

EARLY IDENTIFICATION OF EMOTIONALLY DISTURBED
CHILDREN

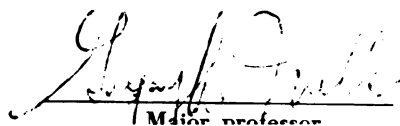
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Wayne R. Maes
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ABSTRACT

EARLY IDENTIFICATION OF EMOTIONALLY DISTURBED CHILDREN

by Wayne R. Maes

Body of Abstract

The purpose of this research was to validate the instruments and statistical analyses used by Bower, Tashnovian and Larson in their study of techniques for identifying emotionally disturbed children in grades four, five and six. They found that the following characteristics differentiated between a group of normal pupils and a group of pupils identified by clinicians as emotionally disturbed: reading and arithmetic achievement, intelligence, teacher ratings of pupil physical and behavior characteristics and perception of a pupil by his peers. Bower assigned weights to each of the above characteristics based on the size of the critical ratios for the mean scores of the emotionally disturbed and normal children.

In the present study of fourth, fifth, and sixth grade children, data were collected on 658 children, 612 normal children and 44 whom school and child guidance clinic psychologists identified as being sufficiently emotionally disturbed to require psychotherapy. The two groups were compared on the following variables: reading as measured by the California Achievement Tests, arithmetic as measured by the California Achievement Tests, intelligence as measured by the California Short-Form

Test of Mental Maturity, pupil behavior and physical status as measured by a teacher rating scale developed by Bower et al, perception by peers as measured by "A Class Play" developed by Bower et al, and the Projective Self Concept Scale developed for the purposes of this study.

The data were analyzed in the following steps:

1. Bower's instrumentation, scoring and weighting procedures were replicated and a point biserial correlation of .27 was obtained between total weighted scores on the six independent variables (reading achievement, arithmetic achievement, intelligence, peer perception, teacher ratings of pupil physical and behavior characteristics) and the criterion variable (emotional disturbance). This is a significant (.01 level of confidence) but low level correlation (accounting for only seven percent of the variance) and the time involved in collecting data on the six variables is so extensive as to render them of questionable value in identifying emotionally disturbed children in the elementary school.
2. A multiple correlation of .40 was obtained between the six independent variables listed in step one and the criterion variable for one half of the sample of emotionally disturbed (N = 22) and normal children (N = 306) randomly selected from the total sample. The ranking of the independent variables in decreasing order of their contribution to predicting the criterion variable is as

follows: 1) teacher rating of behavior characteristics, 2) arithmetic grade placement, 3) intelligence, 4) peer perception, 5) teacher rating of pupil physical status, and 6) reading grade placement.

Variables one, two and three predicted the criterion variable as adequately as did all six variables combined. The weights obtained on variables one, two, and three in the multiple regression analysis were used in deriving scores for the remaining two samples (22 emotionally disturbed and 306 normal children) on these three independent variables. A point biserial correlation of .21 was obtained between the weighted scores of pupils on the three independent variables and the criterion variable. This correlation was significantly greater than zero at the .01 level of confidence but was a low level correlation (accounting for only four percent of the variance) and offers little promise for use in identifying emotionally disturbed children in the elementary school.

3. Using the three independent variables (after having made certain revisions in the teacher rating) which were most predictive in step two and the Projective Self Concept Scale developed specifically for use in this study, a multiple correlation of .41 was derived for one half of the sample of emotionally disturbed ($N = 22$) and normal children ($N = 306$) drawn randomly from the total sample. The two variables which accounted for essential-

ly all of the prediction of the dependent variable by the independent variables were teacher rating of behavior characteristics and intelligence.

The B weights derived for the revised teacher rating and intelligence were used to derive weighted scores on these two variables for the remainder of the sample (22 emotionally disturbed and 306 normal children). These scores were then correlated with the criterion variable. The obtained point biserial correlation of .32 was significantly greater than zero at the .01 level of confidence. The data on the teacher rating scale and intelligence test scores are readily obtainable in the school setting and the correlation is sufficiently high to afford some degree of prediction. For example, 20% of the normal children received a weighted score higher than .1000 on the two variables combined while 68% of the emotionally disturbed received a score of higher than .1000. Such a cutoff score would be of value in a school setting as a basis for referring children in need of psychotherapy.

SUMMARY

In this research study reading and arithmetic achievement test scores, teacher ratings of pupil physical status, and perception of a pupil by his peers did not differentiate between emotionally disturbed and normal children. Bower, Tashnovian and Larson had previously observed that each of these did differentiate

between emotionally disturbed and normal children. The Projective Self Concept Scale developed specifically for the purposes of this study also failed to differentiate between the criterion groups. Teacher ratings of pupil behavior and intelligence test scores were predictive and are recommended for use in identifying those children who might be in need of individual psychotherapy.

EARLY IDENTIFICATION
OF
EMOTIONALLY DISTURBED CHILDREN

By
Wayne R. Maes

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This study would not have been possible were it not for the cooperation of the Lansing Public Schools who willingly contributed pupil, teacher and principal time. Finally, a debt of gratitude is owed the pupils who submitted themselves, usually willingly, to testing and observation. It is hoped that this study will, in some small measure, contribute to the lessening of the pain of the emotionally disturbed child.

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1. *Journal of Management Studies*, 1997, 34, 1, 1-14.

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Introduction To The Study

Purpose

Teachers are continually observing pupil behavior and are called upon to make judgments based upon these observations. One of these judgments which they are called upon to make is whether a pupil's behavior is evidence of emotional problems of such severity that referral should be made to an appropriate professional service. The purpose of the present study is to investigate techniques which are appropriate for use by teachers in identifying emotionally disturbed children in the elementary school.

This study will investigate sources of information which are designed to increase the amount and breadth of significant information available to the teacher upon which he or she can base judgments concerning the mental health of pupils. The sources of information studied by Bower, Tashnovian, and Larson (8) will be investigated with the following modifications:

1. A different statistical model will be used in analyzing data collected in the present study on the following five aspects of pupil behavior.

- a) Intelligence
- b) Achievement
- c) Self concept
- d) Peer rating

e) Teacher rating of physical and behavior status

2. A different measure of pupil self concept will be substituted for the one which Bower and his co-researchers found to produce minimal results.
3. Modification will be made in the instruments which Bower used to obtain teacher and peer ratings of pupils.

The Need For The Study

Numerous studies have been conducted on a variety of populations in an effort to determine the number of emotionally disturbed children within them. There is considerable disagreement among the studies as to the percent of children who are emotionally disturbed. Contributing to this disagreement are such factors as differences between the populations studied, use of different techniques in identifying the emotionally disturbed, and selection of different points along the emotional disturbance-mental health continuum to establish the line between the emotionally disturbed and the mentally healthy. However, all of the studies agree that the problem is one of considerable proportions.

Rogers (47) reported that 12 percent of the group of children which he studied showed evidence of poor mental health and another 30 percent showed a moderate degree of poor adjustment. Ullmann (56) found that eight percent of the children he studied had severe maladjustments. In an earlier study Mangus (33) sur-

vayed 1500 school children and found 19 percent to be poorly adjusted. In her study in the Battle Creek Public Schools, Andrew (2) also found that 19 percent of the children she studied showed signs of poor adjustment while two percent were severely maladjusted. Martens (34) reports that 2.5 percent of the children in the five-to-nineteen-year age range should have special educational attention because of emotional problems.

We have a national commitment to foster the fullest possible functioning of the human potential of each individual in our society. By definition the emotionally disturbed are not "fully-functioning." Our values commit us to attempt to gain further understanding of the nature of emotional disturbance and the nature of therapeutic experiences which can free the emotionally disturbed to a fuller realization of individual potential. Even if the number of emotionally disturbed in our population were infinitesimal we would be committed to the task of understanding and service. But the magnitude of the problem in sheer numbers compounds the individual and social tragedy and makes amelioration more insistent.

Review Of The Literature

Studies Using Multiple Criteria

Numerous studies have been conducted in an effort to determine the characteristics of pupils who are poorly adjusted. One of the earliest such studies was that conducted by Olson (43) in the Minneapolis Public Schools in 1930. Experienced raters rated 1,537 first grade children on the Behavior Problem Record (Haggerty-Olson-Wickman). The raters indicated the frequency with which 15 types of problem behavior such as cheating, lying, bullying, speech problems, etc. occurred in each pupil. Those pupils rated as most frequently demonstrating problem behavior tended to be older for their grade and poorer in achievement than those rated as infrequently demonstrating problem behavior.

The children described in this study as having problem behavior can in no sense be equated with a group of pupils identified by psychologists as emotionally disturbed, but undoubtedly a number of those demonstrating severe behavior problems would be so classified.

In 1942, Rogers (46) set out to determine the number of Columbus, Ohio school pupils demonstrating poor emotional adjustment. He selected several criteria which he hypothesized would be indicative of poor mental

health. The criteria which he utilized were: chronological age as it related to grade placement, mental age as it related to reading achievement, reading achievement in comparison to the median achievement of the class, school failures, truancy, scores on behavior rating scales, the California Test of Personality, a "Guess Who Game", and the ratings of observers.

Children who deviated significantly from the average on at least four of the indices were the subjects of further clinical study. This further study led Rogers to conclude that his method would screen those sufficiently maladjusted to make them future candidates for jails, state hospitals, divorce courts, and relief agencies. Rogers stated that any of the indices taken separately might well be fallible but, taken in combination, they provided a useful index of a pupil's mental health.

Rogers found that 12 percent of the Columbus, Ohio school children showed poor mental health and another 30 percent showed a moderate degree of poor adjustment. Three times as many boys as girls were identified as having adjustment problems and the lowest incidence of mental health problems occurred among the higher socioeconomic levels.

In 1952 Ullmann (56) conducted a study for the United States Public Health Service in which he utilized multiple criteria in identifying emotionally disturbed

children in the school setting. Ullmann was particularly interested in the efficacy of teacher judgment in identifying children with mental health problems. An earlier study by Wickman (59) had shown teachers to be poor judges of pupil mental health, especially when it came to identifying those children who were emotionally disturbed but who demonstrated quiet, withdrawn behavior.

Ullmann collected the following information on each of the 810 ninth grade pupils whom he studied: ratings by teachers of adjustment level, ratings by teachers on a forced choice test of pupil adjustment, the self score on the California Test of Personality, the social score on the Science Research Associates Youth Inventory, and sociometric status.

Ullmann corroborated Wickman's earlier findings that teachers were better able to identify those emotionally disturbed children who acted their problems out. He also found that the teachers were better able to judge the mental health status of pupils when they themselves were free from external pressure and when the amount of information available to them was increased.

In a later article Ullmann (57) reported that an adequate assessment of pupil mental health requires pupil self-assessment and teacher ratings. For the purposes of this study Ullmann utilized being selected as an honor student as indicative of adjustment and

utilized withdrawal prior to graduation as indicative of maladjustment. Satterlee (50) found a low correlation to exist between self-concept and group status and suggested that both are necessary in understanding personality. The studies by Satterlee and Ullmann point to the need for considering the use of peer, teacher, and self ratings in describing behavior.

Bower's Study

The study of greatest consequence for the purposes of this inquiry is that conducted by Bower, Tashnovian, and Larson and entitled "A Process for Early Identification of Emotionally Disturbed Children" (8). Bower et al selected the variables which they utilized to differentiate between emotionally disturbed and normal children from prior research such as that cited in the preceding section. The Bower study will be outlined and each variable which was measured will be discussed in light of prior research. At the conclusion of the discussion of each variable the results derived by Bower will be cited.

Bower and his co-authors utilized the multiple criteria approach in studying a group of 192 fourth, fifth, and sixth graders identified by psychologists, psychiatrists, or clinical teams as being emotionally disturbed. This group was compared with 4,871 children, none of whom had been identified as being emotionally disturbed. The questions which their research was designed to answer are as follows:

1. Can a teacher-centered procedure for early identification of emotionally disturbed children be developed?
2. Can information ordinarily obtained by teachers in their routine interaction with their classes

be utilized by this procedure?

3. What affect would utilization of the teacher-centered procedure have on a teacher's use of the results?

4. To what extent would participation in the procedure affect the teacher's perception of a child's behavior, the type and quality of referrals to the clinical staff, and her relationship to administrative and supervisory personnel?

5. To what extent are teachers and mental health experts in agreement regarding what child is emotionally disturbed?

6. How many emotionally disturbed children are there in a class of average size?

7. What relationships, if any, are there between factors such as intelligence, achievement, socioeconomic status, social status in the classroom, and emotional disturbance? (8,pl3)

Of particular interest for the purposes of this study are questions 1,2,5,6,7.

In an effort to gain answers to the above questions the authors studied pupils residing in 60 school districts which had well developed psychological services. Prior to identifying the emotionally disturbed pupils in these school districts, meetings were held with psychologists, guidance counselors, and others responsible for the identification of disturbed pupils. The mental health specialists attending these meetings were informed of the nature of the study and were asked to select, from students they had already interviewed, those who were emotionally disturbed according to the following criteria suggested by Bower.

In the discussions of the criteria to be used in identifying the emotionally disturbed children and the definition of an emotionally disturbed child, it was suggested that the clinicians differentiate wherever possible those children who were situationally or sociologically maladjusted

from those with psychological or emotional difficulties. For the purposes of this study it was suggested that the clinically designated child be one whose primary problem was emotional. The crux of the differential diagnosis seemed to be in determining whether or not the child's perception of himself, his ego structure, or his personality integration had been disturbed. Jahoda's definition of mental health was recommended for use by the clinicians. In the psychologically maladjusted child such internal or self-functioning relationships would be injured, with the possible result that the child's perception of himself and his world would be distorted. It was also suggested that those whose ego or self development had never prospered and who, because of basic conflicts or other psychological difficulties, were unable to understand and to meet the demands of society should be considered as emotionally disturbed. (8,p15)

[This position is broader than that taken by Bower in a later publication (7) when he described emotional disturbance as being evidenced by a limitation of the individual's degrees of personal freedom.] There was no indication of the instruments to be used in such an identification nor any mention of further attempts beyond those above to insure that each specialist look for the same type of child.

The teachers in whose classes the emotionally disturbed children were enrolled were contacted and asked if they wished to participate in a study of emotionally disturbed children. The teachers were not told why they had been selected and in no case were the names of the pupils previously identified as emotionally disturbed associated with the selection of a particular classroom. Only those teachers who volunteered to participate were involved in the study. (The authors do not indicate

the ratio of those invited to participate to those who consented.)

The researchers in this particular study wished to utilize information supplied them by teachers to discriminate between emotionally disturbed and normal children. The information to be collected by the teachers was governed by the following concerns:

1. The information should be suitable for use with large numbers of school children.
2. The information should be so defined as to have comparable meaning to all teachers.
3. The method of the study should not involve any direct psychological or psychiatric assistance in the screening of children.
4. The collection of information and subsequent use of the results by teachers should not require an excessive amount of time and work.
5. The information was to be such that it could be obtained by teachers while they were doing their regular classroom work.
6. The information was to be of such nature that in collecting it the teacher would be helped to identify those children who were becoming emotional problems; that is, children who were more vulnerable to emotional disturbance than other children in the class.
7. The information would pertain to many different behaviors of the child and those in various environments. (8,p17)

The following information was collected on all of the normal and emotionally disturbed children by each teacher participating in the research project:

1. Age-grade relationship.
2. The number of absences in a four-month school period.
3. Socioeconomic status of the family as indicated by the father's occupation.
4. Reading and arithmetic achievement test scores.
5. A score on a group intelligence test.

6. The results on "Thinking About Yourself", a self concept inventory distributed by the California State Department of Education.
7. Each pupil's standing on a sociometric technique entitled "A Class Play".
8. The teacher's rating of the pupil's physical and emotional adjustment status.

Each of these variables had been previously explored by other researchers in studying emotionally disturbed children and each had been reported to differentiate emotionally disturbed from normal children. A discussion of previous research in each of these areas and results obtained by Bower follows.

Age-grade Relationship

Studies by Olson (43) and Bedoian (4) demonstrated a relationship between the age-grade ratio and adjustment. Olson found that problem behavior was more frequent among the pupils who were older for their grade and Bedoian indicated that the older pupils were less healthy mentally as measured on a self inventory.

Bower found that although the emotionally disturbed children tended to be older for their grade in grades four, five, and six than were the other pupils, this difference was not statistically significant.

Rate of Absence

Mullen (39) studied certain factors related to school attendance and found that poor school attenders showed less achievement motivation and also had less favorable living conditions than those of the perfect school attenders. The poor school attender "is rated poorest by his teachers in the personality traits related to success in school work." To the extent that such personality traits are related to mental health, absences in the study by Mullen are an index of mental health.

The study of delinquents by Sheldon and Eleanor Glueck (18) demonstrates a greater frequency of truancy amongst delinquents than among a control group of non-delinquents. As Kvaraceus (29) points out, some delinquents are emotionally disturbed and some are not. The Gluecks' findings cannot be applied directly to the emotionally disturbed but suggest that the incidence of truancy merits further study to determine its usefulness in identifying emotionally disturbed children.

