical state.
- h. complained of difficulties in concentration and thinking.
- i. appeared to be generally tremulous.⁸

Discharge: A statement by his physician leading the patient to believe he was being formally released from the hospital.

Extra-Hospital Factors: Factors that presumably affect the anxiety level of the patient on his return to the community such as his family problems, employment status, illness of a member of his family, and provision for follow-up care.

IV. LIMITATIONS

This study is planned and executed with certain limitations. These are:

1. The study is limited to patients hospitalized for a period of at least two weeks and being discharged from a psychiatric unit of one general hospital.
2. It is limited to patients who could take the test on the tenth day of hospitalization and again before discharge.
3. The discharge date of patients could not be determined before the testing was started and the length of hospital stay varied with individual patients.

⁸Kendall, Edward, "The Validity of Taylor Manifest Anxiety Scale," Journal of Consulting Psychology, 18 (1954), p. 432.

4. Any patient leaving against medical advice was excluded from the study.

5. Resident physicians supervising the care of the patients did not follow the same discharge procedures.

6. It was limited to patients who had not been hospitalized before.

7. The Taylor Manifest Anxiety Scale gives the patient no opportunity for comment or for explanation or recorded answers. Several patients made comments on the answer sheets on the initial testing. On follow-up testing with the structured interview, explanations could be made.

CHAPTER II

REVIEW OF LITERATURE

In this study the review of literature has been focused on current information pertaining to (1) the Taylor Manifest Anxiety Scale, (2) reports of the use of this scale on previously hospitalized patients, (3) studies of anxiety rates of patients during hospitalization and at the time of discharge, and (4) reports of other testing having implications for this study.

The literature is reviewed in the order indicated above.

I. TAYLOR MANIFEST ANXIETY SCALE

Development of the Test: The Manifest Anxiety Scale (MAS) was originally constructed by Taylor for use in a study of eyelid conditioning. Approximately 200 items from the Minnesota Multiphasic Personality Inventory (MMPI) were submitted to five clinicians along with a definition of manifest anxiety that followed Cameron's description of chronic anxiety reactions. The judges were asked to designate the items indicative of manifest anxiety according to the definition. Sixty-five statements supplemented by 135 additional "buffer items uniformly classified by the judges as non-indicative of anxiety," were administered in group form to 352 students in a course in introductory psychology. The measure ranged from a low anxiety score of 1 to a high score of 36 with a median of 14.56. The form of the distribution was slightly skewed in the direction of high anxiety. The scale was used on hospitalized neurotic

and psychotic patients. The median was 34 with a range of 1 to 49.

Subsequently, the scale went through several modifications. At the present time it consists of 50 items that show a high correlation with total anxiety scores of the original groups tested. The buffer items have been changed so that the test which contained 225 items is now a 90 question test. It included 50 anxiety items and 40 buffer items from the MMPI. These are the L and K scales from the test. The shorter test has been used and is considered preferable to the longer test.¹ The L and K scales measure the tendency to lie and to be defensive respectively. The L scale is based on fifteen items concerned with socially approved and virtuous activities that are generally approved of but not frequently carried out. General population norms indicate what may reasonably be expected on a set of items of this sort. If a person marks an excessive number of these socially approved behaviours, it is considered to be an indication that he tends, consciously or unconsciously, to distort his report so that he appears in a favorable light. That is, he tends to "fake good."

The K scale was developed by keying items that distinguish known abnormals who had presented normal score profiles from a control group of normals. A high score on this scale is thought to indicate a tendency to be very defensive in self evaluation whereas a low score brings out the tendency to be extremely self critical.²

¹Taylor, Janet A., "A Personality Scale of Manifest Anxiety," Journal of Abnormal and Social Psychology, 48:2 (1953), pp. 285-290.

²Thorndike, Robert L. and Elizabeth Hagen, Measurement and Evaluation in Psychology and Education (John Wiley and Sons, Inc., 1961), pp. 339-340.

Validity and Reliability: The reliability of the scale is not in question, but the validity of the scale is in doubt with different results having been obtained by different investigators. There have been many studies conducted using this scale; however, the writer will refer only to the ones which are related to this study.

In order to determine the consistency of scores on the MAS and its stability over time, groups of individuals have been retested on the scale after various intervals. For all groups tested, both the relative position of the individual in the group and his absolute score tended to remain constant over relatively long periods of time.³ Lebo supports the conception that the MAS is a measure of enduring anxiety.⁴

Kendall has tested the MAS and reports that it is safe to conclude that the test is reliable, but a coarse measure of manifest anxiety.⁵

Brackbill and Little correlated the MMPI and the MAS and concluded that the MAS could ascertain manifest anxiety in clinical populations as reliably as from the MMPI.⁶

Goodstein reported the validation studies of the MAS have been of three independent types. The first are experimental studies that were used to measure an individual's reactivity or excitability which in turn reflects the general drive level. The second study type has been in the

³Ibid., p. 289.

⁴Lebo, Dell and William S. Applegate, "The MAS and the DRQ," Journal General Psychology, 61 (1959), pp. 275-279.

⁵Ibid., pp. 432-433.

⁶Brackbill, G. and K. B. Little, "MMPI Correlates of the Taylor Scale of MAS," Journal Consulting Psychology, 18 (1954), pp. 433-436.

clinical field. The third area has been the comparing of the MAS and other tests that purport to measure anxiety.⁷

The experimental studies have predicted performance, reaction time, conditioned verbal learning, and maze learning in a variety of laboratory experiments. Taylor used the MAS to divide her anxious and non-anxious groups in her initial work with eyelid conditioning responses. The anxious students had a more rapid conditioning rate than did the non-anxious group.⁸

There are a number of studies that have shown the MAS scores correlated with clinician's ratings of anxiety. An example of this is shown in Buss's evaluation of anxiety (as defined by textbooks) in a clinical situation. The manifestations of anxiety listed in the tests included both observed and reported behavior. The definition of anxiety in his study included both aspects. This was reflected in the relationship between both types of behavior and the overall clinical rating. There was a low relationship between the MAS and observed categories, and there was a moderate relationship between the MAS and the reported categories. The overall rating did take into account both types of behavior. To the extent that the MAS omits items that relate to observed measures of anxiety, it does not completely measure anxiety as defined by psychiatric and abnormal psychology texts. However, the MAS relationship to

⁷Goodstein, Leonard D. and Leo Golderberger, "Manifest Anxiety and Rorschach Performance in a Chronic Patient Population," Journal Consulting Psychology (1955), pp. 339-344.

