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THE DEVELOPMENT AND VALIDATION OF A SENTENCE-COMPLETION
METHOD: A SEMI-STRUCTURED PROJECTIVE TECHNIQUE DESIGNED
FOR PERSONALITY STUDY

Andrews University

Ed.D.

1980

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Andrews University
School of Graduate Studies

THE DEVELOPMENT AND VALIDATION OF A SENTENCE-COMPLETION
METHOD: A SEMI-STRUCTURED PROJECTIVE TECHNIQUE
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A Dissertation
Presented in Partial Fulfillment
of the Requirements for the Degree
Doctor of Education

by
Esdon N. Bacchus

June, 1980

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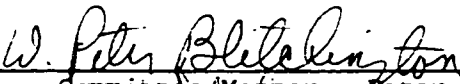
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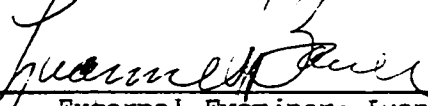

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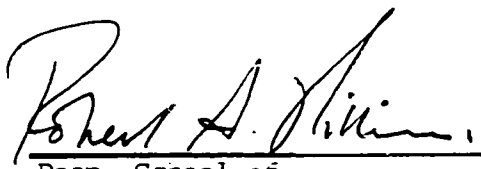
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ABSTRACT

THE DEVELOPMENT AND VALIDATION OF A SENTENCE-COMPLETION
METHOD: A SEMI-STRUCTURED PROJECTIVE TECHNIQUE
DESIGNED FOR PERSONALITY STUDY

by

Esdon N. Bacchus

Chairman: Conrad Reichert

ABSTRACT OF GRADUATE STUDENT RESEARCH

Dissertation

Andrews University

Department of Education

Title: THE DEVELOPMENT AND VALIDATION OF A SENTENCE-COMPLETION METHOD: A SEMI-STRUCTURED PROJECTIVE TECHNIQUE DESIGNED FOR PERSONALITY STUDY

Name of researcher: Esdon N. Bacchus

Name and degree of faculty adviser: Conrad A. Reichert, Ph.D.

Date completed: June, 1980.

Problem

There are very few objective instruments available for use in the psychological diagnosis of emotional impairment at the elementary-school level. The determination of emotional impairment has often been based on clinical judgment and subjectivity. In addition, psychological instruments have been attacked from the standpoint of reliability and validity. Major concerns relate to the seriousness of misclassification and the limited success-rate of rehabilitation efforts. The sentence-completion method is popularly used by clinicians. However, the available incomplete-sentence blanks used at the elementary-school

level rely almost entirely on face validity. Public Legislation 94-142 and the Rehabilitation Act of 1973 specifically require that psychological instruments be validated for the purposes for which they are used. Therefore the purpose of this investigation was to develop and validate an objective sentence-completion method. The ability of the instrument to discriminate among special education groups, the sensitivity of the instrument to long-term treatment effects, and the consistency of scores produced by school psychologists using the objective scoring device were the important factors analyzed.

Method

Based on a review of the previous research done on this method of personality study, an initial list of sentence-completion stems was developed. A more refined list of stems was developed through two field tests using the Chi-square method of analysis to determine which stems exhibited a tendency to discriminate between the emotionally impaired and regular-education youngsters. Feedback from test administrators pertaining to language comprehension difficulty, as well as analysis for disproportionate numbers of responses were also useful guides to final stem selection. The final form consisted of twenty stems. A personality adjustment scale of Negative, Denial, Neutral, Acceptance, and Positive was devised and the quantitative values 1,2,3,4, and 5, respectively, were assigned. The final administration

to determine the ability of the instrument to segregate groups was conducted on emotionally impaired, educable mentally impaired, learning impaired, and regular-education youngsters and analyzed by a nonparametric sign test of differences between medians. Tests of inter-scorer reliability using school psychologists trained on the scoring system were conducted. In addition, the changes in performance on the instrument were compared to personality-adjustment changes over a one-year period as evaluated by an experienced teacher of the emotionally impaired.