Because of difficulties in differentiating truancy from absence, Bower decided to use total absences rather than number of trancies as a basis for comparing the emotionally disturbed with the normal children.

Since truancy is difficult to define and appraise in younger children and often does not begin to be consistent until the child is in adolescence, and since there are other ways children can avoid attendance including complaints, illness, or malingering, total absence, instead of unexcused absence was utilized as perhaps a more productive measure of maladjustment. (8,p46)

In each of the three grades studied by Bower the emotionally disturbed children were more frequently absent than were the normal children; however, the differences were not statistically significant.

Socioeconomic Status

Several studies have indicated a relationship between socioeconomic status and adjustment. Maddy (32) found that children of professional fathers had more emotional stability and fewer worries than children from semiskilled families. Leacock (30) demonstrated that the incidence of mental illness increases as one goes down the socioeconomic scale. These findings are in agreement with those of Rogers (47) who found that the incidence of emotional disturbance was lowest in the higher socioeconomic levels.

The occupation of the father was used as an index of socioeconomic status for the purposes of the study by Bower. In 1937 Edwards developed 10-point scale for classifying occupations according to social classes which was used by the Bureau of the Census. This scale, as revised in 1950 for use in the census of that year, was used by Bower in his study. In commenting upon the use of occupation to designate the socioeconomic level, Bower had this to say:

Several real advantages are associated with the use of occupational indices as a measure of socioeconomic status. The first is that the information is usually available in school records. Secondly,

the rating or ranking of occupations can be done objectively. Other advantages are associated with time and utility. For example, indices which depend on securing data about income or level of education may be inaccurate or incomplete since some persons are sensitive about revealing this type of information.... Occupational indices also have the advantage of extensive research studies in which this kind of socioeconomic classification has been used. Occupations of fathers have also been found to be about the best single index of social class. (8,p51)

A comparison of the distribution of occupations of the fathers of the emotionally disturbed pupils with that of the normal group in Bower's study revealed no significant differences.

Reading and Arithmetic Achievement

Numerous studies have been conducted which have explored the relationship between school achievement and behavior problems, poor adjustment, or delinquency. Particular attention has been paid to reading and arithmetic skills as they relate to emotional adjustment. Reading and arithmetic are complex skills which involve the child emotionally as well as physically and intellectually so that one would anticipate that emotional adjustment and facility in reading and arithmetic would be related. Numerous studies support this expectation.

A study by the New York Youth Commission (45) revealed that the two best predictors of juvenile delinquency were arithmetic failure and being overage for grade. Jastak (27) found that neurotic children tended to do significantly more poorly in arithmetic than in

reading.

Evidence is also available attesting to the concurrence of emotional problems and reading deficiency. Grams (19) studied 151 retarded readers and 103 advanced readers in the first six grades of school and found that the retarded readers received lower scores on a test of social and emotional adjustment. They showed signs of greater inner conflict and were less often chosen as companions by their peers. The marked relationship which can exist between reading problems and emotions is dramatically demonstrated in a study by Axline (3). After involving poor readers in the second grade in a therapy group for three and one-half months she found gains of up to 16 months in reading, with an average gain of five months.

The relationship between general achievement and self-evaluation is pointed out in a study by Blodgett (5). She found that girls with low achievement also had less self confidence and increased feelings of inferiority than girls who ranked high in achievement. The Gluecks' (18) findings were similar in that they found the delinquent boys to be poorer in achievement than the non-delinquents. Olson (43) found that there was an inverse relationship between incidence of problem behavior and achievement in a group of 1,537 first grade pupils.

Bower's results corroborate those of previous studies in demonstrating the relationship between emo-

tional problems and achievement in reading and arithmetic. He found that the reading and arithmetic test scores for the emotionally disturbed children were significantly below (at the .01 level of confidence) those of the pupils in the normal group. The difference between the emotionally disturbed and the normal group was significantly greater on arithmetic than on reading (.01 level).

Intelligence

The concept of the human organism functioning as a whole is commonly accepted in the study of human behavior. This concept suggests that most human activities, and especially the more complex ones, involve physical, intellectual, and emotional factors which can only be separated for the purposes of study but which do, in fact, interact in a complex, dynamic fashion in behavior. That the complex behaviors measured by intelligence tests include more than intellectual factors is suggested by Wechsler (58) when he refers to certain items in intelligence tests in the following manner:

They cover such items as the subject's interest in doing the task set, his persistence in attacking them and his zest and desire to succeed,...items which might more familiarly be described as temperamental or personality factors, but which nevertheless must be recognized as important in all actual measures of intelligence. (58,p11)

The interaction between emotional health and intelligence is treated at length by Hutt and Gibby (25) in their discussion of pseudo mental retardation. They described several cases of children who consistently

received intelligence test scores well within the mentally handicapped range. After receiving intensive psychotherapy these children obtained test scores placing them in the above average range of intelligence.

The effect of anxiety upon test scores is explored extensively by Sarason (49). He presents evidence demonstrating that anxiety does interfere appreciably with test performance. However, the effect of anxiety is not stable and the highly anxious individual reveals greater variability in test performance. Further evidence that anxiety has a differential effect depending upon the nature of the task performed is presented by Korchin and Levine (28). They found that anxiety had a more marked effect upon performance when subjects were dealing with more difficult verbal tasks than when they were learning simple word association.

Bower (8) found that the emotionally disturbed children in his study scored significantly lower on group intelligence tests than did the other children. However, he also found that the emotionally disturbed children earned a significantly higher score on an individual intelligence test than on a group test. The individual intelligence test results were much more like those of other children in the study, leading Bower to the hypothesis that the emotionally disturbed children possessed nearly as much mental potential as did the other children but, because of emotional problems, it was not available

to them for use on the group test. This hypothesis is further substantiated by the work of Sarason (49).

Perception of Self

During the past twenty years there has been a greatly increased interest in the individual's perception of himself as necessary to supplement direct observation in understanding behavior. It has been emphasized that the individual's self concept is a key consideration in studying mental health and emotional disturbance. Gardner Murphy states that,

The vast bulk of clinical data indicates that it is not in the realm of the ordinary run of wants that the conflict is staged, but that neurotic conflict is quite literally a question of keeping a perennially beautiful self-picture before the eyes. It is because the PICTURE rather than the person is besmirched or mutilated that neurotic breakdown occurs. (40,p561)

Horney (24) also emphasizes the importance of considering self concept in any study of emotional disturbance when she identifies tensions between the self concept and the idealized self image as the central conflict in all neuroses.

There is general agreement among the self theorists that one's self concept arises out of interaction with significant people in life, and in particular with parents or parent-surrogates. Snygg and Combs (52), in discussing the individual and his self concept, note,

This concept can only be a function of the way he is treated by those who surround him. As he is loved or rejected, praised or punished, fails or is able to compete, he comes to regard himself as important or unimportant, adequate or inadequate, handsome or ugly, honest or dishonest, and even to describe himself in terms of those who surround him. (52,p83)

This approach is consonant with Sullivan's (54) characterization of the self-concept as comprising "reflected appraisals".

Rogers defines the self structure or self concept as follows:

The self-structure is an organized configuration of perceptions of the self which are admissible to awareness. It is composed of such elements as the perceptions of ones characteristics and abilities; the percepts and concepts of the self in relation to others and to the environment; the value qualities which are perceived as associated with experiences and objects; and the goals and ideals which are perceived as having positive or negative valence. It is then, the organized picture, existing in awareness either as figure or ground, of the self and self-in-relationship, together with the positive or negative values which are associated with those qualities and relationships, as they are perceived as existing in the past, present, or future. (46,p501)

Raimy (44) in an earlier definition of self concept had included certain unconscious elements, whereas Rogers' later definition, cited above, limits the self concept to "perceptions of the self which are admissible to awareness." Taylor (55) attempts to resolve this controversy by suggesting,

Materials which are unverbalizable may still be at least dimly admissible to awareness and effective in influencing perception and behavior, including the self-descriptive behavior in a personality...(or self rating) inventory. (55,p6)

That is, the description that an individual gives of himself or that he thinks with respect to himself may be the result of not only conscious but unconscious forces. Taylor's rapprochement is accepted for the purposes of the present study. The influence of unconscious elements will be further explored in the discussion of social desirability when considering some limitations of Bower's study.¹

In his definition of self concept quoted above, Rogers included the positive and negative feelings which one has about oneself, in other words, how one values oneself. The extent to which one values what one sees oneself as being can be called self-esteem. The meaning of self concept for the individual cannot be understood without an understanding of his self esteem, the worth which he attributes to what he sees in himself.

Butler and Haigh (9) considered the individual's self-esteem to be important to the study and understanding of personality. They developed a technique for the measurement of self-esteem via the discrepancy between the self concept and the ideal self. The technique consisted of a modified Q-sort in which the subjects arranged a set of cards with self-descriptive statements, first according to the manner in which they perceived themselves and then according to

¹ See page 45

how they would ideally like to be. In using this technique with adults, they found that the discrepancy between the self concept and ideal self was an index of mental health and decreased with progress in psychotherapy. Hanlon (23), using this same technique, found that the self concept-ideal self discrepancy was a good indicator of adjustment, and was also normally distributed. The validating criterion for adjustment in Hanlon's study was the California Test of Personality, Secondary Series.

Based upon such findings as those of Butler and Haigh and of Hanlon, Bower developed a paper and pencil inventory (Thinking About Yourself, Appendix I) which was designed to measure the discrepancy between the self concept and the ideal self in children. The item format in the instrument developed by Bower is as follows:

This boy hates school	Most of the time	Often	Not very often	Seldom or never
-----------------------	------------------	-------	----------------	-----------------

Are you like him?

Do you want to be like him?

Scores on each item were derived as follows:

The scoring column on the left, "most of the time," in the inventory...is given a weight of one, the next column a weight of two, the next three, and the last, "seldom or never," a weight of four. The difference, if any, between the child's response to the questions, "Are you like him?" and "Do you want to be like him?" is the child's score for the item. (8,p30)

The emotionally disturbed children were compared with the normal children on each item to determine wheth-

er the deviations on the items were significantly different between the two groups. The authors hypothesized that the emotionally disturbed children would show a greater deviation between self concept and ideal self than would the normal children.

The test consisted of 53 items. The emotionally disturbed boys showed greater discrepancy on 6 of these, as follows:

Item 6. This boy gets in trouble in school.

Item 12. This boy gets to class late.

Item 14. This boy is asked by the teacher to be in charge when the teacher leaves the room.

Item 18. This boy gets good marks in his school work.

Item 36. This boy is the leader of the class.

Item 39. This boy thinks that most of the children like him.

The emotionally disturbed girls showed a significantly greater discrepancy on the following two items:

Item 6. This girl gets in trouble in school.

Item 37. This girl is afraid of her father.

However, it is of interest that the emotionally disturbed girls showed a significantly smaller discrepancy on three of the items on the self concept inventory. These items are as follows:

Item 11. This girl plays with her dad.

Item 14. This girl is asked by the teacher to be in charge when the teacher leaves the room.

Item 45. This girl likes to do daring things.

Each of the items mentioned above was significant at the .05 level of confidence. One would expect that at least 2 of the 53 items would be significant at the .05 level of confidence by chance alone. With only 6 items out of 53 significant in the expected direction for the emotionally disturbed boys, results can certainly be considered minimal for this group. As for the girls' group, two significantly different items are no more than what would be expected by chance. Not only did the items on the "Thinking About Yourself" inventory fail to differentiate the emotionally disturbed girls from the normal girls in the expected direction but three items (one more than chance) showed significance in a direction opposite from that which was predicted by the theory of the construction of the inventory.

These results reflect upon one or all of the following:

1. The adequacy of the measuring instrument.
2. The method of scoring.
3. The theory that the discrepancy between the self concept and the ideal self will differentiate between emotionally disturbed and normal children.
4. The adequacy of the judgments of the clinicians who identified the emotionally disturbed children.

Peer Perception

Gronlund and Holmlund (20) studied sociometric scores of students in grade six and then again when the same students were in high school. They concluded that peer status in grade six was highly predictive of high school adjustment and that the status changed very little from grade six to high school. Criteria of high school adjustment were participation in clubs, sports and involvement in leadership activities along with graduation as opposed to dropping out. Further evidence of the relationship between sociometric status and adjustment was reported by Bonney (6) in an intensive study which he made of the five most accepted and the five least accepted pupils of a total group of 92 children. He found that the five least accepted children had more emotional problems both at home and at school than had the five most accepted. Northway (42) selected the 20 least accepted pupils of 80 fifth and sixth grade pupils and studied their personality characteristics. She described the least accepted group as comprising three main behavioral types:

1. Children who were quiet, retiring, socially uninterested.
2. Children who were listless and recessive.
3. Children who were noisy, rebellious, and socially ineffective.

Because of prior research findings pointing to a relationship between perception of self by peers and

adjustment, Bower made use of a modified sociometric technique in his study. In this technique, which he called "A Class Play"(Appendix II), each pupil is required to select classmates to play one of twelve roles described beforehand. Six roles were considered positive and six negative. The positive roles were those which were thought to be highly regarded by the pupils in the class and were thought to characterize mentally healthy behavior. The negative roles were thought to be undesirable to the pupils and indicative of emotional disturbance.

Bower found perception of self by peers as measured by "A Class Play" to be the most discriminative of the variables which he employed in the early identification of emotionally disturbed children. He states,

"A Class Play" is a highly valid instrument for identifying emotionally disturbed children. If only one method for class analysis were permissible, this would undoubtedly be the best single procedure. In addition, the results can add much to the teacher's understanding of the child's problem. (8,p45)

The emotionally disturbed pupils were chosen by their classmates significantly more often for four of the six negative roles and less frequently for all of the positive roles than were the normal pupils.

Teacher Ratings

Teachers are continually called upon to interpret many aspects of pupil behavior, one of which is the degree of mental health of individual pupils. Numerous studies have been conducted in an effort to appraise the extent to which teacher judgments are accurate. The earliest noteworthy attempt to determine how well teachers were able to judge pupil mental health was a study by Wickman (59) in 1928 in which he had teachers and psychological

workers rank a list of behavior problems in the order of their seriousness. He found that there was no significant correlation between the judgments of teachers and those of mental hygienists. The teachers were especially weak in interpreting withdrawn behavior as having serious implications for mental health. However, Wickman indicated in his study that different directions had been given to the teachers and that this in itself may account for some of the discrepancy between the interpretations of the two groups.

Later studies using a modified Wickman scale have yielded quite different results, either reflecting upon the accuracy of Wickman's original study or exemplifying an improved discriminatory ability of teachers in observing pupil behavior. A study reported in 1936 by Ellis and Miller (16) revealed a correlation of .49 between teachers' and mental health specialists' judgments of behaviors indicating emotional disturbance. In 1940 Mitchell (38) found a correlation of .70 between teachers' and mental health specialists' judgments of pupil behavior identified as indicative of emotional disturbance. Further evidence of a greater degree of congruity between teachers' and mental hygienists' ratings of pupils than indicated by the early Wickman study is revealed in a study by Stouffer in 1952 (53).

Bower had the teachers in his study rate pupils on physical and behavior factors. The rating scale which he used can be found in Appendix III. Tables 1 and 2

TABLE 1. --Comparison of the behavior characteristics of the emotionally disturbed and normal children as reported by their teachers

Item	Emotionally Disturbed	Normal
1. Is this child overly aggressive or defiant?		
Seldom or never	23	64
Not very often	16	20
Quite often	35	12
Most of the time	26	4
2. Is this child overly withdrawn or timid?		
Seldom or never	49	55
Not very often	26	26
Quite often	14	13
Most of the time	11	6
3. Is this child a control problem in his present group?		
Seldom or never	14	57
Not very often	16	25
Quite often	32	14
Most of the time	38	4
4. Is this child an instructional problem in his present group?		
Seldom or never	11	49
Not very often	10	27
Quite often	27	15
Most of the time	52	9
5. Where would you rate this child's adjustment with respect to your present group?		
Best	2	29
Average	11	50
Poorest	87	21

TABLE 1.--Continued

Item	Emotionally Disturbed	Normal
6. Would you rate this child among the two most maladjust- ed children in your class?		
Yes	75	5
No	25	95
7. Would you rate this child among the two best adjusted children in your class?		
Yes	1	1
No	99	99

summarize the results which he reported on each item of the teacher rating scale. Bower indicated that the only physical status item which was significant was the one having to do with physical abnormalities. The emotionally disturbed children had significantly more physical abnormalities than the normal children. He reported no tests of significance on the items having to do with behavior status. Using his data this author computed chi square tests of significance on the items having to do with behavior status. Each item significantly differentiated between the emotionally disturbed and normal children at the .05 level of confidence or beyond.