⁸Taylor Janet, "Relationship of Anxiety to the Conditioned Eyelid Response," Journal of Experimental Psychology, 41:2, pp. 81-92.

the criterion suggests a fairly adequate measure of anxiety.⁹

A number of investigators have shown the MAS is useful in identifying clinical-diagnosable anxiety states. Several studies have shown the patient populations give significantly higher MAS scores than do normal populations. Taylor provided some evidence on this point by measuring anxiety scores of patients undergoing psychiatric treatment. The anxiety scores are available for 103 neurotic and psychotic individuals drawn from both in and out patient populations. The distribution of scores for the patient and the normal groups were different. Taylor suggests that psychiatric patients will tend to exhibit more manifest anxiety symptoms (as determined by direct observation) than do normal individuals; this difference between the two groups appeared to indicate that there is some relationship between the anxiety scale scores and clinical observations of manifest anxiety.¹⁰

Several studies have reported relationship between the MAS and various other scales that measure anxiety including the Rorschach, MMPI, and the Palmar Sweat Index (PSI). McGuigan, et. al. have suggested an explanation for the lack of correlation between verbal and physiological anxiety measures, specifically the PSI and the MAS scale. They state that the PSI is a better measure of situational temporary anxiety while a questionnaire like the MAS scale is a better measure of anxiety as a stable characteristic of personality. Presumably, the MAS scale reflects the verbalized self-concept which may be more permanent than the

⁹Buss, A. H., M. Wiener, A. Durkee, and M. Baer, "The Measurement of Anxiety in Clinical Situations," Journal of Consulting Psychology, 19 (1955), pp. 125-129.

¹⁰Ibid., pp. 285-290.

physiological imbalance reflected in the PSI.¹¹

Winter states that he believes there is some truth in this idea; but in his study, the PSI scores for a given subject were generally stable and characteristic of him in all conditions.¹²

It is also essential to consider, as Cronbach has, that the critical assumptions involved in psychological testing are that the subject is willing to tell the truth to himself and to the investigator and is able to determine the truth.¹³

II. REPORTS OF THE USE OF THE SCALE WITH HOSPITALIZED PATIENTS

Goodstein and Goldberger at the State University of Iowa compared the MAS and the Rorschach test on chronic patients in a mental hospital. The test showed the psycho-neurotics had a significantly higher anxiety score on the MAS than was found among college students. The female mean was higher than that for males. The results also indicated that the Rorschach and the MAS are similar measures of anxiety, at least in a chronic patient population.¹⁴

¹¹McGuigan, F., and Elizabeth Richardson, "Manifest Anxiety, Palmar Perspiration-Index, and Stylus Maze-Learning," American Journal Psychology, 72 (1959), pp. 434-438.

¹²Winter, William D., Antonio J. Ferreira, and Robert Ransom, "Two Measures of Anxiety; A Validation," Journal of Consulting Psychology, 27 (1963), pp. 520-523.

¹³Cronbach, L. J., Essentials of Psychological Testing (New York: Harper, 1949), p. 39.

¹⁴Goodstein, Leonard D., and Leo Goldberger, "Manifest Anxiety and Rorschach Performance in a Chronic Patient Population," Journal Consulting Psychology (1955), pp. 339-344.

In another study the MAS differentiated psychiatric out patients from normal or medical out patients.¹⁵

III. PREVIOUS STUDIES OF ANXIETY RATES OF PATIENTS DURING HOSPITALIZATION AND AT THE TIME OF DISCHARGE

In the survey of literature using the Psychological Abstracts from 1927-1963 and the Quarterly Cumulative Index Medicus from 1927-1963, the investigator was unable to find any published work comparing anxiety levels during hospitalization and at the time of discharge.

IV. OTHER TESTS RELATED TO THE STUDY

Gallagher has reported changes in the MAS scores that are positively correlated with therapy success criteria. The purpose of the study was to determine if there had been changes in anxiety stress level as measured by several scales that included the MAS in a group of patients concomitant with the patient therapy. The 42 subjects were college students who came to an out patient clinic for ten months. The patients came by referral from various agencies or of their own volition to obtain aid in personal adjustment. No attempt was made to diagnose the cases prior to therapy except to exclude persons judged as pre-psychotic or psychotic on the basis of the intake interview. The median number of therapy interviews was between five and six although some cases were seen for a much longer period of time.

A battery of tests was given that included the Rorschach, MMPI, and

¹⁵Matarazzo, Joseph D., Samuel B. Guze, and Ruth G. Matarazzo, "An Approach to the Validity of the Taylor Anxiety Scale: Scores of Medical and Psychiatric Patients," Journal Abnormal Social Psychology, 50 (1955), pp. 276-280.

The Mooney Problem Check List. These were given to the subjects before the beginning of therapy interviews or at the latest, before the second therapy interview. The post-therapy tests were given after an agreement was reached by the therapist and client that therapeutic interviews should end.

The MAS was not used in its entirety since many of the subjects finished only 366 of the total MMPI items. There were only 34 of the 50 items used. It was found that although all measures showed a significant decrease in stress from pre-therapy to post-therapy, the MAS and Winne Neuroticism Scale showed the highest amount of agreement with the therapy success measures.¹⁶

¹⁶Gallagher, J. J., "Manifest Anxiety Changes Concomitant with Client Centered Therapy," Journal of Consulting Psychology, 17 (1953), pp. 443-446.

CHAPTER III

METHOD

I. SETTING FOR THE COLLECTION OF DATA

The research was conducted at the Salt Lake General Hospital. The psychiatric unit has a maximum of 25 patients and draws the majority of its patients from the immediate area. Patients are admitted to the unit after the admission office has considered the manner in which the hospital bill will be paid. The patients pay their bills without aid from insurance plans (which makes them full-pay patients), with the use of insurance plans, or payment being made for indigent patients by the State Welfare Department. This is not a private institution and must accept these welfare patients from the county.

Having only 25 beds, the unit is small and the philosophy seems to be to keep only short term patients because the average hospital stay is only 21 days. Patients who are considered good teaching material are kept for longer periods of time. A patient who is expected to undergo long-term therapy is transferred to the State Hospital.

The psychiatric unit is staffed with a psychiatrist director, seven nurses, twelve attendants, one clerk, one social worker, one occupational therapist, three resident psychiatrists, four medical students who rotate through the service, and graduate students in psychiatric nursing whose number varies and depends on how many are registered in the program. The unit has its own testing facilities for patients including psychiatric testing, EEG, and research within the unit. The hospital is classed as a teaching institution.

In the last five years there have been 395 admissions (177 male and 217 female) with an average hospital stay of 21 days. The patient's stay ranges from a few hours to an indeterminate number of days depending upon the severity of the problems encountered.

II. SAMPLE

The subjects were undergoing active treatment for psychiatric problems and were taken as they were admitted regardless of their age, sex, or diagnosis provided they met the following criteria:

1. The patient must have been in the hospital for ten days before the initial MAS was given.
2. The patient must have been in the hospital for a period of two weeks before the second test and the structured interview were given.

Thirty patients out of 72 admitted over a four and one-half month period met the criteria. Some subjects were excluded from the study after they were started. These included two who were too ill to complete the test, four who left the hospital against medical advice, two of whom the writer was not informed of their discharge, five who started the initial testing but were released from the hospital before they could meet the criteria, and one who refused to take the last test. The other 26 did not remain the full ten days in the hospital and did not qualify for the testing program.

The subjects were 11 male and 19 female, caucasians, ranging in age from 14 to 62 with a mean of 34.7. Of the total group, 23 were married. On admission to the unit, seven stated they were employed, five were

students, 11 were housewives with two having part-time employment, and five of the group were unemployed but employable.