Results

Inner-city special-education groups were placed on the Personality Adjustment Continuum in the order: emotionally impaired--2.3, educable mentally impaired--2.6, learning impaired--2.7, regular education--3.2. A statistically significant difference in performance on the instrument was seen between all special-education groups and regular-education youngsters ($p < .05$). Six correlation coefficients of inter-scorer reliability, ranging from .96 to 1.00, were obtained by school psychologists using the scoring device, suggesting that the instrument can be scored with relatively high consistency. The instrument was able to measure significant ($t=5.08$, $df=7$, $p < .05$), long-term, personality-adjustment changes which correctly corresponded to teacher evaluation.

Conclusion

The instrument produced responds to personality-adjustment changes and can be consistently scored. The instrument was able to distinguish special-education from regular-education pupils. However, special-education youngsters in this population appear to be similar in emotional status even though they are statistically significantly different from regular-education youngsters. The Bacchus Sentence-Completion Method, produced from this investigation, represents a major tool that can be used in the non-biased assessment of emotional impairment at the elementary-school level.

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DEDICATED TO:

My wife Roseanne
My daughter Karen, and
My son Joseph.

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CHAPTER I

INTRODUCTION

With the advent of such Federal public legislation as PL-94-142, there has been an increased emphasis on the matter of the accuracy of psychological assessment. At all levels, federal, state, and local, there has been much concern over the use of standardized tests for special education placement. In fact, this controversy has led to a moratorium on the use of standardized IQ tests in the public schools of New York City, Washington, D.C., and in the state of California. In addition, the recent judgment handed down by Judge Robert F. Peckham in the Larry P. v. Riles case in California on October 16, 1979, banned the public use of IQ tests in classifying black pupils as educable mentally impaired because "the tests have not been modified or validated for blacks." Furthermore, in 1973, the National Education Association asked for a national moratorium on standardized testing until 1975. In fact, it was precisely the need for better and more valid instruments that led to the creation of the system of Multicultural and Pluralistic Assessment. Earlier, in 1968, the Association of Black Psychologists petitioned the American Psychological Association requesting a moratorium on all standardized

testing. These moratoria should not lead to the abandonment of assessment but rather to the development of more refined models and tools capable of yielding more valid and reliable data to be utilized in the diagnosis, classification, and programming of youngsters.

There are hundreds of psychological instruments being sold on the market. It is reasonable to expect that these vary in adequacy. On too many occasions, practicing psychologists encounter instruments lacking standardized procedures. In addition, clinicians are often too busy to subject certain tools to their own personal evaluation or are too entrenched in a particular system to seriously question the use of certain instruments. As Buros (1972)

notes:

It is still true, as I said over ten years ago in Tests in Print, that "At present, no matter how poor a test may be, if it is nicely packaged and if it promises to do all sorts of things which no test can do, the test will find many gullible buyers." (p. 28)

Another major area of concern relates to the question of deviance. To fully assess the capability of a test instrument to discriminate between the normal and abnormal, that instrument should, of necessity, be standardized on a normal as well as an abnormal population. For example, it is precisely this that Alan Kaufman (1976) accomplished with his revealing analysis of test scatter on the Wechsler Intelligence Scale for Children--Revised. His major finding, derived from administering the WISC-R to normal as well as abnormal youngsters was that the WISC-R

profiles of normal children exhibited much test scatter, probably much more than most clinicians previously realized.

The often cited quotation "the future is not what it used to be" appears to be very applicable to the area traditionally defined as special education. Specialized services for special education youngsters have been markedly altered by influences from many fronts: active attention to due process and human rights, litigation and legislation at the federal and state levels, and altered models for service implementation. Few issues are as troublesome to concerned professionals and lay groups as the proper identification of assessment procedures which offer assurance of not discriminating unfairly against youngsters who are referred for psychological services. Besides psychological personality instruments, the following assessment model has been developed which encourages the clinician to examine a subject's psychological functioning in all its multi-dimensional aspects and to consider the social milieu in which a youngster functions. The observer or clinician is asked to focus on the youngster's unique patterns of functioning in all areas of emotional, neurological, and cognitive well-being. In addition, the social systems of family, school, and community are viewed as being influential on the subject's overall performance.