TABLE 2.--Comparison of the physical characteristics of the emotionally disturbed and normal children as reported by their teachers

Item	Emotionally Disturbed	Normal
1. Height		
Very short	4	6
Short	15	18
Average	46	49
Tall	29	22
Very tall	6	5
2. Weight		
Greatly under	3	3
Under	24	14
Average	59	69
Over	11	12
Greatly over	3	2
3. Sight		
Normal	85	93
Some difficulty	12	6
Marked difficulty	3	1
4. Hearing		
Normal	93	96
Some difficulty	7	3
Marked difficulty	0	1
5. Speech		
Normal	87	93
Some difficulty	10	6
Marked difficulty	3	1
6. Physical abnormality		
Yes	11	4
No	89	96

Method of Deriving a Total Score

Bower devised a method of computing a total score for each pupil based upon the pupil's scores on those variables which he found to differentiate between the emotionally disturbed and the normal children. The following description of his scoring system points out his use of different weights for the different variables. His text (8) does not describe the method for weighting each of the variables. The author of the present study wrote to him asking how he derived the weights for the variables in his study. He replied that the magnitude of the weights was based upon the size of the critical ratios.

Group IQ test-weight 5

Calculate mean score for class. Children who are 12 points or more below the mean receive one point; children who are more than 23 points below the mean receive two points. Multiply points by weight to get total sub-score. For example: a child with a group IQ score of 85 in a class with a mean of 100 receives 1 point multiplied by 5 for a score of 5.

Achievement test scores

1. Reading grade placement score-weight 5

Calculate mean grade placement for boys and mean grade placement for girls. Boys who are 1.5 years or more below the mean receive a score of 1; boys who are 2.5 years or more below the mean receive a score of 2. Girls who are 1.5 years or more below the mean score of the girls receive a score of 2; girls who are 2.5 years or more below the mean receive a score of 3. Multiply all scores by the weight, 5.

2. Arithmetic grade placement-weight 5

Calculate mean grade placement for boys and for girls. Boys who are 1 year or more below the mean receive a score of 1; those 2 years or more below the mean receive a score of 2. Girls who are 1 year or more below the mean for girls receive a score of 1; those 2 years or more below the mean receive a score of 2. All scores are multiplied by the weight, 5.

Thinking About Yourself-weight 8

Boys: Obtain a difference as described on page 22 (of this dissertation) between boys' response to "Are you like him or her?" and "Do you want to be like him or her?" for items 5,6,12,14,8,22,27,28, 34,36,39,40, and 41. Square each difference and total. Scores for totals are as follows:

Total	Score
117-78 _____	4
77-52 _____	3
51-26 _____	2
5 and below _____	2

Girls: Obtain differences as described on page 22 (of this dissertation) for items 4,6,18,29,39, and 47. Square each difference and total. Scores for totals are as follows:

Total	Score
54-36 _____	4
35-24 _____	3
23-12 _____	2
3 and less _____	2

Add one point to score for each of the following items where the answer to "Are you like her?" is scored "Most of the time": 3,10,21,22,29,34, and 37. Multiply total score by weight, 8.

"A Class Play"-weight 10

Boys: To derive each child's score, divide the number of times chosen for negative roles by the total times chosen and multiply times 100.

Percent	Score
100-90 _____	6
89-80 _____	5
79-70 _____	4

If a boy is chosen a total of less than three times, score 3.

The author's instructions for the scoring of the "A Class Play" for the girls were identical to those for the boys, i.e., the negative roles were to be divided by the total roles and multiplied by 100.

Percent	Score
100-85	6
84-70	5
69-50	4

If a girl is chosen a total of less than three times, score 3. Multiply total score by weight, 10.

Absence: No calculation necessary, but chronic absenteeism should be investigated.

Rating by teacher-weight, 10

Item a)	If rated 4, score 2
	If rated 3, score 11
Item b)	If rated 4, score 4
	If rated 3, score 2
Item c)	If rated 4, score 2
	If rated 3, score 1
Item d)	If rated 4, score 2
Item e)	If rated 3, score 2
Item f)	If rated 1, score 2
Item g)	No score (8, p69-71)

SUMMARY

Previous research has revealed that each of the following variables is related to adjustment:

1. Age-grade relationship.
2. Rate of absence.
3. Socioeconomic status.
4. Reading and arithmetic achievement.
5. Intelligence.
6. Perception of self.
7. Perception of self by peers.
8. Teacher ratings.

Bower (8) obtained data on each of these variables and found that emotionally disturbed and normal children are significantly different on variables 4, 5, 7 and 8.

4. Reading and arithmetic achievement.

Reading and arithmetic achievement were significantly lower for the emotionally disturbed than for the normal pupils. The arithmetic achievement of the emotionally disturbed was significantly lower than their reading achievement.

5. Intelligence.

The emotionally disturbed pupils scored significantly lower on group intelligence tests than did the normal pupils. However, when the emotionally disturbed pupils received individual intelligence tests they scored significantly higher on the individual test than they had on the group test.

7. Peer perception

The emotionally disturbed children were chosen more often for negative roles on a modified sociometric technique and less often for positive roles than were the normal children.

8. Teacher rating.

Bower found that only one item on the teacher rating of physical status differentiated significantly between the emotionally disturbed and normal pupils, viz., the presence of a physical abnormality. Bower did not report significance levels for the behavior status items on the teacher rating scale. As a part of the present study, chi square tests of significance were computed on the behavior status items. Each item was significant at the .05 level or above.

Limitations of Bower's Study

The Criterion Measure

The emotionally disturbed children studied by Bower et al in their research were identified by mental health specialists whom the authors refer to as "clinicians". The previous account of the instructions given to the "clinicians" demonstrates the general nature of these instructions.¹ The "clinicians" were instructed to differentiate the "situationally or sociologically mal-adjusted" child from the one with "psychological or emotional difficulties". It was suggested that Jahoda's (26) definition of mental health be used by the "clinicians" in identifying the child with "psychological or emotional difficulties". Bower states that the major emphasis was placed upon the clinical and professional judgment of the "clinicians" to select those children whom they thought were emotionally disturbed.

The author is vague as to who these "clinicians" were. He refers to them as "psychologists, guidance counselors and others". It may be that the psychologists and guidance counselors differed considerably among themselves in the amount and kind of training which they had obtained and Bower does not identify the "others". There may be a good deal of disagreement among clinicians with essentially equivalent training

¹See pages 9-10.

as to the diagnostic decisions which are made. One would expect even more disagreement among a group of professionals with as varied a background as the "clinicians". It is very likely that a variety of theoretical frameworks were utilized in deciding which children were emotionally disturbed (even though Jahoda's theory was suggested) and the author did very little to improve the reliability of decision making. There was no attempt to improve inter- and intra-rater reliability. Such conditions make it impossible to describe the characteristics of the group so that a similar group might be selected for replication. What distinguishes this group is that it comprises children whom psychologists, guidance counselors, and others have identified as emotionally disturbed.

In defense of this approach, those children who receive treatment or special assistance with their adjustment problems are those identified by school "clinicians" as emotionally disturbed, so that the sample in Bower's study may be thought of as typical of those identified in the school as emotionally disturbed and for whom psychotherapeutic measures are prescribed.

The complexity of the problem of designating specific criteria to be used in identifying emotionally disturbed children was confronted by a committee appointed to develop such criteria for programs for the emotionally disturbed in the State of Michigan (37).

The committee comprised a clinical psychologist and a psychiatrist employed in a children's psychiatric hospital, school psychologists, and school special education personnel. After considerable deliberation the committee decided that it was much more feasible to describe the professional personnel qualified to identify an emotionally disturbed child than to develop a detailed description of the nature of emotional disturbance in children and how it can be identified. The report briefly and in broad terms describes the emotionally disturbed child but goes into greater detail describing personnel essential to such an identification.

This in no sense negates the necessity for experimentation designed to test theories of emotional disturbance and to test out instrumentation based on such theories of emotional disturbance. On the contrary, such basic research is essential. However, conclusive validation of one particular theory and set of instruments has not been achieved and those children who are today treated as emotionally disturbed are those who have been identified by trained professionals.

Need for Cross-validation of Weights

Bower developed a scoring system for the variables which he used in identifying emotionally disturbed children by assigning weights to each variable based upon the size of the critical ratio.¹ A scoring system based

¹See pages 31-32.

on an initial group used for item selection must be reapplied on a second sample to investigate the extent to which the original scoring system capitalizes on chance errors. Anastasi (1) states that, "Any validity coefficient computed on the same sample that was used for item selection purposes will capitalize on chance errors within that particular sample and will consequently be spuriously high." Cattell (10) cites a study which demonstrates the point made by Anastasi. In this particular study an effort was made to determine whether the Rorschach would assist in selecting sales managers for life insurance agencies. The test was administered to 42 good and 38 poor salesmen and from the results 32 signs were derived which occurred more frequently in one group than in the other. When these 32 signs were reapplied to the original group it was found that 79 of the 80 salesmen could be correctly identified as good or poor. However, when these signs were reapplied to a new sample of 21 good and 20 poor salesmen, the validity coefficient dropped to .02. It is apparent that the signs used in this particular study capitalized on error.

Bower's weights cannot be used as such for they are very likely inflated and capitalize upon error. He had a sufficiently large sample that he could have established the initial weights on half of the sample and reserved the other half of the sample for a cross-validation. There were 206 emotionally disturbed and

5,381 normal children in his sample.

Assigning Weights on the Basis of the Size of the Critical Ratio

Bower indicated that he assigned weights to the variables which he used based on the size of the critical ratios derived in testing the null hypothesis that there was no difference between the emotionally disturbed and normal children on each of the variables. This procedure has the following limitations:

1. Assigning different weights to variables on the basis of the size of the critical ratios assumes a difference between the critical ratios. One would need to know the nature of the distribution of differences between critical ratios in order to assign weights to variables based upon critical ratios which were significantly different.
 2. Use of critical ratios for assigning weights does not capitalize on the effect which combining variables might have upon the discriminatory adequacy of the variables. It is possible for a variable to fail to significantly discriminate on the criterion variable and still make a contribution to prediction in combination with other variables. Multiple correlation, for example, avoids this shortcoming.
- Guilford (21) cites the example where R_{12} or R_{13} is very small and R_{23} is very large and the result

is that $R_{1.23}$ is larger than with either of the variables separately.

3. Assigning weights to variables separately also fails to recognize the effect of high correlation between two variables. If two variables correlate to a high degree and weights are assigned without regard for this correlation, an undue significance is assigned to one aspect of the difference between the control and experimental groups. For example, if intelligence and reading correlate to a high degree, assigning weights to each separately places too much weight on the variance accounted for by these variables in relation to weights assigned to variables which are related to the criterion but have a very low correlation with each other.

4. Treating each variable separately in terms of the size of the critical ratio is much less efficient for it entails using each variable which significantly discriminates between the control and experimental groups. It is possible that each of ten variables significantly discriminates between the control and experimental groups but that five of the variables in combination will predict just as adequately as the ten and possibly more adequately. Treating the variables separately gives no information concerning the best combination of variables.

Weights Assigned to Intelligence and Achievement

The weights assigned to intelligence and achievement test scores would appear to predispose the variables selected by Bower to identify a number of mentally handicapped children who were not necessarily emotionally disturbed. For example:

1. Children 23 points or more below the class mean on a group intelligence test receive 10 points. (The author does not state why he used the class mean instead of operating from the mean I.Q. for the test standardization sample.)
2. Boys below grade level by 2.5 years or more in reading receive a score of 10 and girls this far below their grade level receive a score of 15.
3. Those two years or more below grade level in arithmetic receive a score of 10.

Bower suggested that children who receive a score of 100 or higher should be looked at closely because they may well be emotionally disturbed. On the three above variables a boy can score 30 and a girl 35. The mentally retarded child will receive a large weight on number one above and is very likely to receive a large weight on two and three. Therefore, he can receive fairly low scores on the remaining variables and be classified as emotionally disturbed. However, the gifted or average child will usually have to score very high on the remaining variables to receive the same score as the mentally retarded. The tendency to

assign undue weight to intelligence, reading, and arithmetic, which correlate among themselves, could have been reduced by use of multiple correlation as was pointed out previously.¹

In school systems which have homogeneous grouping for the mentally retarded pupils there would be fewer retarded children identified as emotionally disturbed on the basis of Bower's weights because there are fewer present in the regular classroom. The above criticism is especially applicable to the school system in which there is no homogeneous grouping of the mentally retarded. In a school system with homogeneous grouping of the mentally retarded one would expect the intelligence and achievement test scores of pupils in regular classes to receive greater weight because low scores would be less contaminated with mentally retarded children who were not emotionally disturbed.

"Thinking About Yourself", A Self Concept Measure

The self concept measure developed by Bower contains 53 items. One would expect at least two of the 53 items to significantly differentiate between the emotionally disturbed and normal children purely by chance. Only six of the items were significant in the expected direction for the boys, or only four more items than would be expected at the .05 level simply by chance. The normal girls were significantly different from the

¹See page 42.

emotionally disturbed on only two items with an additional three items being significantly different in a direction opposite from that which the theory of the test would predict. These results are extremely minimal and reflect upon the instrument used, the theoretical framework which asserts that there is a relationship between the discrepancy between self concept and ideal self on the one hand and emotional disturbance on the other, or upon the judgments of the "clinicians" who identified the emotionally disturbed children.

In a previous discussion¹ studies were cited which demonstrate the relationship between self concept, ideal self discrepancy and adjustment. Such results make untenable the conclusion that Bower's results reflect upon the theory on which his test was based. Teacher and peer judgments tend to agree with the judgments of the "clinicians" who identified the emotionally disturbed suggesting that the apparent inadequacy of "Thinking About Yourself" was not the result of poor judgments of pupil adjustment by the "clinicians". The most plausible explanation of the minimal results would appear to be that the items themselves were inadequate.

Bower's failure to take into account the following two important considerations in the development of his self concept measure may have contributed substantially to the minimal results which he obtained.

¹See page 22.

Social Desirability.--McGehee (35) suggests that the individual's self concept, as reported on a paper and pencil inventory, may be inflated through his effort to maintain his self esteem. The individual's defenses may be such that threatening pictures of self are kept from awareness. As a result the responses on an inventory may indicate that the individual views himself appreciatively, when, if more indirect measures of repressed, undesirable self pictures were used, a truer and lower self concept would be revealed.

Horney (24) presents a similar notion when she suggests that the neurotic, feeling weak and inadequate, builds up an "idealized image" which serves as a substitute for realistic self-confidence and realistic pride. When asked to describe himself, the neurotic responds in terms of the manufactured self picture, built to conform more nearly to what he perceives as socially desirable. He is not malingering in presenting an inflated self picture but has repressed negative feelings about self which exist. Horney states that the degree to which the individual is disturbed is reflected in the degree of discrepancy between the idealized image (which he has built up to bolster self esteem) and the real self concept.

The foregoing hypothesis, if correct, means that at least two types of individuals would evidence a small discrepancy between the ideal and self concept,

viz., those who are relatively satisfied with themselves and those who inflate their self picture to make it more desirable to themselves and others. To differentiate between these two types of individuals, McGehee (35) poses the need for measures which are indirect and which tap subconscious feelings and as a result obtain a truer picture of the individual's self concept.

There are essentially four approaches which have been used in an attempt to control the effect of social desirability:

1. The development of inventories in which the items are primarily of the subtle or neutral type, thus not as likely to cause the subject to engage in defensive sorting of his responses. This approach was used by Hanley (22) with some success in a study of the MMPI. One of the major limitations of this technique is that it is very difficult to find items which are subtle or neutral and which discriminate on a criterion measure such as adjustment. It is especially difficult to find self-referent items which are neutral for all subjects.
2. Use of a scale such as the K or SD, developed by Meehl and Hathaway (36), for use with the MMPI, which was a collection of items purported to identify those with psychological pathology who respond like the normal subjects on other items.
3. The pairing of statements which are essentially

equivalent on a scale of social desirability and forcing the subject to select the alternative which best describes him. This was the approach used by Edwards in the Personal Preference Schedule (14).

4. The use of a projective format. Getzels and Walsh (17) found that this approach reduced the effect of social desirability. This approach has the advantages of involving less cumbersome techniques in item selection and analysis and of having been used with children.

In studying a group of children ranging in age from eight to thirteen, Getzels and Walsh used a sentence completion test which they had cast in the following format:

When they asked Frank to be in charge_____

When they asked me to be in charge_____

The discrepancy between the projected response and the personal response constitutes the "index of differentiation", which the authors define as "A measure of the magnitude of the discrepancy between the personal hypothesis and the expressed reaction ...". The assumption is that the responses to the projective sentence completion more nearly approximate the individual's true feelings while the first person response is screened by the way in which the individual needs to see himself and present

himself to others.

Getzels and Walsh reported that the index of differentiation increased as a function of age (they interpreted this as a function of socialization), the index of differentiation is greater for girls than for boys of the same age, the index is greater for only children, and it is greater for the middle and upper socioeconomic levels than for the lower socioeconomic levels. Each of these results was in the direction predicted by the authors based upon prior information concerning the socialization process and the need to conceal feelings as they relate to age, sex, being an only child, and socioeconomic level.