The patients were admitted to the unit in the following manner: fifteen from the emergency room, seven admitted by court order, and six referred into the unit by private physicians or psychiatrists and one by a psychologist. Twenty-two subjects came from Salt Lake County. Two patients came from other areas of the state and six were from out of state.

There were five resident physicians involved in the treatment of the subjects. The diagnoses varied and included functional as well as organic classifications. Table I shows the different classifications of diagnoses. Seventeen of the subjects were placed on some type of medication. The length of hospitalization varied from 14 to 82 days with a mean of 23.2. Table II shows the time interval test-retest for the patients in this study.

III. COLLECTION OF DATA

All subjects who met the study criteria were given the test. The entire MAS was given twice to the patients rather than half of the items because the results would be more valid (see personal correspondence, Appendix A, p. 49). Each patient was assigned a number to match the number on the MAS and the record of the structured interview. There were no reasons given to the patient for administering the test. It was included in the established pattern of testing in the hospital.

Each patient was individually administered the initial MAS test on the tenth day of hospitalization by the writer. Retesting was done from four to 72 days later also by the writer. The retests were also given

TABLE I
PRIMARY DIAGNOSIS OF THE SAMPLE PATIENTS

| Diagnosis | Number in Sample | Total |
|--|---------------------|-------|
| I. Transient Personality Problem | | 2 |
| Acute Situational Maladjustment | 2 | |
| II. Psychoneurotic Disorders. | | 10 |
| Anxiety Reactions | 5 | |
| Obsessive Compulsive | 1 | |
| Depressive Reactions | 4 | |
| III. Character and Behavioral Disorders. | | 4 |
| Pathological Personality Types: | | |
| Schizoid Personality | 1 | |
| Immaturity Reactions: | | |
| Passive Aggressive Personality | 3 | |
| IV. Alcoholic Intoxication and Drug Addiction | | 3 |
| Chronic Alcoholic | 2 | |
| Drug Addiction | 1 | |
| V. Psychosis without known Organic Etiology. | | 7 |
| Paranoid | 5 | |
| Unclassified | 2 | |
| VI. Psychosis due to other mental disorders with demonstratable etiology or associated structural change in brain or both. | | 4 |
| Intoxication (bromide) chronic with psychotic reaction (paranoid skitz) | 1 | |
| Intoxication (tranquilizer) acute reaction | 1 | |
| Psychosis with new growth central nervous system lesion with psy- chotic reaction (paranoid skitz) | 1 | |
| Psychosis due to unknown or heredi- tary cause but associated with organic change (multiple sclerosis) | 1 | |
| | | 30 |

TABLE II

TEST RE-TEST TIME INTERVAL FOR THE 30 PATIENTS
IN THE ANXIETY STUDY

| Number of Days from 10th Day of Admission and Re-test | |
|--|------------------------------|
| Patient No. | First Test to Second Test |
| 1 | 7 |
| 2 | 4 |
| 3 | 4 |
| 4 | 16 |
| 5 | 30 |
| 6 | 21 |
| 7 | 17 |
| 8 | 6 |
| 9 | 4 |
| 10 | 72 |
| 11 | 24 |
| 12 | 4 |
| 13 | 14 |
| 14 | 5 |
| 15 | 4 |
| 16 | 22 |
| 17 | 13 |
| 18 | 33 |
| 19 | 5 |
| 20 | 6 |
| 21 | 6 |
| 22 | 4 |
| 23 | 9 |
| 24 | 4 |
| 25 | 9 |
| 26 | 4 |
| 27 | 4 |
| 28 | 10 |
| 29 | 4 |
| 30 | 23 |

individually. The retest was given six to 24 hours after the patient was told he would be released from the hospital. The structured interview was given after the MAS.

All of the patients but four received the second test on the day of discharge. Two of the four patients were given 48 hours notice of their discharge and two remained in the hospital after the final testing due to medical problems that were not resolved. The tests were administered in the mornings.

The tests were administered in the following manner:

1. On Initial Testing.

The subject entered the room and was asked to be seated. The booklet, answer sheet, and pencil were placed in front of him. The author explained to him that he was being asked to take a test as part of the testing program. The instructions were read to him. Time was allowed for the patient to ask questions. No time limit was set. The subject was asked to answer the questions as they related to him at the present time. When the test was completed, the subject was informed that he might be asked to take another test before his discharge. On the initial testing, four patients wrote on the answer sheets attempting to clarify the reason for answering the questions as they did. "Usually" and "sometimes" were written beside the answer. One patient qualified her test answers verbally to the writer.

2. Second Testing.

The booklet along with the answer sheet and the pencil were placed on the desk in front of the patient. The subject was informed that he was being asked to take another test. The instructions on the

booklet were read. Several patients asked if this was the same test. The author stated that it was but that the patient was not being asked to duplicate the other test results. The writer asked the patient to answer the questions as they pertained to him at the present time.

IV. STRUCTURED INTERVIEW

Construction of the Questionnaire: The information which was asked for included the methods presently being used to discharge patients and information relating to extra-hospital situations at the time of discharge. Since extra-hospital factors are highly variable and personal, a structured interview was decided upon to identify their nature and determine their effect.

Part of the hospital's treatment program presumably meets the patient's needs for security and protection. It is hoped that his needs are met in the hospital setting by the personnel. At the time of discharge, the patient is returning to a community setting and there are interpersonal strains such as finding a new job or returning to an old one, the re-adjustment to the family situation or to living alone which must be met by the patient.

This structured interview was constructed to elicit the patient's response at the time of his discharge. Effort was made to avoid a patterned response but to determine what had occurred or was occurring at the time of discharge. The questionnaire was designed to pick up clues which would show how the patient perceived these situations. The questions which were asked in the interview are found in Table IV, p. 27.

The structured interview was conducted by the author at the same time as the administration of the second test. There were no instructions given to the patient, only the administration of the questions.

V. ANALYSIS OF STATISTICAL DATA

A correlated t test was used to determine if there was a significant increase in the MAS scores from the initial test to the re-test. A Pearson product moment correlation was used to calculate the correlations between the first and second tests on the MAS, L, and K scales.

Two by two contingency tables were used to see if there was a relationship between the structured interview and the MAS. The scores on the MAS were divided into high and low anxiety groups by the median on the second test. The answers on the interview were divided into negative and positive responses. Chi square test was also used to indicate any reliable relationship between the MAS and the variables considered in the study.

CHAPTER IV

RESULTS

I. RESULTS OF THE MAS

The initial MAS raw scores ranged from 2 to 41. On re-test, the raw scores ranged from 4 to 43. (The highest possible score was 50). The raw score data is found in Appendix C, p. 58. The frequency distribution of scores showed a slight skewing toward anxiety. The mean on the first test was 24 and on the second test, 25. The standard deviation on the initial test was 12.1 and on the second test, 10.8. The median was 26.6 on the initial test and on re-test, 27.5. The median for Taylor's scale for psychiatric patients is 34.¹

The difference in the means was then computed. The t ratio was $-.75$ which is not significant. The correlation between the first and second test was $.94$ which is significant at the $.01$ level of confidence.

The K scales were then compared. The means were: initial test, 11; re-test, 10.7. The standard deviation was 4.2 for both initial and re-test. The test-retest correlation was $.73$ which is significant at the $.01$ level of confidence.