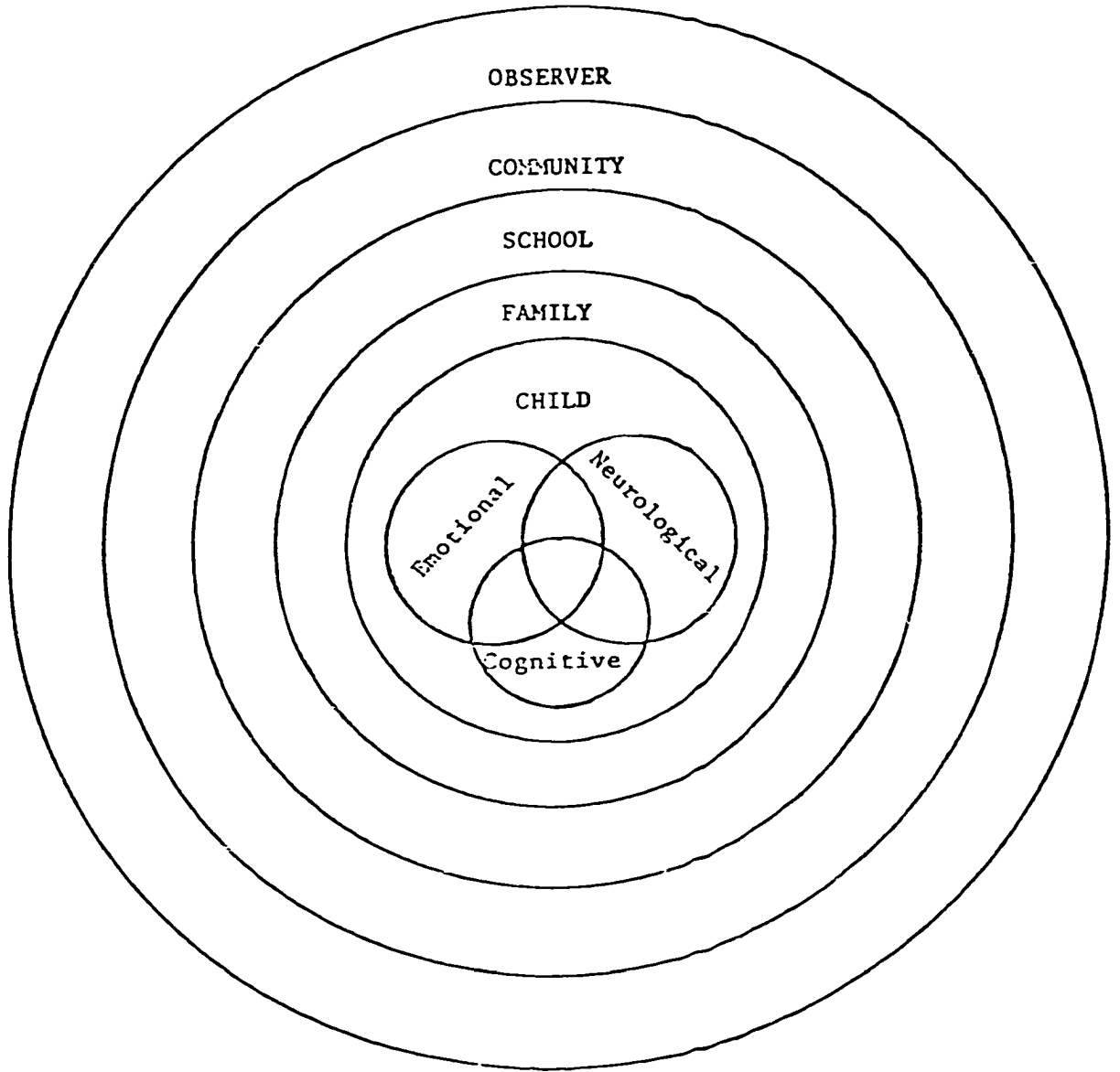


Fig. 1. Psycho-diagnostic Model

Much of the controversy on psychological assessment has so far fallen in the arena of mental retardation. The following criteria and considerations most frequently used in the determination of mental retardation include:

- (1) Sub-average intellectual functioning
- (2) Impairment in adaptive behavior
- (3) Occurrence and identification of handicap during the developing years.