In light of the above discussion, one would question the extent to which the minimal results obtained by Bower on his "Thinking About Yourself" inventory are related to the greater need of the emotionally disturbed children to avoid revealing how they really see themselves resulting in an inflation of their reported self concept. If this were true, the discrepancy between the self concept and the ideal self would be decreased.

Content of Self Concept Measured.-Rogers' definition of the self concept contains a wide variety of perceptions of "self and self-in-relationship".¹ Smith (51) points out

¹See page 20.

the limitations in using a global concept of the self without further refinement. He suggests that the self concept contains "an aggregate of factors rather than a single evaluative dimension". He factor-analyzed 70 bipolar adjectives descriptive of personality and isolated five factors which he called; self-esteem, anxiety-tension, independence, estrangement, and body-image.

Smith states that,

The results help explain the findings of investigators who have noted poor correspondence between different tests of the self concept and low correlation between the self concept and external criteria of adjustment. (51,p191)

The reason for poor correlation among tests and between tests and external criteria, according to Smith, is the unwitting confounding of several self concept variables.

Some aspects of self concept may be more closely related to emotional disturbance in children than other aspects. Certain aspects of self concept may also be more readily affected by social desirability than others. In the direct response, self-report inventory those aspects of self concept more sensitive to social desirability would be less likely to discriminate between the emotionally disturbed and the normal children because the self concept would be artificially inflated, thus reducing the discrepancy between the self concept and ideal self. The notion that certain aspects of self concept are more susceptible to the influence of social desirability than others is supported by Wylie (60) who reports that subjects are more willing to reveal informa-

tion "about their attitudes, opinions, tastes, and interests than about their personality or body characteristics."

Bower, in his research monograph, makes no attempt to identify the different aspects of the content of self concept measured by his self concept inventory. His failure to attend to those aspects of self concept most likely to discriminate between the emotionally disturbed and normal children and those aspects least likely to be affected by social desirability may further account for the minimal results which he obtained.

A Class Play.--In assigning a weight to scores on the sociometric technique, "A Class Play", Bower included two negative roles which produced results in an opposite direction from that upon which the construction of the instrument and the scoring system were based. The effect of this procedure was to make the total score less effective in discriminating between the emotionally disturbed and the normal children. The two negative items which failed to discriminate between the normal and emotionally disturbed children in the desired direction are as follows:

"Someone who could play the part of a person who doesn't ever say anything."

"This person knows all the answers and usually works alone."

These items were apparently chosen to identify the child who was emotionally disturbed but quiet, withdrawn and over-conforming rather than acting-out. These roles

were probably often associated with children who had learned how to best get along in the classroom and to please the teacher. This may have been especially true of the girls in the sample.

Summary

The methodology used in the present study is designed to avoid the following limitations in Bower's study which were cited in the preceding discussion:

1. The failure to cross-validate weights.
2. Assigning weights to variables based on the sizes of the critical ratios computed in testing the significance of the difference between the emotionally disturbed and normal children.
3. Including items on a self-concept scale in the derivation of weights when the number of such items which were significant was only slightly greater than what would be expected by chance.
4. The inclusion of two roles on a modified sociometric technique which actually yielded results in a direction opposite from that predicted by the theoretical constructs of the technique.

Methodology

The Sample

The files in the Psychological Services Department of the Lansing Public Schools were carefully examined and all pupils were identified who were described as having emotional problems. From this group those children were selected whom the school psychologists had deemed sufficiently disturbed to require treatment by the community child guidance clinic. The child guidance clinic also supplied a list of names of fourth, fifth, and sixth grade pupils whose names did not appear on the list obtained from examination of the Psychological Services Department files but who were in treatment at the clinic. Seven children whose names did not appear on the Psychological Services list were identified by the clinic as currently under treatment.

A total group of 91 emotionally disturbed children was identified through the above described survey. The total enrollment in grades four, five, and six in the Lansing Public Schools was approximately 5000, hence just under 2% of the enrollment in these three grades was identified as sufficiently emotionally disturbed to call for individual treatment by the child guidance clinic. Excluded from consideration were three to four percent of the school population who had been placed in special education programs for the mentally handicapped. Addition of this group would increase the percent of the school

population considered to be emotionally disturbed if the contention of Hutt and Gibby (25) is correct that the percent of emotionally disturbed among the mentally retarded is greater than among children who are of average intelligence or above. Also excluded from this group were 25 pupils who were so disturbed as to require placement in a special, segregated program for emotionally disturbed children. Those sufficiently emotionally disturbed to be recommended for individual treatment would therefore comprise a minimum of from two to three percent of the school population in grades four, five, and six in the Lansing Public Schools.

The psychological services offered in the Lansing Public Schools are considerably more adequate in terms of staff-pupil ratio than would be found in many school systems. At the time of the identification of the subjects of this study, the staff consisted of the equivalent of seven full-time psychologists for a school population of 25,000 pupils. However, the 5,000 high school pupils received a very small proportion of the psychologists' time so that the ratio more nearly approximated seven psychologists for a school population of 20,000. Because of the nature of the psychological services available, the number of children referred for individual psychological study would exceed that of many school districts. Also, the fact that teachers in the system were accustomed to having and using such services

(individual testing had been done in the school district since the late 1920's) resulted in their being more alert to watching for pupil behavior which was symptomatic of disturbance, indicating the need for referral to psychological services. These factors suggest that the emotionally disturbed pupils identified for the purposes of this study more nearly approximate the total number of such children present in the school system than would be the case in many school systems.

A study of each of the 91 emotionally disturbed children and their classmates would have involved 70 classrooms, 35 schools, and 1300 pupils. The school administration was reluctant to involve principals, teachers, and pupils this extensively and such an undertaking would have been prohibitive in terms of time and money for the purposes of this study. Consequently, a random sample of the emotionally disturbed pupils was selected for study. Selecting every fourth emotionally disturbed pupil yielded a sample of 22. The classes in which these pupils were enrolled were selected for study. Since some of the classrooms selected for study contained pupils in the original sample of 91 emotionally disturbed who were not a part of the random sample, these pupils were added to the initial sample of 22 emotionally disturbed, making a total of 33 emotionally disturbed pupils in 22 classrooms. The normal children in these classes numbered 612.

The original data were collected in May and June

of 1959 and three years and four months later (October 1962) the 612 pupils originally classified as normal were reviewed through a survey of the Psychological Services files to determine how many of this group were in the interim identified as emotionally disturbed. The survey indicated that between 1959 and 1962 11 pupils were identified by the school psychologists as severely enough disturbed emotionally to require treatment from the child guidance clinic.

Instrumentation

In the present study, data were collected only on those variables which Bower had found to significantly differentiate the emotionally disturbed from the normal children. The one exception to this procedure was the introduction of a self concept scale which contained modifications of the approach which Bower used in developing his self concept inventory. The variables on which information was collected and the instruments used in this study are as follows:

1. Intelligence: California Test of Mental Maturity-Short Form (11)
2. Reading and arithmetic achievement: California Achievement Test (12)
3. Physical and adjustment status of pupils: a teacher rating scale (Appendix III)
4. Peer rating: "A Class Play" (Appendix II)
5. Self concept: "Projective Self Concept Scale" (Appendix IV)

Intelligence

Group intelligence tests were administered to each fourth and sixth grade pupil in the Lansing Public Schools and the results of these tests were used for the purposes of this study. Since the fifth graders were not administered an intelligence test in 1959, the scores which they had obtained in the fourth grade were used. With the exception of a few pupils new to the system, the scores recorded for the pupils in the study were based on the California Test of Mental Maturity-Short Form.

For those pupils who had moved into the school system recently and had not been administered intelligence tests, the most current test results in their records were used.

Achievement

Reading and arithmetic achievement tests were administered in the Lansing Public Schools in grades four and six. Achievement test scores for the fourth and fifth graders are based upon the fourth grade achievement tests while the scores for the sixth graders in the study were based upon achievement tests administered in grade six. With the exception of pupils new to the system who had not been involved in the system-wide testing program, the achievement test scores used in the present study are from the California Achievement Test. For those pupils new to the system, the most recent achievement test scores reported in their cumulative folders were used.

Teacher Ratings

Physical Status

The teachers were asked to rate each pupil in comparison to his or her age peers on height, weight, sight, hearing, speech, and as to whether any marked physical abnormality was present. The teacher rating scale is a part of the "Adjustment Index Summary" and can be found in Appendix III. The items having to do with physical status are as follows:

- a) Height--1) very short 2) short 3) average
4) tall 5) very tall _____
- b) Weight--1) greatly underweight 2) underweight
3) average 4) overweight 5) greatly
overweight _____
- c) Sight-(with or without glasses)-1) appears
normal 2) some difficulty 3) marked
difficulty _____
- d) Hearing--1) appears normal 2) some dif-
ficulty 3) marked difficulty _____
- e) Speech--1) appears normal 2) some dif-
ficulty 3) marked difficulty _____
- f) Does this child have any marked physical
abnormality _____ Yes _____ No
If yes, please explain: _____

The above items were analyzed individually, using the data collected in the present study and only those items were retained which significantly differentiated between the emotionally disturbed and normal pupils. The significance of the difference between teacher ratings for the emotionally disturbed and normal children on each item was tested by the Chi Square method.

Behavior Status

The teachers were asked to rate each pupil in comparison with the other children his age in terms of whether he was aggressive or defiant, withdrawn or timid, a control problem in the classroom, an instructional problem in the classroom and his general adjustment status in comparison with other pupils in the class. The teacher rating scale is a part of the "Adjustment Index Summary" developed by Bower and can be found in Appendix III. The

items having to do with adjustment status are as follows:

- a) Is this child overly aggressive or defiant?
1) seldom or never 2) not very often 3) quite often 4) most of the time _____
- b) Is this child overly withdrawn or timid?
1) seldom or never 2) not very often 3) quite often 4) most of the time _____
- c) Is this child a control problem in his present group?
1) seldom or never 2) not very often 3) quite often 4) most of the time _____
- d) Is this child an instructional problem in his present group?
1) seldom or never 2) not very often 3) quite often 4) most of the time _____
- e) Where would you rate this child's adjustment with respect to your present group?
1) among the best adjusted 2) among the average 3) among the poorest _____
- f) Would you rate this child among the two most maladjusted children in your class?
1) Yes 2) No
- g) Would you rate this child among the two best adjusted children in your class?
1) Yes 2) No

The above items were analyzed individually, using the data collected in the present study and only those items were retained which significantly differentiated between the emotionally disturbed and normal pupils. The significance of the difference between teacher ratings for the emotionally disturbed and normal children on each item was tested by the Chi Square technique.

Feer Ratings

Of all the data which Bower collected he found the modified sociometric technique (A Class Play), which

he developed, to be the instrument which most effectively discriminated between the emotionally disturbed and normal children. "A Class Play" consists of twelve briefly described roles, six of which are negative and six of which are positive.¹ The instructions to pupils and the response blank on which the roles are described can be found in Appendix II. "A Class Play" was used in the present study. However, roles eight and twelve were eliminated because Bower found that they did not significantly differentiate between the emotionally disturbed and normal children. The modified class play is in Appendix VII.

Bower derived a pupils' total score by dividing the number of times selected for negative roles by the total selections and multiplying the quotient by 100. This method of scoring was used in the present study.

Self Concept

In the previous discussion of the limitations of Bower's study, it was pointed out that two major limitations of his self concept measure, "Thinking About Yourself" were that no attempt was made to take into account the social desirability effect nor the different aspects of the self concept which were being measured by the instrument.

For the purposes of the present study a self concept measure was developed in which an effort was made

¹See page 26

to minimize the effects of social desirability and to identify the content of self concept measured. The self concept inventory developed for use in the present study is the Projective Self Concept Scale (Appendix IV) consisting of fifty items cast in a projective format.

Rationale and Procedures in Item Selection

Theory regarding the nature of self concept¹ suggests that it includes all of the ideas that an individual might hold with respect to himself. In an effort to construct items which would measure broadly representative and important aspects of self concept the following steps were taken:

1. Murray (41) and his associates intensively studied thirteen subjects over a period of several months and accumulated a wealth of data from which they abstracted a conceptual scheme of a "theory of directional forces". These "directional forces" or needs are considered by Murray to be the most significant aspects of personality to be considered in the understanding of human social behavior.

Most of the needs to be described are social reaction systems which lead a subject (1) to raise his status; (2) to conserve and defend the status he has attained; (3) to form affiliations and to co-operate with allied objects (or institutions), as well as to praise, direct and defend them; or (4) to reject, resist, renounce or attack disliked hostile objects. (41,p.150)

¹See page 20.

Edwards selected fifteen of Murray's need categories as the basis for his selection of items for his Personal Preference Schedule. These are the need categories which served as a basis for item selection for the Projective Self Concept Scale (PSCS). A list of the need categories and a definition of each can be found in Appendix V.

At least one item was selected to each of the need categories with the exception of heterosexuality. Assignment to a category was based upon the judgment of the individual selecting the items that the given item measured the type of behavior outlined in the description of the category. The number of items selected for each category appears in table 3.

TABLE 3.--The number of PSCS items selected for each need category

Need Category	Number of Items
Achievement	2
Deference	2
Order	1
Exhibition	3
Autonomy	6
Affiliation	6
Intracception	5
Succorance	3
Dominance	6
Abasement	8
Nurturance	1
Change	1
Endurance	4
Heterosexuality	0
Aggression	2

2. The items selected to measure the fourteen need categories of Edwards' Personal Preference Schedule were derived from the self concept instruments developed by Lipsitt (31) and Rogers (48). Lipsitt developed twenty-two items, consisting of self-descriptive adjectives, for use with fourth, fifth, and sixth graders. He found the responses on this instrument to correlate significantly with the Children's Manifest Anxiety Scale. Eleven of these items were selected and revised for use in the present study. The remaining thirty-nine items in the PSCS were revisions of items used in Rogers' Q-sort.

It was pointed out in the previous discussion of the limitations of Bower's "Thinking About Yourself" self concept inventory¹ that direct self concept measurement can be criticized because it is subject to distortion due to the tendency of subjects to unconsciously make an effort to maintain the "idealized self image" and thus present a spuriously high self concept. Several approaches to this problem were previously discussed². The approach used in the present study is the projective item format, developed by Getzels and Walsh (17). The projective character of the items is revealed in the

¹See page 45.

²See pages 46-48.

following discussion of the inventory format.

Format

1. The PSCS was designed to be simple, readable, and to require a reasonable administration time. A pilot study of two fourth, fifth and sixth grade classrooms indicated that, with the exception of the very poor readers, all items were read and understood. The fifty items were completed by all class members in 35 minutes. The poor readers needed assistance from the teacher in completing the inventory.
2. The items are worded in the present tense for the projected self concept and in the future tense for the projected ideal self. The children perceived the distinction readily.
3. Separate tests with identical items were used for boys and girls with the exception of the change in the personal pronoun.
4. The projective quality of the scale and the item format is shown in the following excerpt from the directions and sample items of the PSCS.

"This is an easy test because it is a test of imagination. I want each of the boys to think of a make-believe boy and each of the girls to think of a make-believe girl. Are you thinking of one? (pause) The questions in your test booklet ask about your make-believe boy or girl. They ask what he or she is like and what he or she wants to be like. Now look at the first example on the

front of your question booklet and read along with me:

He (or She) is kind

- A) Always
- B) Most of the time
- C) Some of the time
- D) Never

If you think that he (or she) is always kind, put a circle around the word, Always. If you think that he (or she) is kind most of the time, put a circle around Most of the time. If you think he (or she) is kind some of the time, put a circle around Some of the time. If you think that he (or she) is never kind, put a circle around the word, Never.

The next question asks about the way he or she wants to be.

He (or She) wants to be kind

- A) Always
- B) Most of the time
- C) Some of the time
- D) Never

If you think that he (or she) wants to be kind always, circle the word Always. If you think that he (or she) wants to be kind most of the time, circle Most of the time. If you think that he (or she) wants to be kind some of the time, circle Some of the time. If you think that he (or she) never wants to be kind, circle the word Never." The teacher is then instructed to

repeat the above-described procedures with two additional example items. The complete teacher directions and PSCS can be found in Appendix IV.

Scoring

Each item was scored in the following two ways:

1. Self, Ideal Self Discrepancy. Using as an example the item cited previously, "He is kind", numerical values of 1 to 4 were assigned to the four response categories, "Always" being assigned a value of 1, "Most of the time" a value of 2, "Some of the time" 3, and "Never" 4. On the second part of the item, "He wants to be kind", each response category is assigned the same value as in the first part of the item so that a response on the second part of, "Always" was assigned a numerical value of 1 and the response, "Never", was assigned a numerical value of 4. A pupil's score on an item is the discrepancy between his response to the portion of the item phrased, "He is" and the portion of the item phrased, "He wants to be....". For example, if a pupil responded, "Never", (4) to the first portion of the item and "Always", (1), to the second portion of the item the discrepancy score for this particular item would be 3, which is the maximum discrepancy score for any item.