The L scales were compared. The means were 5.8 on initial testing and 5.6 on re-test. The standard deviation on the initial test was 3.3 and 3.2 on re-test. The strength of the relationship is a positive one; the value of Pearson r was $.69$, a value significant at the $.01$ level of confidence. Table III shows results of the differences in scores of the MAS, L, and K scales.

¹Taylor, Janet A., "A Personality Scale of Manifest Anxiety," Journal of Abnormal and Social Psychology, 48:2 (1953), pp. 285-290.

TABLE III
 DIFFERENCES IN SCORES ON MAS, L, AND K SCALES
 FROM TEST TO RE-TEST

| Scale | 1st Test | | Re-test | | Correlation* |
|-------|----------|------|---------|------|--------------|
| | Mean | SD | Mean | SD | |
| MAS | 24.0 | 12.1 | 25.0 | 10.8 | .94* |
| L | 5.8 | 3.3 | 5.6 | 3.2 | .73* |
| K | 11.0 | 4.2 | 10.7 | 4.2 | .69* |

* Significant at the .01 level of confidence.

The L score was compared with the MAS score and yielded a Pearson product moment which was a negative value; the value of the Pearson r was $-.59$. There seems to be a tendency for the patients who scored low on the Taylor scale to be less candid (as inferred from their scores on the L scale) than the individuals in the higher anxiety ranges.

The K scale was compared in the same manner and yielded a Pearson product moment of $-.76$. Both the L and K scale correlations are significant at the $.01$ level of confidence. There is a high relationship between the K scale index and the score on the MAS which would indicate that one's anxiety level by the MAS reflects his "test taking attitude" as well as whatever else it is the Taylor scale is sampling.

II. FINDINGS OF THE STRUCTURED INTERVIEW

The structured interview with the patient consisted of nine items. The items are listed in Table IV and the divisions into which these are scored are indicated. Chi square contingency tables were used to find whether significant relationships existed between the information obtained from the patient and the results of the MAS.

Before discussing chi square tests, several patterns or trends were discernable from the structured interview. Twenty-one of the 30 patients were given 24 hours notice of their discharge. This seems to indicate that some notice is given to the patients and an agreement is reached between the physician and the patient as to the time he will leave the hospital.

Twenty-two of the patients were released with some type of future planning. Two were released from this group with a prescription for medication with no set time for further follow-up care. Eight others

TABLE IV
 PATIENT'S RESPONSE TO STRUCTURED INTERVIEW

| Statements | Responses | Total |
|--|----------------------------------|-------|
| How long ago were you told of your discharge? | 24 hours | 21 |
| | 6-12 hours | 9 |
| Who told you about your discharge? | Resident | 24 |
| | Others | 6 |
| What did he or she say? | Released with future plans | 22 |
| | Released | 8 |
| Do you plan to return for follow-up care? | Yes | 20 |
| | No | 10 |
| Are you planning to return to your job immediately? | Yes (Employed full or part-time) | 9 |
| | No (Unemployed) | 21 |
| How do you feel about going home? | Positive | 17 |
| | Negative | 13 |
| How does your family feel? | Positive | 15 |
| | Negative | 15 |
| How is your family? Has there been any illness in the family since you have been hospitalized? | None | 18 |
| | Illness | 12 |
| How are you feeling about leaving the hospital? | Positive | 15 |
| | Negative | 15 |

were released without any further care planned. Follow-up care was planned (by appointment) for 20 patients in the sample. This indicates that one-third of the patients in the sample were released without further psychiatric care planned. The 20 who had appointments to return for care indicated they would keep the appointments.

At the time of discharge from the hospital, nine of the 30 patients were to return to previous employment. Twenty-one of the group were unemployed. When this is compared with their employment status on admission, nine were employed at that time and 21 were unemployed. Five were employable.

Seventeen of the group had positive feelings about returning home. Statements as: "I want to go home," "I feel fine about going," "I've been waiting since I came in to go home," were given to the researcher. Negative statements were also made: "I am apprehensive about going home," "I am anxious about going home," "I have mixed feelings about going home."

When asked how their family felt about the patient coming home, there were 15 positive and 15 negative responses. Some positive responses were: "My mother feels good about it and I do, too," "My mother is happy to have me coming home." Negative responses were: "I've had no contact with my family since I came in," "My husband expects me to go home and just take care of everything the same way as before. I can't do this. I must return today, but I am asking for a divorce."

When the question regarding illness in the family was asked, 12 reported illness in the family. This varied from children who had tonsils

removed to a death in the immediate family. It seems to the researcher that often the interest in the patient is paramount and that how other members of the family affect this patient is not considered. The patient lives in a world of interacting personalities and his adjustment to this is important.

The responses to the question about how the patient was feeling about leaving the hospital were divided equally with negative and positive answers. The positive feelings were that they were glad to be leaving. There were negative responses and ambivalent feelings by the others.

The results of the interview with the patient indicate that follow-up care and illness in the family are situational factors in the lives of the patients leaving the hospital. Returning to the community, to jobs, to family and illness could create a great deal of situational anxiety at the time the patient is released from the hospital.

Chi Square: Two by two contingency tables were used to see if there was any reliable relationship between the MAS scores and the items in the structured interview. The MAS scores were divided at the median of 27.5 on the second test into high and low anxiety groups. The division of the questions of the structured interview can be seen in Table IV. Only five of the items in the interview could be tested in this manner. Four could not be tested because of insufficient numbers in the cells of the 2 x 2 table which precluded a meaningful analysis. Table V gives the 2 x 2 contingency tables for five types of interview information. Each table shows the number of subjects scoring high and low in the MAS

TABLE V
CHI SQUARE TABLES WITH MAS SCORES

| Question | Two x Two Tables | | | |
|---|------------------|---|----|----|
| | H | L | | |
| Do you plan to return for follow-up care? | Yes | 9 | 11 | 20 |
| | No | 5 | 5 | 10 |
| How do you feel about going home? | Positive | 5 | 12 | 17 |
| | Negative | 9 | 4 | 13 |
| Has there been any illness in the family? | Positive | 5 | 7 | 12 |
| | Negative | 9 | 9 | 18 |
| How do you feel about leaving the hospital? | Positive | 6 | 9 | 15 |
| | Negative | 8 | 7 | 15 |

in relation to how they answered the questions.

One question was significant. How do you feel about going home? was confirmed at the .05 level of significance ($\chi^2 = 6.42$ $df = 1$). The patients that desired to return home had a lower anxiety rate than the ones who desired to remain in the hospital.

Chi square tests also indicated there were no reliable relationships between the MAS scores and the following variables: referral to the hospital, payment of the hospital bill, medications, areas from which the patients came to the hospital, marital status and sex.

CHAPTER V

DISCUSSION AND CONCLUSION

I. MAS

The MAS response on both tests is almost identical. Because the MAS response did not change, the hypothesis was not confirmed. The average anxiety level on this test remained the same. It seems possible that the manifest symptoms of anxiety often seen in patients at the time of discharge may be due to situational and not to basic anxiety. The patient's basic anxiety may not have changed or he may not have had time to see any change in himself.