To be more specific, according to the Guidelines for Special Education Programs and Services in Michigan (1974, p. 71), the "educable mentally impaired" means that, based upon a comprehensive evaluation by a school psychologist, certified psychologist, or certified consulting psychologist, and other pertinent information, a person is identified by an Educational Planning and Placement Committee as having all the following behavioral characteristics:

1. Development at a rate approximately 2 to 3 standard deviations below the mean as determined through intellectual assessment.
2. Scores approximately within the lowest 6 percentiles on a standardized test in reading and arithmetic.
3. Lack of development primarily in the cognitive domain.
4. Unsatisfactory academic performance not found to be based on social, economic, and cultural background.

At the end of the section "Guidelines for Special Education Programs and Services for the Educable Mentally Impaired,"

there is provided a list of twenty-seven intelligence and education tests from which a clinician may select his or her tools for the assessment and determination of mild mental retardation.

On the other hand, the Guidelines for Special Education Programs and Services in Michigan (1974,p.93) state that, based upon a comprehensive evaluation by a school psychologist and social worker, a certified psychologist, a certified consulting psychologist, or a certified psycniatrist, and other pertinent information, "emotionally impaired" means a person identified by an Educational Planning and Placement Committee as having one or more of the following behavioral characteristics:

1. Disruptive over an extended period of time to the learning process of other students or him or herself in the regular classroom.
2. Extreme withdrawal, over an extended period of time, from social interaction in the school environment.
3. Manifestation of symptoms characterized by diagnostic labels such as psychosis, schizophrenia, and autism.
4. Disruptive behavior which has resulted in placement in a juvenile detention facility.

At the end of the section, no list of standardized tests for identification and determination of emotional impairment is provided.

In addition, the Guidelines for Special Education Programs and Services in Michigan (1974,p.93), on the basis of a comprehensive evaluation by a school psychologist or certified psychologist, or certified consulting psychologist or an evaluation by a neurologist, or equivalent medical examiner qualified to evaluate neurological dysfunction, and other pertinent information, defines the "learning impaired" as a person identified by an Educational Planning and Placement Committee as having all the following characteristics:

1. Disorder in one or more of the basic psychological processes involved in understanding or in using spoken or written language, which disorder may manifest itself in imperfect ability to listen, think, speak, read, write, spell, or do mathematical calculation.

2. Manifestation of symptoms characterized by diagnostic labels such as perceptual handicap, brain injury, minimal brain dysfunction, dyslexia, or aphasia.

3. Development at less than the expected rate of age group in the cognitive, affective, or psychomotor domains.

4. Inability to function in regular education without supportive special education services.

5. Unsatisfactory performance not found to be based on social, economic, or cultural background.

At the end of the section, no list of standardized tests for the identification and determination of learning

impairment is provided. The guidelines for the determination of mental retardation are more detailed and specific. Some clinicians in the area have gone so far as to caution that the currently used projective techniques, because of the nature of the test items, lend themselves to "negative" and "conflict" responses. It would probably be rather easy to confirm one's bias and preconceived ideas through the use of personality instruments currently in use.

The diagnosis of emotional impairment is much more of a subjective undertaking. Perhaps the most unstructured instrument for personality study is the Rorschach Psychodiagnostic Technique. There are other techniques in frequent use such as the Thematic Apperception Test and the sentence-completion method. Because of the difficulty involved with analysis and interpretation, many clinicians stay away from using the Rorschach. All things considered, emotional impairment is a delicate matter often determined on the basis of clinical judgment.