This scoring system is predicated upon the findings reported by Rogers and Dymond (46) based

upon the results of the self-referent Q-sort items developed by Butler and Haigh (9). Rogers and Dymond reported a relationship between self concept-ideal self discrepancy and emotional adjustment.

2. Self Concept Level. In reviewing Worschel's Self-Activity Inventory, Wylie (60) states that,

When other variables are related to SAI scores, the findings involving the two-part SAI indices are either insignificant or they are essentially the same as those involving the Self scores.... In the studies where the Self score and the (Self-Ideal) score give essentially similar correlations with other variables, the trends involving the (Self-Ideal) score are often weaker than those involving the Self scores. (60,p.76)

The superiority of self concept scores over self concept-ideal self discrepancy scores was demonstrated in a recent study of elementary school children. In studying a group of fourth, fifth and sixth graders, Lippsitt (31) obtained test-retest reliabilities ranging from .73 to .91 on the self concept scores and reliabilities of .51 to .72 on the discrepancy scores. He found significant correlations between the self concept scores and scores on the Children's Manifest Anxiety Scale (CMAS) for both boys and girls in grades four, five, and six. All but one of the six correlations were significant at the .01 level. The correlations between discrepancy scores and the CMAS were significant for the fourth grade boys and the sixth grade girls at the .05 level and for the fourth and fifth grade girls at the .01 level. The

correlations between discrepancy scores and the CMAS were not significant for the fifth and sixth grade boys.

Twenty-seven of the items on the PSCS contain adjectives which are negatively self-referent. An example of such an item is, "He fails". Other items on the PSCS contain adjectives which are positively self-referent. An example of a positive item is, "He is popular." In order to obtain a measure of the self concept level for each item, it was necessary to make a prior determination as to whether an item was positively or negatively self-referent. Items were identified as either positive or negative based upon the judgment of this writer as to whether the children would regard the item as a desirable or undesirable self-description. Appendix VI groups the twenty-seven positive and twenty-three negative items. On the positive items the response "a) always" was assigned a value of 4, "b) most of the time" a value of 3, "c) some of the time" a value of 2, and "d) never" a value of 1. The negative items were treated inversely so that the response "a) always" was assigned a value of 1 and "d) never" was assigned a value of 4.

Summary

The instruments utilized and the numerical data derived from each are as follows:

1. Intelligence

With the exception of a few pupils new to the Lansing Public Schools, the intelligence test scores recorded for each pupil are derived from the California Test of Mental Maturity-Short Form (11). Language, non-language, and full scale I.Q. scores were recorded for 575 normal and 32 emotionally disturbed children.

2. Achievement

With the exception of a few pupils new to the Lansing Public Schools the grade placement scores recorded for each pupil are derived from the California Achievement Test (12). Reading and arithmetic grade placement scores were recorded for 578 normal children and 32 emotionally disturbed.

3. Teacher rating

The teachers rated each pupil on six items having to do with physical status and seven items having to do with behavior status. A pupil's score on the teacher rating scale is the sum of the ratings on those items which significantly differentiated between the emotionally disturbed and normal children.

4. Peer status

A modified sociometric technique developed by

Bower (Appendix VII) was used to measure each pupil's status with his peers. This instrument consists of twelve roles for which pupils are selected by their classmates. Bower found ten of the twelve roles to significantly differentiate between the emotionally disturbed and normal children and these ten roles were utilized in the present study. Six of these roles are positive (behavior associated with the normal children) and four are negative (behavior associated with the emotionally disturbed children). Roles 2,4,6, and 9 are negative.

5. Self concept

The Projective Self Concept Scale consisting of fifty self-descriptive items was developed as a substitute for the self concept measure (Thinking About Yourself) with which Bower had very limited success. The items on the PSCS were selected to represent Murray's need categories (40) as adapted for use in the Edwards Personal Preference Schedule. The items were written in a projective format. A discrepancy score and a self concept score was derived for each item.

Analysis of Data

The purposes of the analysis of the data are to:

1. Compare Bower's method of weighting the independent variables with the use of multiple regression in deriving weights.
2. To determine the effects of certain modifications in the instruments upon the prediction of the criterion variable by the independent variables.

In order to achieve these purposes, step one of the analysis entailed applying Bower's weights to the current study.¹ Steps two and three of the analysis involved step-wise multiple regression analysis to derive a total weighted score for each pupil on each independent variable. Essential to steps two and three of the analysis was the derivation of a single raw score for each of the six variables.

Deriving a Single Score for Each Variable

A single score was readily obtainable for intelligence, achievement, and peer status. Full scale I.Q. scores on the California Test of Mental Maturity, and grade placement scores on the reading and arithmetic sections of the California Achievement Test were the scores used for each pupil on intelligence and achievement. The peer status score for each pupil was derived by the following formula which was used by Bower in his

¹ See pages 31-33

research:

$$\text{Score} = \frac{\text{negative roles}}{\text{total roles}} \times 100$$

Some unique problems were confronted in deriving a single score for the teacher rating and self concept variables.

Teacher Rating

The response categories for the items on the teacher rating scale vary from two to four.¹ This poses a problem in summing item ratings to obtain a total score for a pupil on the teacher rating scale. In an attempt to avoid assigning different weights to the respective items simply because of the differing number of response categories, the following modifications were made in the number values assigned to the response categories in each item:

¹See pages 57-58.

TABLE 4.--Numerical values assigned to item response categories on the teacher rating of physical status

Item	Numerical Value Assigned to Response Category ^a		
1. Height	1 (3)	2 (2&4)	3 (1&5)
2. Weight	1 (3)	2 (2&4)	3 (1&5)
3. Sight	1	2	3
4. Hearing	1	2	3
5. Speech	1	2	3
6. Marked Abnormality	1 (no)		3 (yes)

^aWhen the number assigned to an item response category combines original item response numbers or differs from the original item response numbers, the original numbers follow immediately in parentheses.

TABLE 5.--Numerical values assigned to item response categories on the teacher rating of behavior status

Item	Numerical Value Assigned to Response Category ^a	
1. Aggressive	1 (1&2)	3 (3&4)
2. Timid	1 (1&2)	3 (3&4)
3. Control Problem	1 (1&2)	3 (3&4)
4. Instructional Problem	1 (1&2)	3 (3&4)
5. Adjustment	1 (best) 2 (avg.) 3 (poorest)	
6. One of two most maladjusted	1 (no)	3 (yes)
7. One of two best adjusted	1 (yes)	3 (no)

^aWhen the number assigned to an item response category combines original item response numbers or differs from the original item response numbers, the original numbers follow immediately in parentheses.

The numbers assigned to the item response categories in tables 4 and 5 are based upon a theoretical rationale concerning those responses most likely to accompany emotional disturbance. The rationale behind assigning the chosen weights to various response categories is obvious in most cases. A question can be raised concerning the assigning of values to the items having to do with height and weight under physical status. The response "average" on both of these items was assigned a value of 1, "under" and "overweight" a value of 2, and "greatly" under or overweight a value of 3. The premise is that being different from agemates in physique can be contributory to emotional disturbance. On the other hand, one might hypothesize that emotionally disturbed children are more likely to have had limited success in school and consequent failure leading to the hypothesis that they will be older and larger. Theoretical rationale and previous research does not clearly support either of these two alternative ways of treating these data, therefore, the data were inspected. The inspection of the data indicated that the emotionally disturbed tended to deviate in both directions from the average in weight and height and did not tend to be larger.

The numbers assigned to the item response categories in tables 4 and 5 are such that a score of one on an item indicates the least likelihood of emotional disturbance while a score of three indicates the greatest likelihood

of emotional disturbance.

Analysis of Items

Physical Status.- Each item on the physical status section of the teacher rating scale was analyzed to determine whether it discriminated significantly between the emotionally disturbed and normal children. Only those items which were found to discriminate between these two groups of children were included in computing a pupil's total score on the teacher rating scale. The chi square test of significance, a nonparametric statistic, was used for this purpose. When chi square was used with one degree of freedom Yates correction for continuity, as described by Guilford (21), was used for those contingency tables in which the expected frequency in any cell was less than ten. The effect of using Yates correction for continuity is to reduce by .5 the deviation between the expected and observed frequency in any given cell.

Following are the contingency tables and the chi squares for each of the items on the teacher rating scale. In each of the tables the expected frequencies follow the observed frequencies and are in parentheses. The emotionally disturbed children in the following chi squares comprise only those who were identified in 1959 ($N = 33$) and do not include the additional 11 identified in 1962. The size of the N 's varies from item to item because of the failure of teachers to fill in

certain of the items on the rating scale. In the analysis of combined variables¹ those emotionally disturbed children identified in 1959 and those identified in 1962 were all included in the emotionally disturbed criterion group, making a total sample of 44 emotionally disturbed.

a)height---1)very short 2)short 3)average 4) tall 5)very tall

In the following contingency table the above response categories were assigned numerical values² as follows:

3)=I, 2) & 4) = II, and 1) & 5) = III.

TABLE 6.--A comparison of the height of normal and emotionally disturbed children as rated by their teachers

	I	II	III	
	Average	Short & Tall	Very Short Very Tall	Sum of rows
Emotionally Disturbed	11 (16.4)	16 (12.3)	5 (3.2)	32
Normal	325 (319.6)	236 (239.7)	61 (62.8)	622
Total	336	252	66	654

$$\chi^2 = 4.04 \text{ with 2 degrees of freedom.}^a$$

^aNot significant at the .05 level.

¹See page 93.

²See page 73, table 4.

b) Weight---1)greatly underweight 2) underweight 3) average 4)overweight 5)greatly overweight

In the following contingency table the above response categories were assigned numerical values as follows:

3) = I, 2)&4) = II, 1)&5) = III.

TABLE 7.--A comparison of the weight of normal and emotionally disturbed children as rated by their teachers

	I	II	III	
	Average	Underweight Overweight	Greatly Underweight Greatly Overweight	Sum of rows
Emotionally Disturbed	18 (24)	12 (6.4)	1 (.6)	31
Normal	476 (470)	119 (124.6)	12 (12.4)	607
Total	494	131	13	638

$$\chi^2 = 6.72 \text{ with 2 degrees of freedom.}^a$$

^aSignificant at the .05 level.

- c) Sight---(with or without glasses)-1) appears normal
 2) some difficulty 3) marked difficulty

In the following contingency table the numbers of the columns correspond with the numbers in the response categories in item c) above.

TABLE 8.--A comparison of the sight of normal and emotionally disturbed children as rated by their teachers

	I	II	III	
	Appears Normal	Some Difficulty	Marked Difficulty	Sum of rows
Emotionally Disturbed	23 (29.12)	7 (1.63)	1 (.25)	31
Normal	564 (557.88)	26 (31.36)	4 (4.75)	594
Total	587	33	5	625

$$\chi^2 = 22.34 \text{ with 2 degrees of freedom.}^a$$

^aSignificant at the .01 level.

d)Hearing--1) appears normal 2) some difficulty 3) marked difficulty

In the following contingency table the numbers of the columns correspond with the numbers in the response categories in item d) above.

TABLE 9.--A comparison of the hearing of normal and emotionally disturbed children as rated by their teachers

	I	II	III	
	Appears Normal	Some Difficulty	Marked Difficulty	Sum of rows
Emotionally Disturbed	31 (31.30)	1 (.54)	0 (.25)	32
Normal	601 (600.79)	10 (10.46)	5 (4.75)	616
Total	632	11	5	648

$$\chi^2 = .48 \text{ with 2 degrees of freedom.}^a$$

^aNot significant at the .05 level

e)Speech---1) appears normal 2) some difficulty 3) marked difficulty

In the following contingency table the numbers of the columns correspond with the numbers in the response categories in item e) above.

TABLE 10.--A comparison of the speech of normal and emotionally disturbed children as rated by their teachers

	I	II	III	
	Appears Normal	Some Difficulty	Marked Difficulty	Sum of rows
Emotionally Disturbed	28 (30.38)	3 (1.08)	1 (.54)	32
Normal	591 (588.62)	19 (20.92)	10 (10.45)	620
Total	619	22	11	652

$$\chi^2 = 4.20 \text{ with 2 degrees of freedom.}^a$$

^aNot significant at the .05 level.

f) Does this child have any marked physical abnormality _____ Yes _____ No.

In the following contingency table "Yes" is column III and "No" is column I.

TABLE 11.--A comparison of the incidence of physical abnormality in normal and emotionally disturbed children as rated by their teachers

	I	III	
	No	Yes	Sum of rows
Emotionally Disturbed	29 (30.66)	2 (.34)	29
Normal	610 (608.34)	5 (6.66)	615
Total	639	7	646
$\chi^2 = 8.74$ with 1 degree of freedom. ^a			

^aNot significant at the .05 level.

Behavior Status.—Following are the contingency tables and the chi squares for each of the items having to do with behavior on which the teachers rated each pupil. In each of the tables the expected frequencies follow the observed frequencies and are in parentheses.

- a) Is this child overly aggressive or defiant?
 1) seldom or never 2) not very often 3) quite often
 4) most of the time

In the following contingency table the above response categories were assigned numerical values¹ as follows: 1)&2) = I, and 3)&4) = III.

TABLE 12.--A comparison of the incidence of aggressive or defiant behavior in normal and emotionally disturbed children as rated by their teachers

	I	III	
	Seldom or Never Not Very Often	Quite often Most of the Time	Sum of rows
Emotionally Disturbed	17 (26.3)	15 (5.7)	32
Normal	507 (497.7)	98 (107.3)	605
Total	524	113	637

$$\chi^2 = 4.868 \text{ with 1 degree of freedom.}^a$$

^aSignificant at the .05 level.

¹See page 74, Table 5.

- b) Is this child overly withdrawn or timid?
 1) seldom or never 2) not very often 3) quite often
 4) most of the time

In the following contingency table the above response categories were assigned numerical values as follows: 1)&2) = I and 3)&4) = III.

TABLE 13.--A comparison of the incidence of withdrawn or timid behavior in normal and emotionally disturbed children as rated by their teachers

	I	III	
	Seldom or Never Not Very Often	Quite Often Most of the Time	Sum of rows
Emotionally Disturbed	25 (27.2)	8 (5.8)	33
Normal	494 (491.8)	103 (105.2)	597
Total	519	111	630

$$\chi^2 = 1.06 \text{ with 1 degree of freedom.}^a$$

^aNot significant at the .05 level.

c) Is this child a control problem in his present group?

- 1) seldom or never 2) not very often 3) quite often
4) most of the time

In the following contingency table the above response categories were assigned numerical values as follows: 1)&2) = I and 3)&4) = III.

TABLE 14.--A comparison of the extent to which normal and emotionally disturbed children are rated to be control problems by their teachers

	I	III	
	Seldom or Never Not Very Often	Quite Often Most of the Time	Sum of rows
Emotionally Disturbed	20 (26.8)	12 (5.2)	32
Normal	511 (504.2)	90 (96.8)	601
Total	531	102	633

$$\chi^2 = 2.796 \text{ with 1 degree of freedom.}^a$$

^aNot significant at the .05 level.

d) Is this child an instructional problem in his present group?

- 1) seldom or never 2) not very often 3) quite often
4) most of the time

In the following contingency table the above response categories were assigned numerical values as follows: 1)&2) = I and 3)&4) = III.

TABLE 15.--A comparison of the extent to which normal and emotionally disturbed children are rated to be instructional problems by their teachers

	I	III	
	Seldom or Never Not Very Often	Quite Often Most of the Time	Sum of Rows
Emotionally Disturbed	10 (21.8)	21 (9.2)	31
Normal	453 (441.2)	174 (185.8)	627
Total	463	195	658

$$\chi^2 = 5.68 \text{ with 1 degree of freedom.}^a$$

^aSignificant at the .02 level.

e) Where would you rate this child's adjustment with respect to your present group?

- 1) among the best adjusted
- 2) among the average
- 3) among the poorest

In the following contingency table the numbers of the columns correspond to the numbers in the response categories in item e) above.

TABLE 16.--A comparison of the adjustment of normal and emotionally disturbed children as rated by their teachers

	I	II	III	
	Among the Best Adjusted	Among the Average	Among the Poorest	Sum of Rows
Emotionally Disturbed	0 (9.2)	9 (17.0)	24 (6.8)	33
Normal	176 (166.8)	327 (310.0)	130 (103.2)	633
Total	176	327	130	633

$$\chi^2 = 59.56 \text{ with 2 degrees of freedom.}^a$$

^aSignificant at the .005 level.

f) Would you rate this child among the two most maladjusted children in your class?

1) Yes

2) No

In the following contingency table the above response categories were assigned numerical values as follows: 1) = I and 2) = III.