It seems to the author that the MAS measures basic anxiety and does not deal with situational anxiety. It also may be that basic anxiety has an overlay of situational anxiety that is seen as the patient prepares to leave the hospital. The basic anxiety has not changed and the patient returning to the community meets stress situations which create situational anxiety that is observed upon discharge but not picked up on the MAS. There may be some differences in memory arousing stimuli as well as differences in the defense mechanisms and the self attitude of the patient.

The responses to the MAS may be influenced by the patient's fear of indicating how he really feels. He may wish to present himself as he feels the "normal" members of society view themselves and does not feel himself to be a unique individual. This is indicated by explanations written on the answer sheet and attempted validation by one individual of the information at the time the test was handed to the writer, and by

the significant negative correlated with the L and K scales, the lower mean on score obtained in the present study and by Taylor's scale for psychiatric patients. This may mean that the socially and culturally acceptable answers, as viewed by the patient, were given on the test and lack of insight contributed to the answers given. Psychiatric care is not a one-two-three operation, and patients who take time to discover their problems for themselves develop lasting insight that is not intellectual only. To tell a person what is wrong with him will not "cure" him; patients must discover for themselves what their problems are with the help of adequate guidance.

The test may not be refined enough to pick up the small situational changes that the individual experiences during the course of therapy in the hospital. Perhaps a larger sample as the one used by Taylor of 103 psychiatric patients would change the results. A testing device is a highly impersonal tool to use in assessing behavior. The results of the testing even though not confirmed by the MAS are still seen at the time of discharge. A psychiatric nurse clinician who is sensitive to the needs of patients is able to see this occurring.

Table VI compares the results of Gallagher's study with this study. Gallagher's study showed a decrease in anxiety at the time of discharge from out patient therapy.¹ This study did not show such a change from initial testing to discharge time. The divergence may be due to the difference in the diagnostic composition of the sample. The patients

¹Ibid., pp. 443-446.

TABLE IV
 DIFFERENCES BETWEEN TEST-RETEST
 OF MAS SCALE

| Study | N | Mean | S.D. |
|---------------|----|-------|-------|
| Gallagher | | | |
| Pre-test | 42 | 17.28 | 6.18 |
| Post-test | 42 | 13.76 | 6.13 |
| Present Study | | | |
| Initial test | 30 | 24.00 | 12.10 |
| Re-test | 30 | 25.00 | 10.80 |

were undergoing therapy and had not been removed from the community. Any psychotic or pre-psychotic patients had been removed from his sample. The patients in this study were removed from the community. The duration of hospitalization was short. The study included psychotic as well as other diagnoses. The number in the sample differed.

The MAS proves to be a reliable scale as do the K and L scales. It is significant to compare Rosen's study with the results of the present study. Rosen's test-retest stability or reliability test-retest of the MMPI scales was done on a psychiatric population. He used 40 patients who were hospitalized in a veteran's hospital.² The product moment stability correlations of the two studies generally correspond except on the L scale. This may be due to the divergence in the differences of the diagnostic composition of the samples. Rosen did not state the length of hospitalization of the patients. Table VII shows the test-retest co-efficients of the MMPI scales for Rosen's study and this study.

It is also significant to compare Matarazzo's study with the results of the present study. Using 119 medical students and 31 female occupational therapy students, Matarazzo compared the L and K scales against the MAS scores. None of these were psychiatric patients.³ Matarazzo found a lower correlation than the present study, but he was using a normal sample. Table VIII shows the correlations between the MAS, L, and K scales in the present study and in Matarazzo's study.

²Rosen, Albert, "Test-Retest Stability of MMPI Scales for a Psychiatric Population," Journal of Consulting Psychology, 17:3 (1953), pp. 212-215.

³Ibid., pp. 276-280.

TABLE VII
TEST-RETEST CORRELATIONS
FOR MMPI SCALES

| Scale | Present Study N 30 | Rosen's Study N 40 |
|-------|-----------------------|-----------------------|
| L | .69 | .62 |
| K | .73 | .65 |

All significant at the .01 level of confidence.

TABLE VIII
CORRELATIONS BETWEEN MAS, L, AND K SCALES
IN THE PRESENT AND MATARAZZO STUDIES

| Scale | Present Study N 30 | Matarazzo Study | |
|-------|-----------------------|------------------|------------|
| | | Medical N 119 | OT N 31 |
| L | -.59 | -.32 | -.52 |
| K | -.76 | -.71 | -.84 |

All significant at the .01 level of confidence.

The results of the present study show that a significant negative correlation between the MAS and the K and L scales. This seems to indicate that the MAS does depend on whether the individual knows how he feels and is willing to report it to others. It appears that the patient, when he marks many of the socially approved but not frequently carried out behaviors, is attempting to place himself in a good light, consciously or unconsciously. There is also an attempt in instances of high L scores to be extremely self-critical. These factors do enter into the results of the study and would seem to interfere with the validity of what the MAS is measuring.

In Taylor's initial research on drive level, she classified drive as determined not only by the relevant need (the one that is reduced by the response) but also by the aggregate strength of all other primary and secondary needs operative at the moment. These latter needs are referred to as irrelevant needs. Needs are a function of certain antecedent conditions (environmental deficiencies, noxious stimulation) that contribute to the total drive strength. Needs combine to produce drive strength.⁴ The needs of the individuals who showed high L and K scores may be very defensive against internal anxiety states. The recurrence of anxiety may be reduced through the use of defenses. Defense reactions could be considered to be a function of high drive level or needs. The defense responses may be effective in reducing the anxiety and thus the anxiety level appears low on the testing. Previous experiences with anxiety states and defense reactions to reduce the anxiety state (even

⁴Ibid., pp. 81-92.

though the needs are still present) could also be dissociated and thus the patient does not realize how he feels because it is painful to him. The effectiveness of the defense syndrome reduces the anxiety.

II. STRUCTURED INTERVIEW

The structured interview consists of nine items. Only one factor is statistically significant. It seems that there is less anxiety in a patient returning to the community who desires to return than in a patient who is hesitant to return.

The writer concludes, although no statistically significant relationship exists between the MAS and extra hospital factors, the results of the interview show that patients are released from the hospital without adequate follow-up care. Eight of the patients did not have care planned for them. Twenty of the 30 patients planned to return for care. Ten of the patients did not at the time of release plan to continue any type of care and often are readmitted to the institution. If patients are released without adequate follow-up care, then we can assume that they will return to the hospital setting. The patients have been unable to function in the community or they would not have been admitted to the psychiatric unit of the hospital. They need continued follow-up care.

The employment status of the patients had not changed. A previous study on employment was conducted in Boston. This sample consisted of 370 patients and it was found that the majority of them (77%) stayed at the same occupational level although there were some instances of under-employment. Evidence indicates that the ex-patients may have less

difficulty adjusting to work roles than to social and family roles. These findings raised questions concerning a commonly held assumption that employment is a major problem of ex-patients and that negative employer attitudes cause underemployment.⁵ Evidence in this study would support the findings of Olshansky that problems of unemployment remain the same during the patient's hospitalization.