Statement of the Problem

As compared with the diagnosis of mental retardation, there are few objective guidelines for the determination of emotional impairment. Much of the decision is based on clinical judgment and interpretation of findings on projective techniques. With the increased attention focused on the reliability of psychological assessment, it becomes increasingly necessary to use psychological instruments that are valid and reliable. According to the

Supervisor of Special Education in the Benton Harbor school district, "very few, if any, of the youngsters put into classes for the emotionally impaired ever seem to get out." It becomes increasingly important, therefore, that the possibility of making an erroneous diagnosis be reduced to a minimum.

From a clinical point of view, the sentence-completion method is popularly used by many professionals in personality adjustment diagnosis. The most widely used sentence-completion method, the Rotter, was standardized for use with high school and college students only. Other instruments of this nature, such as the Politte Sentence-Completion Test designed for the elementary grades, have not been subjected to standardization procedures and rely almost entirely on face validity (see appendix VI). The Rehabilitation Act of 1973 (Larry P. v. Riles, 1979) and Public Law 94-142 (1975) require that evaluation materials and tests be validated for the specific purpose for which they are used. There is therefore an important need for a valid and reliable sentence-completion method designed for use in the assessment of emotional impairment at the elementary-grade level. In addition, the ability of the sentence-completion method, as a personality instrument to discriminate between groups, has not so far been tested. In fact, recent versions such as the "Politte" have tended to ignore relevant research on the instrument.

Purpose of the Study

The purpose of this study was:

- (1) To develop, refine, and validate a sentence-completion method that is capable of discriminating between special-education groups and regular-education students.
- (2) To produce an instrument that can be scored with some consistency by clinicians.
- (3) To test the instrument's ability to measure six-months to one-year treatment effects when administered to emotionally impaired youngsters undergoing educational intervention.
- (4) To lay a foundation for the standardization of other sentence-completion methods, and to establish baseline data for further research.
- (5) To develop an objective scoring device for the sentence-completion method being created.

Significance of the Study

There are several reliable and valid instruments for the clinician to use in making an assessment of the educable mentally impaired student. There is, on the other hand, a paucity of objective instruments for the identification and determination of emotional impairment since the diagnosis of emotional impairment is much more of a subjective undertaking. Therefore, this study was primarily concerned with the development and validation of an objective diagnostic test of emotional impairment. The investigation would provide normative data on the sentence-completion

method, an objective scoring device, and results on the sensitivity of the instrument to treatment effects. The final form of the instrument would also be available for research purposes. A more valid and reliable instrument facilitates proper classification and helps to prevent misclassification, thus reducing the possibility of improper and unnecessary labelling which may lead to stigmatization. This instrument would be a tool used for early identification and hence early psychotherapeutic intervention. The long-term benefit to society would be a reduction in the number of maladjusted citizens, with monetary implications for savings. Finally, this research was in support of public legislation 94-142 and the Rehabilitation Act of 1973 in terms of assisting with accurate diagnosis prior to appropriate programming.

Definition of Terms

Personality is the nature or make-up of a person including all his or her distinguishing characteristics and attributes.

Personality adjustment is the term used to denote the emotional status of a subject which determines the quality of his personal and social relationships.

Personality instruments are scales or devices designed to measure any or all features of personality.

A regular student is a student who is enrolled in the mainstream of general public education.

Elementary schools are public schools including grades one through six.

Bacchus Sentence-Completion Method is the name given to the instrument being developed and validated in this research.

The Guidelines for Special Education Programs and Services in Michigan (1974) gives the following definition:

Emotional impairment is the demonstration of unpredictable behavior clearly disruptive to the learning process and inability to deal with realistic demands. It is exhibited in extreme withdrawal over an extended period of time from social interaction in the school environment, and a manifestation of symptoms characterized by diagnostic labels such as psychosis, schizophrenia, and autism. Disruptive behavior resulting in placement in a juvenile detention facility may also be involved.