TABLE 17.--A comparison of the extent to which normal and emotionally disturbed children are rated by their teachers as being one of the two most maladjusted children in class

	I	III	
	Yes	No	Sum of Rows
Emotionally Disturbed	18 (2.5)	12 (27.5)	30
Normal	34 (49.5)	562 (546.5)	596
Total	574	52	626

$$\chi^2 = 27.53 \text{ with 1 degree of freedom.}^a$$

^aSignificant at the .005 level.

g) Would you rate this child among the two best adjusted children in your class?

1) Yes

2) No

In the following contingency table the above response categories were assigned numerical values as follows:
1) = I and 2) = III.

TABLE 18.--A comparison of the extent to which normal and emotionally disturbed children are rated by their teachers as being one of the two best adjusted children in class

	I	III	
	Yes	No	Sum of Rows
Emotionally Disturbed	1 (2.29)	29 (29.72)	30
Normal	44 (42.72)	517 (518.28)	543
Total	54	519	573

$$\chi^2 = .83 \text{ with 1 degree of freedom.}^a$$

^a Not significant at the .05 level.

Summary

Each item on the physical and behavior status sections of the teacher rating scale was analyzed by use of the chi square test of significance to determine whether it differentiated between the normal and emotionally disturbed children. The physical and behavior characteristics rated on the items which significantly discriminated are as follows:

1. Weight- The emotionally disturbed children were more frequently over or underweight than were the normal children.
2. Sight- The emotionally disturbed children were more frequently rated as having visual defects than were the normal children.
3. Overly aggressive or defiant- The emotionally disturbed children were more frequently rated as being aggressive or defiant than were the normal children.
4. Adjustment- The emotionally disturbed were more frequently rated as being poorly adjusted than were the normal children.
5. Instructional problems- The emotionally disturbed children were more frequently rated as being instructional problems than were the normal children.
6. One of two most maladjusted- The emotionally disturbed were more frequently rated as being one of the two most maladjusted children in the class.

A pupil's score on the teacher rating scale is the sum of the adjusted scores¹ which he received on the six items which measure the characteristics listed above.

Projective Self Concept Scale

Each item on the PSCS was scored in two ways, viz., self concept level and self concept, ideal self discrepancy.² Two chi squares were computed on each item, one to determine whether there was a significant difference between the self concept levels of the emotionally disturbed and normal children and the other to determine whether there was a significant difference between the self concept, ideal self discrepancies of the emotionally disturbed and normal children.

Self, Ideal Self Discrepancy

Chi squares computed on the items scored in this manner indicated that only one item significantly differentiated between the emotionally disturbed and normal children at the .10 level of confidence. Yates correction for continuity was used when any cell in the contingency table had an expected frequency of less than ten.

Self Concept Level

Chi squares computed on items scored in this manner showed that one item significantly differentiated between the emotionally disturbed and normal children at the .01

¹See page 73.

²See pages 66-68.

level of confidence, five items were significant at the .05 level and five items were significant at the .10 level. Yates correction for continuity was used when any cell had an expected frequency of less than ten. The significant items and the confidence levels appear in table 19.

TABLE 19.--Significant PSCS items

Item	Chi Square	Confidence Level
She is important	13.74	.01
She is clumsy	9.39	.05
She is afraid of what others think of her	10.22	.05
She is alone	7.84	.05
She asks for help	7.72	.05
She acts grown up	9.38	.05
She is told what to do	7.37	.10
She is lazy	6.94	.10
She tells others what worries her	6.70	.10
She gets mad at herself	6.56	.10
She is a leader	6.33	.10

Six of the significant items were those which, for the purposes of this study, had been identified as reflecting negative or undesirable personal attributes and five of the items were those identified as reflecting positive or desirable personal attributes. On each item

the direction of the difference between the emotionally disturbed and normal children was as predicted by the rationale for the PSOS. That is, the emotionally disturbed children saw themselves as more negative on the negative items and less positive on the positive items. The eleven significant self concept level items listed above were summed to obtain a total score on the PSOS for each pupil.

The results of the analysis of the PSOS are consistent with the previous discussion of the superiority of self concept measures over self, ideal self discrepancy measures in predicting appropriate criterion variables.¹

Analysis of Combined Variables

The purpose of the analysis of the data collected in this study was to determine whether multiple regression analysis was superior to Bower's method of assigning weights to the combined independent variables and to determine the effect of certain modifications in the instrumentation upon prediction of the criterion variable.

The point biserial correlation technique was selected for use in the present study. The use of the biserial correlation necessitates making the assumption that the dichotomous variable is, in fact, continuous and is normally distributed. It would be rather difficult to

¹See page 67.

demonstrate that emotional disturbance and mental health exist on a continuum and are normally distributed. In fact, good arguments could be made for the contention that emotional disturbance is not distributed linearly but that there are types or classes of disturbed and healthy individuals whose behaviors and their causes are qualitatively different. Even if one were to present convincing arguments to support the linear distribution of emotional disturbance and mental health, it might be successfully argued that this distribution is not normal but skewed in the direction of mental health, there being disproportionately more individuals falling on the emotionally disturbed end of the continuum.

The point biserial correlation is a more conservative estimate of the relationship between a continuous and a dichotomous variable than is the biserial correlation. If the dichotomous variable were actually linearly and normally distributed, the point biserial correlation would be an underestimate of the relationship between the predictors and the criterion variables.

The following steps were taken in analyzing the data in this study:

Step I

Bower's weights were used to derive a score for each pupil on physical status, behavior status, intelligence, modified sociometric technique, arithmetic achievement, and reading achievement.¹ The data utilized were

¹See pages 31-33.

identical to those to which Bower had assigned weights in his study, with one exception. His self-concept measure was not included because the results which he obtained were very meagre.

A total score was derived for each pupil comprising the sum of the weighted scores for each of the above-named variables. A point biserial coefficient of correlation was computed to determine the relationship between the total weighted scores of the pupils on the one hand and emotional disturbance and normality on the other. The coefficient of correlation was .27. Fisher's test was used to test the null hypothesis that the population correlation was zero. The obtained correlation was significant at the .01 level and thus does not represent a population correlation of zero.

Step II

One half of the sample of emotionally disturbed ($N = 22$) and one half of the sample of normal children ($N = 306$) was randomly selected for analysis. The data on the physical status, behavior status, intelligence, modified sociometric technique, arithmetic achievement and reading achievement were used for analysis. Through use of step-wise regression analysis, a multiple point biserial correlation of .40 was derived. The results of the step-wise multiple regression analysis reported in table 20 indicate the following:

1. Teacher rating of pupil behavior status enters

TABLE 20.--Results of multiple regression analysis - Step II

Variable	F level	Standard error	B coefficient	Standard error of B	Student T	Beta Coefficient
1. Teacher rating of behavior status	39.353	.24742	.01045	.0044	2.363	.4365
2. Arithmetic grade placement	13.379	.24277	-.00327	.0012	-2.656	-.6452
3. Intelligence	3.504	.24183	-.00067	.0005	-1.435	-.2778
4. Class Play	.864	.24188	.00036	.0004	.960	.0781
5. Teacher rating of physical status	.389	.24211	.00519	.0085	.610	.1399
6. Reading grade placement	.007	.24249	-.0009	.0011	-.085	-.0192

first, has a relatively high beta coefficient and an F level which indicates that this variable accounts for much more variance than it contributes to the error term.

2. Arithmetic grade placement enters second, has a relatively high beta weight and has an F level which indicates that it accounts for more of the variance than it contributes to the error term and thus the standard error decreases with the addition of this variable.

3. Intelligence has a considerably lower beta than the other two variables but the F level indicates that this variable accounts for more of the variance than it contributes to the error term and thus the standard error continues to decrease with the addition of this variable.

4. With the addition of each of the remaining variables, more error is added than the variance which is accounted for, thus maximum prediction is achieved with the three variables which entered first, i.e., teacher rating of behavior status, arithmetic grade placement, and intelligence.

The B coefficients derived in the multiple regression analysis for variables one, two and three reported in table 20 were used to derive weighted scores on the remaining half of the sample of emotionally disturbed ($N = 22$) and normal children ($N = 306$). A point bi-

serial coefficient of correlation was computed to determine the extent to which the three weighted variables (teacher rating of pupil behavior status, arithmetic grade placement, and intelligence) were predictive of emotional disturbance and normality. The point biserial correlation was .21, significantly different from zero at the .01 level of confidence.

Step III

One half of the sample of emotionally disturbed (N = 22) and one half of the sample of normal children (N = 306) was randomly selected for analysis. The three independent variables found to be the best predictors of the criterion variable in step two above were included in this analysis plus a total score for each pupil on the eleven items on the PSCS which were found to significantly differentiate between the emotionally disturbed and normal children.¹ In this analysis only those items on the teacher rating of pupil behavior which were found to significantly differentiate between the emotionally disturbed and normal children were used to derive a total score for each pupil on this variable.² The results of this step-wise multiple regression analysis are reported in table 21. These can be interpreted as follows:

1. Teacher rating of pupil behavior status enters first, is the variable which accounts for most of

¹See page 92.

²See page 90.

TABLE 21.--Results of multiple regression analysis--Step III

Variable	F level	Standard error	B coefficient	Standard error of B	Student T	Beta Coefficient
1. Teacher rating of behavior status	46.731	.24121	.03087	.00527	5.84882	.66145
2. Intelligence	9.913	.23767	-.00036	.00072	-.50222	-.15427
3. Arithmetic grade placement	.355	.23793	-.00071	.00127	-.56379	-.14746
4. Projective self concept scale	.286	.23832	-.00042	.00249	-.16915	-.03981

the variance and has a relatively high beta coefficient.

2. Intelligence enters second with a negative relationship to the criterion variable (the emotionally disturbed received lower scores), its contribution to the error variance is smaller than the true variance for which it accounts and it has the next highest beta coefficient.

3. The remaining two variables contribute more to error variance than they account for true variance, as is apparent from the F level and the increase in the standard error term, so that neither of these two independent variables adds to the prediction of the criterion variable.

The B weights derived in the multiple step-wise regression for variables one and two in table 21 were used to predict scores for the remaining half of the sample which had been randomly divided in step three above. A point biserial correlation was computed to determine the relationship between the weighted scores on the teacher rating of behavior status and intelligence on the one hand and emotional disturbance and normality on the other. This analysis yielded a point biserial correlation of .32 which was tested by use of Fisher's test and found to be significantly different from zero at the .01 level of confidence.

The combined weighted scores on the teacher rating

scale and intelligence were ranked and inspected. A weighted score of .1000 was selected as best minimizing the normal and maximizing the emotionally disturbed children receiving a higher score. Selecting .1000 as a cut-off, the following observations were made:

1. 56 of the 279 normal children (20.07%) obtained a score higher than .1000.
2. 15 of the 22 emotionally disturbed children (68%) obtained a score higher than .1000.
3. 22% of all children receiving scores over .1000 were emotionally disturbed. If all children with a score above .1000 had been referred for psychological testing, one of every five referred would have been considered sufficiently emotionally disturbed to warrant referral to a clinic for individual psychotherapy.

Conclusions

The analysis of the data is summarized in table 22. The following conclusions seem justified on the basis of the results of the statistical analyses:

1. The weights derived by Bower, Tashnovian and Larson can be applied to teacher ratings of a pupil's physical and behavior status, arithmetic and reading achievement test scores, intelligence test scores, and scores on "A Class Play" to predict whether a student is emotionally disturbed. The correlation

TABLE 22.--Summary of analysis of data

Step	Point biserial r	Multiple r	F level
Step I	.27* (variables 1-6)		
Bower's weights			
Step II	.21* (variables 1,2,3)	.40	
1. Teacher rating of behavior status			39.353
2. Arithmetic			13.379
3. Intelligence			3.504
4. Class Play			.864
5. Teacher rating of physical status			.389
6. Reading			.007
Step III	.32* (variables 1,2)	.41	
1. Teacher rating of behavior status			46.731
2. Intelligence			9.913
3. Arithmetic			.355
4. FSCS			.286

*significantly different from zero at the .01 level
of confidence

between such weights and emotional disturbance is significant but so low (.27, accounting for only seven percent of the variance) and the time involved in collecting data on the six variables so extensive as to render their use questionable in identifying emotionally disturbed children in the elementary school.

2. A step-wise multiple regression analysis of teacher ratings of pupils' physical and behavior status, reading and arithmetic test scores, intelligence test scores and scores on "A Class Play" as predictors of emotional disturbance, revealed that teacher ratings of behavior status, arithmetic test scores, and intelligence test scores are the best predictors of emotional disturbance. Weighted scores on these three best predictors correlated .21 with the criterion variable. This is a significant but low level correlation (accounting for only four percent of the variance) and the time involved in collecting data on the six variables is so extensive as to render their use questionable in identifying emotionally disturbed children in the elementary school.

3. A step-wise regression analysis of teacher ratings of selected items on the teacher rating of behavior status, arithmetic test scores, intelligence test scores on selected items on the Projective Self

Concept Scale revealed that teacher ratings and intelligence were the best predictors of emotional disturbance. Weighted scores on these two variables correlated .32 with the criterion variable. This is a significant but low level correlation (accounting for only ten percent of the variance). However, in view of the ease with which data can be collected on these two variables and the fact that they are predictive, their use is desirable in identifying emotionally disturbed children in the elementary school.

Limitations of the Study

The Criterion Measure

The judgments of school psychologists were used as the criterion for emotional disturbance. These judgments undoubtedly varied from psychologist to psychologist. The students identified as emotionally disturbed in the present study were those whom the psychologists identified, in the course of their daily function in the schools, as being sufficiently emotionally disturbed to require treatment by the community child guidance clinic. If one were to attempt to replicate the present study, one would never be sure that the criterion group in the replication matched the criterion group in the present study. However, there are several reasons which would appear to make the procedure in this study defensible.

1. The ultimate criterion in almost all standardized, replicable measurements of emotional disturbance is clinical judgment. The validity of an instrument for measuring emotional disturbance is typically dependent, in the identification of items, in identifying factors relevant to mental health and in establishing the validity of the completed instrument, upon the judgments of clinicians.

The major deficiency in the criterion measure

in the present study is not that the judgments of psychologists were used but that the criteria which they used were not explicitly stated. Economy and practical considerations in a public school system rendered it impossible to initiate an individual diagnostic survey of the current student body in grades four, five and six to identify those who were emotionally disturbed. It was necessary to select a number of those emotionally disturbed children who had already been identified by psychologists in the daily course of their diagnostic testing.

2. The purpose of the current research was to study techniques for identifying children whom psychologists would identify as emotionally disturbed in the typical school setting. Those children identified as emotionally disturbed in the present study are those who would likely be identified as emotionally disturbed by a school psychologist in a typical school setting and referred to and accepted for treatment by a community child guidance clinic.

Circularity of the Criterion Measure and the Teacher Rating Scale

One of the instruments used to identify the emotionally disturbed children was a teacher rating scale. Use of teacher ratings introduces a certain amount of circularity into the results. Teachers referred most of the children who were identified as emotionally disturbed by

the criterion measure and then were called upon to rate the same children on behavioral characteristics thought to be related to emotional disturbance. The teacher rating scale may have been effective not only because teachers were especially adept at identifying the emotionally disturbed but because the children initially referred to the school psychologists were the types of children who tend to be identified by teachers as emotionally disturbed. The effect which this might have upon the discriminatory adequacy of the teacher rating scale tends to be reduced, however, by the following considerations:

1. Some of the emotionally disturbed children were identified by the local child guidance clinic as a result of direct referrals from parents.
2. A number of the emotionally disturbed children no longer had the teacher who had initially referred them to the psychological services department.
3. Many pupils identified by the teachers as having emotional problems were not considered by the psychologists to be sufficiently emotionally disturbed to warrant referral for treatment so they appear in the normal rather than the emotionally disturbed group.
4. Some of the emotionally disturbed children in the present study had been referred to psychological services because of reasons other than the fact that the teacher suspected emotional disturbance and

the school psychologist recognized the presence of emotional disturbance.

Failure to Cross-validate Weights

Selected items from the Projective Self Concept Scale and the teacher rating scale were used in the final analysis. These items were selected because they significantly differentiated between the emotionally disturbed and normal children in the present study. These significant items were then included as independent variables in the final multiple regression analysis (Step III) conducted on the same sample which was used in identifying the significant items on the Projective Self Concept Scale and the teacher rating scale. This criticism is particularly applicable to the teacher rating scale inasmuch as it was retained for prediction of the scores used in the point biserial correlation with the criterion variable in Step III.¹ The sample of emotionally disturbed children was not large enough to be divided into three groups to allow for identifying the significant items, determining weights through multiple regression and cross-validating these weights on separate samples.

Projective Self Concept Scale

Item Selection

The final fifty items used in the present study were selected from an initial pool of 112 items on an a priori

¹See pages 98-101.

basis to represent Edward's need categories.¹ It would have been desirable to retain all of the 112 items in the study and select those for the final analysis which were the most reliable and valid.