The structured interview shows a need to deal with the patient's environment and his response to his environment. Half of the patients had positive responses about returning to the family and half gave negative responses. Twelve of the patients had various problems of illness in the family at the time of their release. The patient lives in a world of interacting personalities and his adjustment to his family and his social roles within the family are extremely important in prevention of another admission.

The writer feels that more specific results may have been obtained if rapport with the patients had been established before admission of the interview. The patients were seen twice by the author and no opportunity to establish a relationship with the patients was developed.

It is the conclusion of the author that further care needs to be implemented as the patient leaves the hospital and nursing should assume continuity of patient care in the community. A patient should be followed in his home to evaluate his progress, to supervise medication, to support follow-up care, and to meet the patient and family needs in the

⁵Olshansky, Simon, Samuel Grab, and Miriam Ekdahl, "Survey of Employment Experiences of Patients Discharged from Three State Mental Hospitals During Period 1951-1953," Mental Hygiene, 44 (1960) pp. 510-522.

environmental situation to which the patient has returned. The nurse as a member of the health team can insure that problems are dealt with as they arise, decreasing anxiety and creating a therapeutic environment for the growth of the patient and family into healthier living for all.

RECOMMENDATIONS

On the basis of the findings of this study, several recommendations are made:

1. A more precise and appropriate tool for measuring patient anxiety needs to be developed, specifically one that measures situational anxiety.

2. The MAS needs further evaluation of its effectiveness.

3. A person planning research with patients in a structured interview needs a relationship with the patient prior to the interview.

4. To determine if there is a change in anxiety over a longer period of time between testing, the scale should be given at the beginning of therapy in the hospital and at the time therapy is completed with the supportive care of a nurse in the home combined with the therapy of a psychiatrist.

CHAPTER VI

SUMMARY

Purpose: This study was made to determine (a) if there is a significant difference between anxiety levels of psychiatric patients at a mid-way point in their hospitalization and at the time of their discharge, and (b) if extra-hospital factors such as illness, employment status, or follow-up care influence anxiety levels as the patient is being released from the hospital. This was accomplished by administration of the Taylor Manifest Anxiety Scale (MAS) and a structured interview. Every new patient admitted to the psychiatric unit of Salt Lake General Hospital who met the following criteria was selected as a subject: (1) he must have been in the hospital for ten days before the initial MAS was given, and (2) he must have been in the hospital for a period of two weeks before the second test and the structured interview were given. Information concerning independent variables (age, occupation, sex, race, medication, source of referral to the hospital, and method of payment) was recorded. Each patient was individually administered the tests.

Results: For each scale (MAS, L, and K) a t test was used to determine the significance of the difference between the initial and re-test. A Pearson product moment correlation was completed from the test-retest record of the 30 patients. There was no significant difference in means or standard deviations on the three scales. The positive correlations were all significant at the .01 level of confidence. The hypothesis that there would be an increase in anxiety at the time of

discharge was not confirmed. There was a significant tendency for patients scoring low on the Taylor scale to be less candid (as inferred from their scores on the L scale) than individuals scoring high.

The structured interview divulged the present methods of discharging patients and information relating to the extra-hospital situations at the time of discharge. Since extra-hospital factors are highly variable and personal, an interview seemed to be the best method to determine their effect. Although not statistically significant, the pattern of responses indicate that follow-up care and illness in the family are situational factors affecting anxiety.

Two by two contingency tables were used to see if there was a reliable relationship between the MAS and the items in the interview as well as the independent variables. One question was significant - How do you feel about going home? - and was confirmed at the .05 level of significance ($X^2 = 6.42$). The patients who desired to return home had a lower anxiety rate than the ones who desired to remain hospitalized.

This study is consistent with past studies and indicates the MAS measures basic anxiety. Basic anxiety levels have not changed and the patient returning to the community meets stress situations which create situational anxiety that is manifest. The test is not refined enough to pick up small changes that the individual experiences during the course of hospitalization.

The L and K scales show defensive reactions to anxiety. The defense responses may be effective in reducing anxiety and thus the anxiety level may appear low on testing.

The interview revealed extra-hospital factors that affect the patient at the time of discharge and shows a need to deal with the patient's environment and his response to it. Results of the structured interview could be improved if the author had established rapport with the patients and also a sense of trust had been developed.

It is the conclusion of the writer that further care should be implemented as the patient leaves the hospital and that nursing should assume continuity of patient care in the community. The nurse, functioning as a member of the health team, can insure that problems are dealt with as they arise, decrease anxiety, and create a therapeutic environment for the family.

B I B L I O G R A P H Y

SELECTED BIBLIOGRAPHY

A. BOOKS

- Cameron, Norman. The Psychology of Behavior Disorder, a Biosocial Interpretation. (New York: Houghton Mifflin Company, 1947). pp. 55.
- Eysenck, H. J. The Handbook of Abnormal Psychology. (New York: Basic Books, 1961). pp. 329.
- Garrett, Henry E. Elementary Statistics. (New York: David McKay Company, Inc., 1962), pp. 178.
- Horney, Karen. Neurosis and Human Growth. (New York: W. W. Norton and Company, 1950). pp. 525.
- Kahn, Robert L. and Charles F. Canelle. The Dynamics of Interviewing. (New York: John Wiley and Sons, Inc., 1963). pp. 351.
- Sullivan, Harry Stack. The Interpersonal Theory of Psychiatry. (New York: W. W. Norton and Company, Inc., 1953). pp. 351.
- Thorndike, Robert L. and Elizabeth Hagen. Measurement and Evaluation in Psychology and Education. (New York: John Wiley and Sons, Inc., 1963). pp. 570.
- White, Robert. The Abnormal Personality. (New York: Ronald Press Company, 1948). pp. 329.

B. PERIODICALS

- Bitterman, M. E. and W. H. Holtzman. "Conditioning and Extension of the Galvanic Skin Response as a Function of Anxiety," J. abnorm. soc. Psychol., 47 (1952), pp. 615-623.
- Brackbill, G., and K. B. Little. "MMPI Correlates of the Taylor Scale of MAS," J. consult. Psychol., 18:6 (1954), pp. 433-436.
- Buss, A. H., M. Wiener, A. Durkee, and M. Baer. "The Measurement of Anxiety in Clinical Situations," J. consult. Psychol., 48 (1955), pp. 125-129.
- Buss, A. H. "Two Anxiety Factors in Psychiatric Patient," J. abnorm. soc. Psychol., 65:42 (1962), pp. 426-427.