Limitations of the Study

The data yielded by the investigation may be lacking in ability for generalization because of a lack of proven external validity to a wider population. In addition, severe limitations of statistical analysis may be imposed on the treatment of the data because of the nature of the scoring device used and the classification of omission responses. The practical significance of the findings may therefore be emphasized over statistical significance. The study was restricted to the development and validation of the Bacchus Sentence-Completion Method without undue attention to

the defensibility of the overall use of projective techniques in personality assessment.

Basic Assumptions

(1) It was assumed that personality adjustment can be measured.

(2) It was also assumed that the verbal method of responding would be a more efficient method of gathering responses.

(3) It was assumed that there is an inherent difference in the overall functioning of groups classified as learning impaired, emotionally impaired, educable mentally impaired, and regular education students.

(4) It was further assumed that the classification of students into special-education groups was accurately made by the Educational Planning and Placement Committee and the school psychologists in the school system containing the sample.

(5) It was assumed that personality adjustment ranges on the severity continuum of behavioral manifestations might be classified Negative, Denial, Neutral, Acceptance, and Positive.

(6) It was assumed that there is a relationship between perception of stimuli and personality functioning.

(7) It was assumed that no artificial antecedents such as drugs were operating in special-education youngsters to produce behavioral consequents.

(8) The assumption of local independence was made which means that a subject's performance on one test item is not influenced by his or her performance on any other test item.

(9) It was assumed that individual test items have equal discrimination potential.

CHAPTER II

REVIEW OF THE LITERATURE

Towards a Definition of Personality

Many personality psychologists have attempted to define personality. The following are examples of such definitions (Sanford, 1963):

Allport: Personality is the dynamic organization within the individual of those psychophysical systems that determine his unique adjustments to his environment. (pp. 494-95)

Newcomb: . . . personality. . . is known only as we observe individual behavior. (I am using the term "personality", by the way, in the inclusive sense of referring to the individual's organization of predisposition to behavior.) What I want to suggest is that the kind of behavior from which we can learn most about personality is role behavior. By observing John Doe in such capacities as husband, host, employee, and employer, we can discover those kinds of order and regularity in his behavior which are the goal of the student of personality. (p. 496)

Eysenck: Personality is the more or less stable and enduring organization of a person's character, temperament, intellect, and physique, which determines his unique adjustment to his environment. (p. 496)

Bronfenbrenner: A conception of personality as a system of relatively enduring dispositions to experience, discriminate, or manipulate actual or perceived aspects of the individual's environment (including himself). (p. 497)

Sullivan: . . . the relatively enduring pattern of recurrent interpersonal situations which characterize a human life. (p. 497)

Cattell: Personality is that which permits a prediction of what a person will do in a given situation. . . . Personality is. . .concerned with all the behavior of the individual, both overt and under the skin. (p.496)

Hilgard: . . .the sum total of individual characteristics and ways of behaving which in their organization of patterning describe an individuals unique adjustment to his environment. (p. 497)

Personality, according to the researcher, is in reality a study of the nature of man. According to Klausmeier (1971, p. 386), every individual is a unique person, not quite like anyone else. Personality, says Klausmeier (1971, p.386), is the concept or construct that describes this uniqueness and totality of an individual as a social being. The assessment of personality has therefore been subjective and related to the various aspects that comprise man's total functioning. The question of normality of behavior within one's social setting is an important consideration. The consistency and inconsistency of behavior cannot be ignored and it is precisely this that personality theories and personality instruments seek to explain and measure.

According to Robert Lundin (1961, pp.4-6), a variety of definitions proposed by psychologists have been classified by a number of authors under the headings of omnibus, integrative, hierarchial, and adjustmental. Those who subscribe to the "omnibus" definition view personality as the sum total of one's behavior. The integrative approach stresses some organizational function. Personality is not naphazard but possesses some core or unifying principle. The

hierarchical definition relates to some idea of demarcation of functions or layers of traits or characteristics. The final definition considers personality in terms of adjustment.