Response Set

No effort was made to study item format as it related to response set. For example, the extent to which response set resulted in a subject choosing the same response on both parts of an item stem is not known. To the extent that such a response set was operative, to that extent the discrepancy between self concept and ideal self on items was decreased and contributed to the negligible results.

The Criterion Groups

There were undoubtedly a number of emotionally disturbed children in the normal group who had not been identified. During a three year period (1959-1962) eleven children initially included in the normal group were identified as emotionally disturbed. There were undoubtedly others in the normal group in 1962 who were emotionally disturbed but who had not yet been identified. To the extent that emotionally disturbed children were included in the normal group in the final analysis and to the extent that they scored like the emotionally disturbed on the measuring instruments, they caused the instruments to appear to be less discriminative than they actually were.

¹See page 62.

Although individually testing each child in the total sample to more accurately determine the number of emotionally disturbed would have been desirable, it was impossible because of the demands it would have made in terms of time and money.

Multiple Regression With a Small Sample

The sample of emotionally disturbed children ($N=22$) used in the present study is extremely small for use in multiple prediction. Since computing a multiple correlation through the least squares solution capitalizes upon any chance errors which favor high multiple correlation, the chance of sampling error producing a spuriously high correlation are much greater with a small sample (21). The limitations of the small sample are largely negated, however, by applying the regression weights in a new sample and cross-validating the weights derived in the multiple regression analysis.

Implications for Further Research

1. There were children in the present study who were included in the normal criterion group whose weighted scores on the independent variables were more like those of the emotionally disturbed. Individual analysis of these children would provide evidence as to whether they were actually emotionally disturbed but had not been identified by the school or guidance clinic psychologists.
2. Some of the emotionally disturbed children obtained weighted scores on the independent variables which were more like those of the normal children than they were like the rest of the emotionally disturbed children. Further individual study of these children might reveal the reason that the independent variables failed to identify them as emotionally disturbed. Such an analysis might suggest the need for additional types of measuring instruments to identify certain types of emotionally disturbed children.
3. The evidence in the present study that most of the measuring instruments used by Bower to identify emotionally disturbed children were of little value, may reflect upon the methods of identifying the criterion group of emotionally disturbed children as much as it reflects directly upon the instruments. It may be that emotionally disturbed children who are accepted as clients at a child guidance clinic are a very heterogeneous group and

that instruments appropriate for the identification of some subgroups within this larger group are inappropriate for other subgroups. Such subgroup labels as "childhood autism", "character disorder", "neurosis", and "school phobia" have been efforts at identifying behavior syndromes which distinguish certain emotionally disturbed subgroups from other subgroups. Further efforts are needed to describe the nature of emotional disturbance and to determine whether children referred for psychotherapy are so heterogeneous as to negate any attempt at classifying them as a single group.

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APPENDIX I

THINKING ABOUT YOURSELF

Form A
For Boys

Prepared by Carl A. Larson and Eli M. Bower
California State Department of Education, Sacramento

The questions in this booklet will make you think about yourself. Because all of you like different things, each of you will probably answer the questions differently. What you say will help us to find out what boys like you are thinking and wishing. Do your best to make your answer to each question tell what you really think and really wish.

Name _____
Age _____ School District _____
School _____
Grade in School _____ Date _____

HOW TO ANSWER THE QUESTIONS IN THIS BOOKLET

This is an EXAMPLE of
the questions you will
be asked to answer: Always Frequently Seldom Never

This boy is usually
picked first to play on
a team.

1. Are you like him?	1	2	3	4
2. Do you want to be like him?	5	6	7	8

In answering the first question, "Are you like him?"- you can place an X in any one of the four boxes. If you feel you are like this boy always, place the X in Box 1. If you feel you are like this boy frequently, place an X in Box 2. If on the other hand you feel you are like this

boy seldom, place the X in Box 3. If you feel you are never picked first to play on a team, place the X in Box 4.

In answering the second question, you have to think about what you want to be and put an X in the box which would be most true for you. If you would like to someone who is picked first always, place the X in Box 5. If you would like to be picked first frequently, place the X in Box 6. If on the other hand you would like to be this boy seldom, place the X in Box 7. If you don't care at all and would never like to be chosen first, place an X in Box 8.

Now try to complete the two examples below-

This boy likes to do
daring things.

Always Frequently Seldom Never

1. Are you like him?
2. Do you want to be
like him?

This boy worries about
tests.

1. Are you like him?
2. Do you want to be
like him?

If you still don't understand how to answer the questions, raise your hand. Also, if you need help later on, raise your hand. Your teacher will give you the help you need.

Now turn the page and begin.

	<u>Always</u>	<u>Frequently</u>	<u>Seldom</u>	<u>Never</u>
1. This boy has bad dreams				
Are you like him?	_____	_____	_____	_____
Do you want to be like him?	_____	_____	_____	_____
2. This boy likes to tease girls.				
Are you like him?	_____	_____	_____	_____
Do you want to be like him?	_____	_____	_____	_____
3. This boy hates school.				
Are you like him?	_____	_____	_____	_____
Do you want to be like him?	_____	_____	_____	_____
4. This boy thinks his mother doesn't like him.				
Are you like him?	_____	_____	_____	_____
Do you want to be like him?	_____	_____	_____	_____
5. This boy has lots of spending money.				
Are you like him?	_____	_____	_____	_____
Do you want to be like him?	_____	_____	_____	_____

6. This boy gets in
trouble in school.

Are you like him? _____

Do you want to be
like him? _____

7. This boy can go to
the movies any time
he likes.

Are you like him? _____

Do you want to be
like him? _____

8. This boy is happy.

Are you like him? _____

Do you want to be
like him? _____

9. This boy would like
to be a girl.

Are you like him? _____

Do you want to be
like him? _____

10. This boy is afraid
of teachers.

Are you like him? _____

Do you want to be
like him? _____

Always Frequently Seldom Never

11. This boy plays
with his dad.

Are you like him? _____

Do you want to be
like him? _____

12. This boy gets to
class late.

Are you like him? _____

Do you want to be
like him? _____

13. This boy would
rather play with girls
than with boys.

Are you like him? _____

Do you want to be
like him? _____

14. This boy is asked
by the teacher to be in
charge when the teacher
leaves the room.

Are you like him? _____

Do you want to be
like him? _____

15. This boy tells his
parents when he worries.

Are you like him? _____

Do you want to be
like him? _____

Always Frequently Seldom Never

16. This boy wishes he
were grown up right
now.

Are you like him? _____

Do you want to be
like him? _____

17. This boy likes to
play with younger
children.

Are you like him? _____

Do you want to be
like him? _____

18. This boy gets good
marks in his school
work.

Are you like him? _____

Do you want to be
like him? _____

19. This boy cries
easily.

Are you like him? _____

Do you want to be
like him? _____

20. This boy picks on
smaller children.

Are you like him? _____

Do you want to be
like him? _____

Always Frequently Seldom Never

21. This boy would quit school if he could.

Are you like him? _____

Do you want to be like him? _____

22. This boy gets upset.

Are you like him? _____

Do you want to be like him? _____

23. This boy likes to play by himself.

Are you like him? _____

Do you want to be like him? _____

24. This boy wants his teacher to like him.

Are you like him? _____

Do you want to be like him? _____

25. This boy likes to stay in bed late in the morning.

Are you like him? _____

Do you want to be like him? _____

Always Frequently Seldom Never

26. This boy hates dogs.

Are you like him? _____

Do you want to be
like him? _____

27. This boy plays games
better than other boys
his age.

Are you like him? _____

Do you want to be
like him? _____

28. This boy feels that
teachers treat other
children better than they
do him.

Are you like him? _____

Do you want to be
like him? _____

29. This boy would like to
run away from home.

Are you like him? _____

Do you want to be
like him? _____

30. This boy gets angry
easily.

Are you like him? _____

Do you want to be
like him? _____

Always Frequently Seldom Never

31. This boy gets invited
to many parties.

Are you like him? _____

Do you want to be
like him? _____

32. This boy is the best-
liked boy in his room.

Are you like him? _____

Do you want to be
like him? _____

33. This boy is made to
study at home.

Are you like him? _____

Do you want to be
like him? _____

34. This boy gets tired
easily.

Are you like him? _____

Do you want to be
like him? _____

35. This boy is a sissy.

Are you like him? _____

Do you want to be
like him? _____

Always Frequently Seldom Never

36. This boy is the
leader of the class.

Are you like him? _____

Do you want to be
like him? _____

37. This boy is afraid
of his father.

Are you like him? _____

Do you want to be
like him? _____

38. This boy has trouble
going to sleep.

Are you like him? _____

Do you want to be
like him? _____

39. This boy thinks that
most of the children
like him.

Are you like him? _____

Do you want to be
like him? _____

40. This boy can stay
up at night as long as
he wants to.

Are you like him? _____

Do you want to be
like him? _____

Always Frequently Seldom Never

41. This boy likes to sit and daydream.

Are you like him? _____

Do you want to be like him? _____

42. This boy would like to be famous.

Are you like him? _____

Do you want to be like him? _____

43. This boy thinks his mother picks on him.

Are you like him? _____

Do you want to be like him? _____

44. This boy is afraid of the dark.

Are you like him? _____

Do you want to be like him? _____

45. This boy worries about school.

Are you like him? _____

Do you want to be like him? _____

Always Frequently Seldom Never

46. This boy feels like
hurting other children.

Are you like him? _____

Do you want to be
like him? _____

47. This boy likes to be
a bad boy in school.

Are you like him? _____

Do you want to be
like him? _____

48. This boy likes to
play with older child-
ren.

Are you like him? _____

Do you want to be
like him? _____

49. This boy's mother
treats him like a baby.

Are you like him? _____

Do you want to be
like him? _____

50. This boy's father
spanks him.

Are you like him? _____

Do you want to be
like him? _____

Always Frequently Seldom Never

51. This boy feels that
his teacher likes him.

Are you like him? _____

Do you want to be
like him? _____

52. This boy likes to
play with dolls.

Are you like him? _____

Do you want to be
like him? _____

53. This boy wants to be
a stunt flyer.

Are you like him? _____

Do you want to be
like him? _____

APPENDIX II

A CLASS PLAY

Just imagine your class was going to put on a play and you are selected to direct it. Below you will see the kinds of parts that will be needed for this play. As director of the play, you have the responsibility of selecting any boy or girl in your class for any of the parts. Since many of the parts are very small, you may, if you wish, select the same boy or girl for more than one part.

In order to make this play successful, and a lot of fun, you will need to choose boys and girls who you think would be most natural for the part. Make your choices carefully, and, if you have any questions about the meaning of a word or anything else, be sure to ask your teacher.

Section I

THESE ARE THE PARTS

- Part 1 - The Hero--Someone who is good in sports and in school work. _____
- Part 2 - Someone who is often mean and gets into fights a great deal (Boy or Girl) _____
- Part 3 - The Heroine--Someone who gets along well with other boys and girls and with the teacher. _____
- Part 4 - Someone who is always getting angry about little things. _____

- Part 5 - Someone who could be the hero's friend--a
kind, helpful boy or girl. _____
- Part 6 - Someone who could play the part of a bully--
picks on boys and girls smaller or weaker
than himself. _____
- Part 7 - Someone who has a good sense of humor but is
always careful not to disturb the teacher or
the class. _____
- Part 8 - Someone who could play the part of a person
who doesn't ever say anything. _____
- Part 9 - Someone who is never mean and always friendly.

- Part 10- Someone who could act like the laziest person
in the world--never does anything. _____
- Part 11- A boy or girl you would choose to be in charge
when the teacher left the room. _____
- Part 12- This person knows all the answers and usually
works alone. _____

APPENDIX III

ADJUSTMENT INDEX SUMMARY

Grades 4, 5, & 6

Name of Child _____ Birthdate _____

Age _____ Grade _____ School _____

Sex _____ Number of Siblings _____ Age of Siblings _____

A. California Test of Mental Maturity, Short Form.
Elementary Series, Grades 4-8 (Time, 50 minutes.)

Date Administered: _____ 1) Language IQ _____

2) Non-Language IQ _____

3) Full IQ _____

B. California Achievement Test:

Date Administered: _____ 1) Reading Grade Placement
(35 min) _____

Date Administered: _____ 2) Arithmetic Grade Place-
ment (60) _____

C. The Class Play (Time, 15
min)

1) Section I _____

2) Section II _____

D. Total absences in last four-month period (includes
excused and unexcused) _____

E. Specific Job Description of Father or Guardian i.e.,
kindergarten teacher, production machinist, architect-
ural draftsman: _____

F. Physical status as compared to others in class
(please place the number of the appropriate word
or phrase on the line to the right.)

- a) Height --1) very short 2) short 3) average
4) tall 5) very tall _____
- b) Weight --1) greatly under weight 2) under-
weight 3) average 5) overweight 5) great-
ly overweight _____
- c) Sight --(with or without glasses) 1) appears
normal 2) some difficulty 3) marked dif-
ficulty _____
- d) Hearing--1) appears normal 2) some difficul-
ty 3) marked difficulty _____
- e) Speech --1) appears normal 2) some difficul-
ty 3) marked difficulty _____
- f) Does this child have any marked physical abnormal-
ity _____ Yes _____ No. If yes, please explain:

G. Rating by teacher (please place the number of the ap-
propriate word or phrase on the line to the right.)

- a) Is this child overly aggressive or defiant?
1) seldom or never 2) not very often 3) quite
often 4) most of the time _____
- b) Is this child overly withdrawn or timid?
1) seldom or never 2) not very often 3) quite
often 4) most of the time _____
- c) Is this child a control problem in his present
group?
1) seldom or never 2) not very often 3) quite
often 4) most of the time _____
- d) Is this child an instructional problem in his
present group?
1) seldom or never 2) not very often 3) quite
often 4) most of the time _____

e) Where would you rate this child's adjustment with respect to your present group?

- 1) among the best adjusted 2) among the average
3) among the poorest _____

f) Would you rate this child among the two most maladjusted children in your class?

- 1) Yes 2) No _____

g) Would you rate this child among the two best adjusted children in your class?

- 1) Yes 2) No _____

APPENDIX IV

PROJECTIVE SELF CONCEPT SCALE

TEST INSTRUCTIONS

1. This test is not timed; however, all of the students should finish it in less than one hour. It is, therefore, recommended that papers be collected either within an hour or before that if everyone has completed all items of the test.
2. If you have some students who have difficulty in reading, you may help them with those items which they do not understand. If it is necessary for the teacher to read a great many items to a particular student, this information should be indicated at the top of his test booklet. It is expected that some students will be unable to complete the form because they are non-readers.

Instructions to the class:

The following instructions are to read to the class after each student has printed his or her name, age, and today's date at the top of the sheet. Be sure that the boys have the "He" form and the girls, the "She" form of the test.

The following is to be read aloud to the students:

THIS IS AN EASY TEST BECAUSE IT IS A TEST OF IMAGINATION.
I WANT EACH OF THE BOYS TO THINK OF A MAKE-BELIEVE BOY AND
EACH OF THE GIRLS TO THINK OF A MAKE-BELIEVE GIRL. ARE
YOU THINKING OF ONE? (pause) THE QUESTIONS IN YOUR TEST
BOOKLET ASK ABOUT YOUR MAKE-BELIEVE BOY OR GIRL. THEY
ASK WHAT HE OR SHE IS LIKE AND WHAT HE OR SHE WANTS TO BE
LIKE. NOW LOOK AT THE FIRST EXAMPLE ON THE FRONT OF YOUR
QUESTION BOOKLET AND READ ALONG WITH ME:

HE (OR SHE) IS KIND

- A) ALWAYS
- B) MOST OF THE TIME
- C) SOME OF THE TIME
- D) NEVER

IF YOU THINK THAT HE (OR SHE) IS ALWAYS KIND, PUT A CIRCLE AROUND THE WORD, ALWAYS. IF YOU THINK THAT HE (OR SHE) IS KIND MOST OF THE TIME, PUT A CIRCLE AROUND MOST OF THE TIME. IF YOU THINK HE (OR SHE) IS KIND SOME OF THE TIME, PUT A CIRCLE AROUND SOME OF THE TIME. IF YOU THINK THAT HE (OR SHE) IS NEVER KIND, PUT A CIRCLE AROUND THE WORD, NEVER.

THE NEXT QUESTION ASKS ABOUT THE WAY HE OR SHE WANTS TO BE.

HE (OR SHE) WANTS TO BE KIND

- A) ALWAYS
- B) MOST OF THE TIME
- C) SOME OF THE TIME
- D) NEVER

IF YOU THINK THAT HE (OR SHE) WANTS TO BE KIND ALWAYS, CIRCLE THE WORD ALWAYS. IF YOU THINK THAT HE (OR SHE) WANTS TO BE KIND MOST OF THE TIME, CIRCLE MOST OF THE TIME. IF YOU THINK THAT HE (OR SHE) WANTS TO BE KIND SOME OF THE TIME, CIRCLE SOME OF THE TIME. IF YOU THINK THAT HE (OR SHE) NEVER WANTS TO BE KIND, CIRCLE THE WORD NEVER.