- Calvin, A. D., F. J. McGuigan, I. Tyrell, and M. Soyare. "Manifest Anxiety and the Palmar Sweat Index," J. consult. Psychol., 20 (1956), p. 356.
- Eriksen, Charles W., and Anthony David. "Meaning and Validity of the Taylor and MMPI Scales," J. abnorm. soc. Psychol., 50 (1955), p. 135.
- Gallagher, J. J. "Manifest Anxiety Changes Concomitant with Client Centered Therapy," J. consult. Psychol., 17 (1953), pp. 443-446.
- Gilberstadt, Harold and Gene Davenport. "Some Relationships between GSR Conditioning and Judgments," J. abnorm. soc. Psychol., 60:3 (1960), p. 440.
- Goodstein, Leonard D. "Interrelationship Between Anxiety and Hostility," J. consult. Psychol., 18 (1954), pp. 35-39.
- Goodstein, Leonard D., and Leo Goldberger. "Manifest Anxiety and Rorschach Performance in a Chronic Patient Population," J. consult. Psychol., 19 (1955), pp. 339-344.
- Hathaway, S. R. and M. D. McKinley. Minnesota Multiphasic Personality Inventory, (New York: The Psychological Corporation, 1943).
- Heineman, Charles E. "A Forced Choice Form of the Taylor Anxiety Scale," J. consult. Psychol., 17 (1953), p. 447.
- Hodgins, D. R. "Clinical Manifestations of Anxiety," McGill Medical Journal (1951), pp. 12-15.
- Holtzman, W. H., A. D. Calvin, and M. E. Bitterman. "New Evidence for the Validity of Taylor Manifest Anxiety Scale," J. abnorm. soc. Psychol., 47 (1952), pp. 853-854.
- Hoyt, Donald P. and Thomas M. Magoon. "A Validation Study of the Taylor Manifest Anxiety Scale," J. clin. Psychol., 100 (1954), p. 357.
- Kendall, Edward. "The Validity of Taylor Manifest Anxiety Scale," J. consult. Psychol., 18:6 (1954) pp. 429-432.
- Kerrick, Jean S. "Some Correlates of the Taylor Manifest Anxiety Scale," J. abnorm. soc. Psychol. (1955), p. 75.
- Lauterback, Carl G. "The Taylor A Scale and Clinical Measures of Anxiety," J. consult. Psychol. (1958), p. 314.
- Lebo, Dell and William S. Applegate. "The MAS and the DKQ," J. gen. Psychol., 61 (1959), pp. 275-279.
- Matarazzo, Joseph D. "MMPI Validity Scores as a Function of Increasing Levels of Anxiety," J. consult. Psychol. (1955), p. 213.

- Matarazzo, Joseph D., Samule B. Guze, and Ruth G. Matarazzo. "An Approach to the Validity of the Taylor Anxiety Scale: Scores of Medical and Psychiatric Patients," J. abnorm. soc. Psychol., 50 (1955), pp. 276-280.
- McGuigan, F. and Elizabeth Richardson. "Manifest Anxiety, Palmar Perspiration Index, and Stylus Maze Learning," Amer. J. Psychol., 72 (1959), pp. 434-438.
- O'Conner, James. "Some Patterns of Manifest Anxiety," J. clin. Psychol. (1956), p. 160.
- Olskansky, Simon, Samuel Brao, and Miriam Ekdall. "Survey of Employment Experiences of Patients Discharged from Three State Mental Hospitals During Period of 1951-1953," Mental Hygiene (New York, 1960), p. 428.
- Rosen, Albert. "Test-Retest Stability of MMPI Scales for a Psychiatric Population," J. consult. Psychol., 17:3 (1953), p. 217.
- Rubin, Harold, Leo Schneiderman, William C. Hallow, and Robert J. Jones. "Manifest Anxiety in Psychotics," J. clin. Psychol. (1956), p. 94.
- Rubin, Harold and Alan H. Townsend. "The Taylor Manifest Anxiety Scale in Differential Diagnosis," J. clin. Psychol., 14 (1958), p. 81
- Signman, Aron W. "Cognitive Affective and Psychopathological Correlates of the Taylor Manifest Anxiety Scale," J. consult. Psychol. (1956), p. 176.
- Taylor, Janet A. "A Personality Scale of Manifest Anxiety," J. abnorm. soc. Psychol., 48:2 (1953), pp. 284-290.
- Taylor, Janet A. "The Relationship of Anxiety to the Conditioned Eyelid Response," J. exp. Psychol. (1951), pp. 91-102.
- Taylor, Janet A. and K. W. Spence. "Conditioning Level in the Behavior Disorder," J. abnorm. soc. Psychol., 49 (1954), pp. 497-502.
- Welch, George S. "An Anxiety Index and an internalizational Ratio for the MMPI," J. consult. Psychol., 16 (1952), pp. 65-72.
- Winter, William D., Antonio J. Ferreira, and Robert Ransom. "Two Measures of Anxiety, A Validation," J. consult. Psychol., 27 (1963), pp. 520-523.

APPENDIX A

CORRESPONDENCE

185 West 20th South
Bountiful, Utah
May 3, 1963

Mrs. Janet Taylor Spence
Veterans Hospital
Iowa City, Iowa

Dear Mrs. Spence:

I am at present a graduate student at the University of Utah in the College of Nursing majoring in Psychiatric Nursing and am formulating a Masters Thesis based on a study of anxiety. The hypothesis I have chosen is: The anxiety level of psychiatric patients will show a significant increase at the time of discharge over that level experienced during hospitalization.

In surveying the literature, I have found the Taylor Manifest Anxiety Scale to be most nearly suited for this type of study. I would like permission to use the scale for my thesis and also to have a copy of the present tool which you have developed.

I am planning to give the test half after ten days of hospitalization and half at the time of discharge. Would you please advise me if the tool has been used in this manner.

Thank you for your time and consideration.

Sincerely,

Carol Willhite

C O P Y

May 9, 1963

Mrs. Carol Willhite
185 West 20th South
Bountiful, Utah

Dear Mrs. Willhite:

Enclosed is material on the MAS from which you should be able to prepare copies of the scale to use in your thesis.

I am quite doubtful about your proposal to use only half of the items at each testing time. While the split-half reliability of the scale is satisfactory, I see no good reason to load your final scores with both split-half and test-retest unreliability. I suspect that you considered this procedure because of a fear of practice effects. Let me point out, however, that using only half of the items would circumvent specific effects, those associated with being given the identical items, but not general effects. Further, with college students, we have found no systematic trends in score level with retesting (see my 1953 J. abnorm. soc. Psychol. article). Assuming that psychiatric patients are no different, this suggests that you could reasonably assume that any differences you found were the results of changes taking place during hospitalization and not an artifact of taking the same test twice.

Sincerely yours,

JANET T. SPENCE, Ph.D.
Research Psychologist

APPENDIX B

BIOGRAPHICAL INVENTORY

Do not write or mark on this booklet in any way. Your answers to the statements in this inventory are to be recorded only on the separate answer sheet.

Print your name, the date, the date of your birth, age, sex, etc., in the blanks provided on the Answer Sheet. Use only the special pencil provided for this test. After you have completed filling in the blanks, finish reading these instructions.

The statements in this booklet represent experiences, ways of doing things, or beliefs or preferences that are true of some people but are not true of others. Read each statement and decide whether or not it is true with respect to yourself. If it is true or mostly true, blacken the answer space in column T on the Answer Sheet in the row numbered the same as the statement you are answering. If the statement is not usually true or is not true at all, blacken the space in column F in the numbered row. Answer the statement as carefully and honestly as you can. There are no correct or wrong answers. We are interested in the way you work and in the things you believe.