According to Donald Super (Bass & Berg (eds.), 1959, p. 26), one approach to personality assessment is through observation of performance--of the personality in action. It assumes that people are what they do. Furthermore, Super believes that significant personality traits manifest themselves in everyday behavior. In addition, he cites one additional approach to personality assessment through the use of unstructured or semi-structured projective materials. The projective test, he says, collects, sorts, and provides a record of responses constituting a profitable approach to personality study (p. 24).

Personality Types and Personality Adjustment

A subject's overall personality pattern may be more explicitly described. For example, people have been described, on occasion, as introverted or extroverted according to the degree of withdrawn or outgoing behavior displayed. A particular sample of behavior occurring within a specific time limit may be labelled according to the particular nature of the behavioral manifestation. Responses to the sentence completion method should therefore be analyzed in terms of affect level and also in terms of the themes of the content. An excessively high percentage of any one type of response may raise the possibility of a

particular personality-adjustment difficulty and self-defeating behaviors.

Leary (1957) describes various types of personalities as shown in figure 2 and discussed on the following pages.

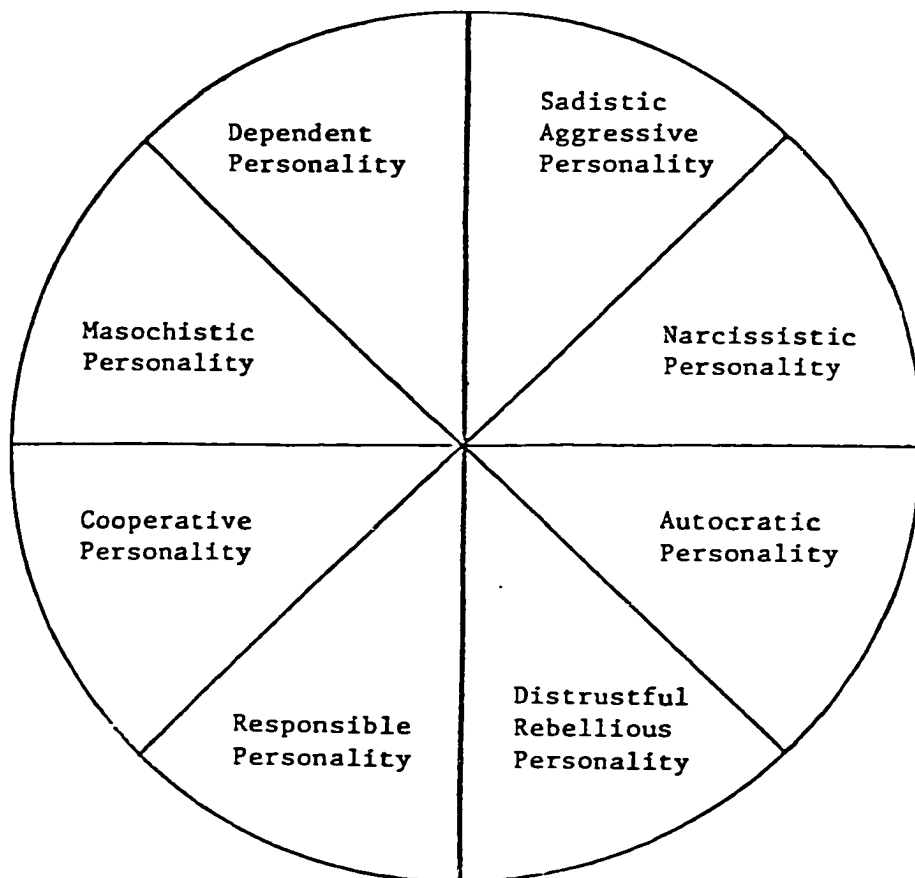


Fig. 2. Personality Types

The distrustful personality

There are individuals who select distrust and rebellion as their solutions to life's problems. In their crucial relationships with others, these human beings consistently maintain attitudes of resentment and deprivation although perhaps in their conscious ideals they may strive and long for tenderness. For people who have experienced past rejections and humiliations, distrustful behaviors serve to protect against the possible anxiety involved in trustful, tender feelings. Leary states that rebellious adjustment may provide a feeling of difference and uniqueness which is most rewarding to some individuals. Distrustful, rebellious behavior may consequently lead to an unfavorable attitude and distancing from others (p. 270).