To the teacher:

Repeat the process described above for the remaining examples:

2. He (or she) is well dressed
 - a) always
 - b) most of the time
 - c) some of the time
 - d) never

He (or she) wants to be well dressed.

- a) always
- b) most of the time
- c) some of the time
- d) never

3. He (or she) is a show-off.

- a) always
- b) most of the time
- c) some of the time
- d) never

He (or she) wants to be a show-off.

- a) always
- b) most of the time
- c) some of the time
- d) never

When the students appear to understand how to proceed, they should be instructed as follows:

NOW OPEN YOUR TEST BOCKLETS AND BEGIN WORKING. BE SURE TO KEEP WORKING UNTIL YOU HAVE COMPLETED ALL OF THE QUESTIONS IN YOUR BOCKLET. IF THERE ARE SOME WORDS YOU DO NOT KNOW, YOU MAY RAISE YOUR HAND; AND I WILL TRY TO ANSWER YOUR QUESTION. GO AHEAD.

NAME _____ AGE _____ DATE _____

EXAMPLES

1. He is kind

- a) always
- b) most of the time
- c) some of the time
- d) never

He wants to be kind

- a) always
- b) most of the time
- c) some of the time
- d) never

2. He is well dressed

- a) always
- b) most of the time
- c) some of the time
- d) never

He wants to be well dressed

- a) always
- b) most of the time
- c) some of the time
- d) never

3. He is a show-off

- a) always
- b) most of the time
- c) some of the time
- d) never

He wants to be a show-off

- a) always
- b) most of the time
- c) some of the time
- d) never

1. He is sad

- a) always
- b) most of the time
- c) some of the time
- d) never

He wants to be sad

- a) always
- b) most of the time
- c) some of the time
- d) never

2. He is shy

- a) always
- b) most of the time
- c) some of the time
- d) never

He wants to be shy

- a) always
- b) most of the time
- c) some of the time
- d) never

3. He asks for help

- a) always
- b) most of the time
- c) some of the time
- d) never

He wants to ask for help

- a) always
- b) most of the time
- c) some of the time
- d) never

4. He wins

- a) always
- b) most of the time
- c) some of the time
- d) never

He wants to win

- a) always
- b) most of the time
- c) some of the time
- d) never

5. He makes up his own mind

- a) always
- b) most of the time
- c) some of the time
- d) never

He wants to make up his own mind

- a) always
- b) most of the time
- c) some of the time
- d) never

6. He is alone

- a) always
- b) most of the time
- c) some of the time
- d) never

He wants to be alone

- a) always
- b) most of the time
- c) some of the time
- d) never

7. He fails

- a) always
- b) most of the time
- c) some of the time
- d) never

He wants to fail

- a) always
- b) most of the time
- c) some of the time
- d) never

8. He is loved

- a) always
- b) most of the time
- c) some of the time
- d) never

He wants to be loved

- a) always
- b) most of the time
- c) some of the time
- d) never

9. He is afraid

- a) always
- b) most of the time
- c) some of the time
- d) never

He wants to be afraid

- a) always
- b) most of the time
- c) some of the time
- d) never

10. He is popular

- a) always
- b) most of the time
- c) some of the time
- d) never

He wants to be popular

- a) always
- b) most of the time
- c) some of the time
- d) never

11. He is clumsy

- a) always
- b) most of the time
- c) some of the time
- d) never

He wants to be clumsy

- a) always
- b) most of the time
- c) some of the time
- d) never

12. He is good-looking

- a) always
- b) most of the time
- c) some of the time
- d) never

He wants to be good-looking

- a) always
- b) most of the time
- c) some of the time
- d) never

13. He obeys

- a) always
- b) most of the time
- c) some of the time
- d) never

He wants to obey

- a) always
- b) most of the time
- c) some of the time
- d) never

14. He is neat

- a) always
- b) most of the time
- c) some of the time
- d) never

He wants to be neat

- a) always
- b) most of the time
- c) some of the time
- d) never

15. He acts like most people

- a) always
- b) most of the time
- c) some of the time
- d) never

He wants to act like most people

- a) always
- b) most of the time
- c) some of the time
- d) never

16. He is afraid of what others think about him

- a) always
- b) most of the time
- c) some of the time
- d) never

He wants to be afraid of what others think of him

- a) always
- b) most of the time
- c) some of the time
- d) never

17. He cheats

- a) always
- b) most of the time
- c) some of the time
- d) never

He wants to cheat

- a) always
- b) most of the time
- c) some of the time
- d) never

18. He is told what to do

- a) always
- b) most of the time
- c) some of the time
- d) never

He wants to be told what to do

- a) always
- b) most of the time
- c) some of the time
- d) never

19. He trusts people

- a) always
- b) most of the time
- c) some of the time
- d) never

He wants to trust people

- a) always
- b) most of the time
- c) some of the time
- d) never

20. He blames others when things go wrong

- a) always
- b) most of the time
- c) some of the time
- d) never

He wants to blame others when things go wrong

- a) always
- b) most of the time
- c) some of the time
- d) never

21. He gets mad at himself

- a) always
- b) most of the time
- c) some of the time
- d) never

He wants to get mad at himself

- a) always
- b) most of the time
- c) some of the time
- d) never

22. He makes mistakes

- a) always
- b) most of the time
- c) some of the time
- d) never

He wants to make mistakes

- a) always
- b) most of the time
- c) some of the time
- d) never

23. He is friendly

- a) always
- b) most of the time
- c) some of the time
- d) never

He wants to be friendly

- a) always
- b) most of the time
- c) some of the time
- d) never

24. He is important

- a) always
- b) most of the time
- c) some of the time
- d) never

He wants to be important

- a) always
- b) most of the time
- c) some of the time
- d) never

25. He is best in whatever
he does

- a) always
- b) most of the time
- c) some of the time
- d) never

He wants to be best in
whatever he does

- a) always
- b) most of the time
- c) some of the time
- d) never

26. He blames himself when
things go wrong

- a) always
- b) most of the time
- c) some of the time
- d) never

He wants to blame him-
self when things go wrong

- a) always
- b) most of the time
- c) some of the time
- d) never

27. He tells others what
worries him

- a) always
- b) most of the time
- c) some of the time
- d) never

He wants to tell others
what worries him

- a) always
- b) most of the time
- c) some of the time
- d) never

28. He is angry

- a) always
- b) most of the time
- c) some of the time
- d) never

He wants to be angry

- a) always
- b) most of the time
- c) some of the time
- d) never

29. He pretends he is
someone else

- a) always
- b) most of the time
- c) some of the time
- d) never

He wants to pretend he
is someone else

- a) always
- b) most of the time
- c) some of the time
- d) never

30. He worries

- a) always
- b) most of the time
- c) some of the time
- d) never

He wants to worry

- a) always
- b) most of the time
- c) some of the time
- d) never

31. He gives up easily

- a) always
- b) most of the time
- c) some of the time
- d) never

He wants to give up easily

- a) always
- b) most of the time
- c) some of the time
- d) never

32. He feels left out

- a) always
- b) most of the time
- c) some of the time
- d) never

He wants to feel left out

- a) always
- b) most of the time
- c) some of the time
- d) never

33. He is healthy

- a) always
- b) most of the time
- c) some of the time
- d) never

He wants to be healthy

- a) always
- b) most of the time
- c) some of the time
- d) never

34. He makes excuses

- a) always
- b) most of the time
- c) some of the time
- d) never

He wants to make excuses

- a) always
- b) most of the time
- c) some of the time
- d) never

35. He has friends

- a) always
- b) most of the time
- c) some of the time
- d) never

He wants to have friends

- a) always
- b) most of the time
- c) some of the time
- d) never

36. He is proud of himself

- a) always
- b) most of the time
- c) some of the time
- d) never

He wants to be proud of himself

- a) always
- b) most of the time
- c) some of the time
- d) never

37. He is good

- a) always
- b) most of the time
- c) some of the time
- d) never

He wants to be good

- a) always
- b) most of the time
- c) some of the time
- d) never

38. He is a hard worker

- a) always
- b) most of the time
- c) some of the time
- d) never

He wants to be a hard worker

- a) always
- b) most of the time
- c) some of the time
- d) never

39. He gets in trouble

- a) always
- b) most of the time
- c) some of the time
- d) never

He wants to get in trouble

- a) always
- b) most of the time
- c) some of the time
- d) never

40. He acts grown-up

- a) always
- b) most of the time
- c) some of the time
- d) never

He wants to act grown-up

- a) always
- b) most of the time
- c) some of the time
- d) never

41. He has new ideas

- a) always
- b) most of the time
- c) some of the time
- d) never

He wants to have new ideas

- a) always
- b) most of the time
- c) some of the time
- d) never

42. He needs help

- a) always
- b) most of the time
- c) some of the time
- d) never

He wants to need help

- a) always
- b) most of the time
- c) some of the time
- d) never

43. He is a leader

- a) always
- b) most of the time
- c) some of the time
- d) never

He wants to be a leader

- a) always
- b) Most of the time
- c) some of the time
- d) never

44. He is strong

- a) always
- b) most of the time
- c) some of the time
- d) never

He wants to be strong

- a) always
- b) most of the time
- c) some of the time
- d) never

45. He does the right thing

- a) always
- b) most of the time
- c) some of the time
- d) never

He wants to do the right thing

- a) always
- b) most of the time
- c) some of the time
- d) never

46. He is trusted

- a) always
- b) most of the time
- c) some of the time
- d) never

He wants to be trusted

- a) always
- b) most of the time
- c) some of the time
- d) never

47. He is happy

- a) always
- b) most of the time
- c) some of the time
- d) never

He wants to be happy

- a) always
- b) most of the time
- c) some of the time
- d) never

48. He is mean

- a) always
- b) most of the time
- c) some of the time
- d) never

He wants to be mean

- a) always
- b) most of the time
- c) some of the time
- d) never

49. He tries hard

- a) always
- b) most of the time
- c) some of the time
- d) never

He wants to try hard

- a) always
- b) most of the time
- c) some of the time
- d) never

50. He is lazy

- a) always
- b) most of the time
- c) some of the time
- d) never

He wants to be lazy

- a) always
- b) most of the time
- c) some of the time
- d) never

APPENDIX V

1. ach Achievement: to do one's best, to be successful, to accomplish tasks requiring skill and effort, to be a recognized authority, to accomplish something of great significance, to do a difficult job well, to solve difficult problems and puzzles, to be able to do things better than others, to write a great novel or play.

2. def Deference: to get suggestions from others, to find out what others think to follow instructions and do what is expected, to praise others, to tell others that they have done a good job, to accept the leadership of others, to read about great men, to conform to custom and avoid the unconventional, to let others make decisions.

3. ord Order: to have written work neat and organized, to make plans before starting on a difficult task, to have things organized, to keep things neat and orderly, to make advance plans when taking a trip, to organize details of work, to keep letters and files according to some system, to have meals organized and a definite time of eating, to have things arranged so that they run smoothly without change.

4. exh Exhibition: to say witty and clever things, to tell amusing jokes and stories, to talk about personal adventures and experiences, to have others notice and comment upon one's appearance, to say things just to see what effect it will have on others, to talk about personal achievements, to be the center of attention, to use words that others do not know the meaning of, to ask questions others cannot answer.

5. aut Autonomy: to be able to come and go as desired, to say what one thinks about things, to be independent of others in making decisions, to feel free to do what one wants, to do things that are unconventional, to avoid situations where one is expected to conform, to do things without regard to what others may think, to criticize those in positions of authority, to avoid responsibilities and obligations.

6. aff Affiliation: to be loyal to friends, to participate in friendly groups, to do things for friends, to form new friendships, to make as many friends as possible, to share things with friends, to do things with friends rather than alone, to form strong attachments, to write letters to friends.

7. int Intreception: to analyze one's motives and feelings, to observe others, to understand how others feel about problems, to put one's self in another's place, to judge people by why they do things rather than by what they do, to analyze the behavior of others, to predict how others will act.

8. suc Succorance: to have others provide help when in trouble, to seek encouragement from others, to have others be kindly, to have others be sympathetic and understanding about personal problems, to receive a great deal of affection from others, to have others do favors cheerfully, to be helped by others when depressed, to have others feel sorry when one is sick, to have a fuss made over one when hurt.

9. dom Dominance: to argue for one's point of view, to be a leader in groups to which one belongs, to be regarded by others as a leader, to be elected or appointed chairman of committees, to make group decisions, to settle arguments and disputes between others, to persuade and influence others to do what one wants, to supervise and direct the actions of others, to tell others how to do their jobs.

10. aba Abasement: to feel guilty when one does something wrong, to accept blame when things do not go right, to feel that personal pain and misery suffered does more good than harm, to feel the need for punishment for wrong doing, to feel better when giving in and avoiding a fight than when having one's own way, to feel the need for confession of errors, to feel depressed by inability to handle situations, to feel timid in the presence of superiors, to feel inferior to others in most respects.

11. nur Nurturance: to help friends when they are in trouble, to assist others less fortunate, to treat others with kindness and sympathy, to forgive others, to do small favors for others, to be generous with others, to sympathize with others who are hurt or sick, to show a great deal of affection toward others, to have others confide in one about personal problems.

12. chg Change: to do new and different things, to travel, to meet new people, to experience novelty and change in daily routine, to experiment and try new things, to eat in new and different places, to try new and different jobs, to move about the country and live in different places, to participate in new fads and fashions.

13. end Endurance: to keep at a job until it is finished, to complete any job undertaken, to work hard at a task, to keep at a puzzle or problem until it is solved, to work at a single job before taking on others, to stay up late working in order to get a job done, to put in long hours of work without distraction, to stick at a problem even though it may seem as if no progress is being made, to avoid being interrupted while at work.

14. het Heterosexuality: to go out with members of the opposite sex, to engage in social activities with the opposite sex, to be in love with someone of the opposite sex, to kiss those of the opposite sex, to be regarded as physically attractive by those of the opposite sex, to participate in discussions about sex, to read books and plays involving sex, to listen to or to tell jokes involving sex, to become sexually excited.

15. agg Aggression: to attack contrary points of view, to tell others what one thinks about them, to criticize others publicly, to make fun of others, to tell others off when disagreeing with them, to get revenge for insults, to become angry, to blame others when things go wrong, to read newspaper accounts of violence.

APPENDIX VI

POSITIVE AND NEGATIVE PSCS ITEMS

<u>Positive</u>	<u>Negative</u>
3. He asks for help	1. He is sad
4. He wins	2. He is shy
5. He makes up his own mind	6. He is alone
8. He is loved	7. He fails
10. He is popular	9. He is afraid
12. He is good-looking	11. He is clumsy
13. He obeys	16. He is afraid of what others think about him
14. He is neat	17. He cheats
15. He acts like most people	18. He is told what to do
19. He trusts people	20. He blames others when things go wrong
23. He is friendly	21. He gets mad at himself
24. He is important	22. He makes mistakes
25. He is best in whatever he does	26. He blames himself when things go wrong
27. He tells others what worries him	28. He is angry
33. He is healthy	29. He pretends he is someone else
35. He has friends	30. He worries
36. He is proud of himself	31. He gives up easily
37. He is good	32. He feels left out
38. He is a hard worker	34. He makes excuses
40. He acts grown-up	39. He gets in trouble
41. He has new ideas	42. He needs help
43. He is a leader	48. He is mean

PositiveNegative

44. He is strong

50. He is lazy

45. He does the right thing

46. He is trusted

47. He is happy

49. He tries hard

APPENDIX VII

A CLASS PLAY (MODIFIED)

Just imagine your class was going to put on a play and you are selected to direct it. Below you will see the kinds of parts that will be needed for this play. As director of the play, you have the responsibility of selecting any boy or girl in your class for any of the parts. Since many of the parts are very small, you may, if you wish, select the same boy or girl for more than one part.

In order to make this play successful, and a lot of fun, you will need to choose boys and girls who you think would be most natural for the part. Make your choices carefully, and, if you have any questions about the meaning of a word or anything else, be sure to ask your teacher.

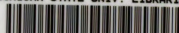
THESE ARE THE PARTS

- Part 1 - The Hero--Someone who is good in sports and in school work. _____
- Part 2 - Someone who is often mean and gets into fights a great deal. (Boy or Girl). _____
- Part 3 - The Heroine--Someone who gets along well with other boys and girls and with the teacher. _____
- Part 4 - Someone who is always getting angry about little things. _____
- Part 5 - Someone who could be the hero's friend--a kind, helpful boy or girl. _____

- Part 6 - Someone who could play the part of a bully--
picks on boys and girls smaller or weaker than
himself. _____
- Part 7 - Someone who has a good sense of humor but is
always careful not to disturb the teacher or
the class. _____
- Part 8 - Someone who is never mean and always friendly.

- Part 9 - Someone who could act like the laziest person in
the world--never does anything. _____
- Part 10- A boy or girl you would choose to be in charge
when the teacher left the room. _____

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