Remember: Mark the answer space in column T if the statement is true or mostly true; mark the answer space in column F if the statement is false or mostly false. Be sure the space you blacken is in the row numbered the same as the item you are answering. Mark each item as you come to it; be sure to mark one, and only one, answer space for each item. Here is an example:

| | T | F |
|-------------------------------|---|---|
| I would like to be an artist. | | |

If you would like to be an artist, that is, if the statement is true as far as you are concerned, you would mark the answer space under T. If the statement is false, you would mark the space under F.

If you have any questions, please ask them now.

DO NOT MARK ON THIS BOOKLET

1. I do not tire quickly.
2. Once in a while I think of things too bad to talk about.
3. I am troubled by attacks of nausea.
4. At times I feel like smashing things.
5. I believe I am no more nervous than others.
6. I do not always tell the truth.
7. I have very few headaches.
8. At times I feel like swearing.
9. I work under a great deal of tension.
10. I get angry sometimes.
11. I cannot keep my mind on one thing.
12. Criticism or scolding hurts me terribly.
13. I worry over money and business.
14. I do not read every editorial in the newspaper every day.
15. I frequently notice my hand shakes when I try to do something.
16. I think a great many people exaggerate their misfortunes in order to gain the sympathy and help of others.
17. I blush no more than others.
18. Once in a while I put off until tomorrow what I ought to do today.
19. I have diarrhea once a month or more.
20. I have very few quarrels with members of my family.
21. I worry quite a bit over possible misfortunes.
22. Sometimes when I am not feeling well I am cross.
23. I practically never blush.
24. Most people will use somewhat unfair means to gain profit or an advantage rather than to lose it.

25. I am often afraid I am going to blush.
26. I am a high strung person.
27. My table manners are not quite as good at home as when I am out in company.
28. I have nightmares every few night.
29. I wish I could be as happy as others seem to be.
30. Often I can't understand why I have been cross and grouchy.
31. My hands and feet are usually warm enough.
32. I am very seldom troubled by constipation.
33. At times my thoughts have raced ahead faster than I can speak them.
34. I sweat very easily even on cool days.
35. I am easily embarrassed.
36. If I could get into a movie without paying and be sure I would not be seen I would do it.
37. I am more sensitive than most people.
38. I hardly ever notice my heart pounding and I am seldom short of breath.
39. It takes a lot of argument to convince most people of the truth.
40. Sometimes when embarrassed I break out in a sweat which annoys me greatly.
41. I am happy most of the time.
42. I would rather win than lose a game.
43. I feel hungry most of the time.
44. I certainly feel useless at times.
45. It makes me impatient to have people ask my advice or otherwise interrupt me when I am working on something important.
46. I have a great deal of stomach trouble.
47. I dream frequently about things that are best kept to myself.

48. I have never felt better in my life than I do now.
49. I am usually calm and not easily upset.
50. I like to know some important people because it makes me feel important.
51. I have periods which I lost sleep over worry.
52. I shrink from facing a crisis or difficulty.
53. What others think of me does not bother me.
54. I frequently find myself worrying about something.
55. It makes me uncomfortable to put on a stunt at a party even when others are doing the same sort of things.
56. I have very few fears compared to my friends.
57. I cry easily.
58. I find it hard to make talk when I meet new people.
59. I feel anxiety about something or someone all of the time.
60. I am against giving money to beggars.
61. I do not like everyone I know.
62. I am unusually self conscious.
63. Sometimes I become so excited I find it hard to get to sleep.
64. I gossip a little at times.
65. My sleep is fitful and disturbed.
66. I get mad easily and get over it soon.
67. I am entirely self competent.
68. Sometimes at elections I vote for men about whom I know very little.
69. It makes me nervous when I have to wait.
70. When in a group of people I have trouble thinking of the right things to talk about.
71. I sometimes feel I am about to go to pieces.

72. At times I am all full of energy.
73. I have periods of such great restlessness that I cannot sit long in a chair.
74. Once in a while I laugh at a dirty joke.
75. I am inclined to take things hard.
76. I have periods in which I feel unusually cheerful without any special reason.
77. I have been afraid of things or people that I know could not hurt me.
78. I think nearly anyone would tell a lie to keep out of trouble.
79. I am certainly lacking in self confidence.
80. At times I think I'm no good at all.
81. At periods my mind seems to work more slowly than usual.
82. Life is a strain for me much of the time.
83. I find it so hard to keep my mind on a task or job.
84. People often disappoint me.
85. I have often met people who were supposed to be experts who were no better than I.
86. I have sometimes felt that difficulties were piling up so high I could not overcome them.
87. I often think, "I wish I were a child again."
88. I must admit that I have at times been worried beyond reason over something that really did not matter.
89. I worry over money and business.
90. At times I feel like swearing.

APPENDIX C

RAW DATA

| Scales | | | | | | | |
|-------------|------|---------|------|---------|------|---------|--|
| Patient No. | A | | L | | K | | |
| | Test | Re-test | Test | Re-test | Test | Re-test | |
| 1 | 39 | 38 | 1 | 1 | 9 | 7 | |
| 2 | 39 | 41 | 5 | 5 | 8 | 9 | |
| 3 | 34 | 28 | 3 | 7 | 5 | 6 | |
| 4 | 19 | 14 | 4 | 6 | 11 | 12 | |
| 5 | 29 | 27 | 4 | 9 | 11 | 12 | |
| 6 | 20 | 21 | 10 | 5 | 13 | 15 | |
| 7 | 32 | 28 | 6 | 5 | 15 | 13 | |
| 8 | 26 | 30 | 2 | 0 | 9 | 5 | |
| 9 | 12 | 6 | 9 | 11 | 13 | 15 | |
| 10 | 41 | 38 | 0 | 0 | 6 | 5 | |
| 11 | 19 | 10 | 6 | 7 | 11 | 12 | |
| 12 | 25 | 26 | 3 | 1 | 8 | 9 | |
| 13 | 32 | 36 | 5 | 4 | 13 | 11 | |
| 14 | 24 | 24 | 9 | 7 | 15 | 12 | |
| 15 | 36 | 36 | 6 | 4 | 6 | 8 | |
| 16 | 27 | 30 | 5 | 6 | 11 | 11 | |
| 17 | 35 | 43 | 1 | 0 | 8 | 4 | |
| 18 | 31 | 13 | 6 | 5 | 10 | 13 | |
| 19 | 35 | 33 | 1 | 1 | 10 | 11 | |
| 20 | 7 | 8 | 5 | 5 | 13 | 12 | |
| 21 | 7 | 12 | 8 | 6 | 12 | 9 | |
| 22 | 31 | 35 | 5 | 6 | 7 | 8 | |
| 23 | 25 | 39 | 6 | 7 | 8 | 8 | |
| 24 | 31 | 32 | 6 | 4 | 14 | 13 | |
| 25 | 2 | 4 | 15 | 14 | 19 | 19 | |
| 26 | 15 | 7 | 6 | 12 | 17 | 22 | |
| 27 | 12 | 12 | 6 | 9 | 10 | 12 | |
| 28 | 8 | 8 | 6 | 5 | 15 | 14 | |
| 29 | 32 | 25 | 1 | 6 | 5 | 8 | |
| 30 | 21 | 17 | 3 | 2 | 13 | 13 | |