The masochistic personality

Individuals in this category often describe themselves as weak and inferior. In some, clown-like behaviors are seen as gratification is obtained from patronizing onlookers. Leary describes the masochistic personality as manifesting symptoms of depression and passivity (p.256). They are not active or self-confident. They are not assertive nor reasonable and they often do not challenge or compete with the clinician. Persons with a masochistic personality often derive pleasure or feelings of self-worth from punishment inflicted by self and others.

The dependent personality

The dependent person, according to Leary (1957), is least anxious when outwardly relying on or looking up to others. Often there is clinical indication of helplessness and overt anxiety sometimes expressed in a marked depression, fears, worries, or phobias.

The overconventional personality

The person with an overconventional personality seems to be comfortable when evoking "good feelings" and establishing harmonious, amicable relations with others. He or she tends to seek satisfaction in sociability with others, is more likely to cooperate, to go along with the conventional pattern, to compromise. External harmony is more important than internal values. Persons with this personality are usually well-liked and agreeable members of any group.

The hypernormal personality

The person with a hypernormal personality presents himself or herself as reasonable, successful, sympathetic, and mature. Such a person avoids the appearance of weakness or unconventionality and is often popular and depended upon by other people. Individuals of this type cannot take a passive, aggressive, or bitter role, even when it is called for. Their feelings of self-esteem are bolstered by appearing mature and generous. They are most secure when

they are involved in close, friendly, protective relationships with dependent others.

The autocratic personality

Leary (1957) says that people with an autocratic personality see power, success, and ambition, as a means of warding off anxiety and increasing self-esteem. Included are those persons who express strength, force, energy, and leadership. Strength may be manifested in a physical way as well as an intellectual way. In addition, social status may be an effective means of exerting authority. Financial strength is another common form of power expression. In social or recreational contexts such a person subscribes to rigid efficiency and competence.

The narcissistic personality

This personality, according to Leary, expresses a clear love and approval of himself. He or she acts in a strong, arrogant manner; appears independent and confident; and feels superior to the "other one." Such a person may easily engage in a self-oriented rejection of others, exhibitionism, and proud self-display. Narcissistic expression varies from person to person and some may even stress their intellectual superiority and engage in competition for self-enhancement.

The sadistic personality

The sadistic type of person is generally hostile and aggressive and operates with cold sternness and

punitiveness. Included in sadistic behaviors are actions which inspire fear in others and which threaten others by physical, moral, or verbal means. Sadistic persons often maintain a punishing attitude towards others and are often feared and avoided.

Nonbiased Assessment

Statistics document the highly disproportionate numbers of Blacks, Chicanos, and other minority children in special-education classes. Furthermore, educators are aware of the debilitating effects that frequently accompany labelling and placement in special classes. The issue of nonbiased assessment did not develop overnight. For the last two decades the legitimacy of standardized testing and its effects have been challenged and questioned. However, in the early 1960s, the advent of major federal funding to education led to an increased use of tests to support and evaluate the success of these federally funded programs. In addition, increased pressures relative to teacher and administrator accountability gave further impetus to the use of standardized tests.

Testing has recently come under direct fire from minority segments of the population. In response to studies done by men such as Arthur Jensen (1969), Blacks, Chicanos, and other minorities have been adamant about the real role of standardized tests. Testing has been indicted further as discriminatory against most socially and culturally different groups in society.

Standardized tests, used for prediction, diagnosis, evaluation, and dissemination and reporting of data have served two broad and important functions in public education. One function is that of classifying children, often for the purpose of determining their eligibility for placement in special programs. Another function is that of acquiring information relevant to planning and evaluating interventions.

The Sentence-Completion Method

The incomplete-sentence blank, as a method, originated with the work of people like Ebbinghaus (1897), Kelley (1917), and Traube (1916). Initially the approach was used to measure intellectual variables. In this endeavor, Copple (1956), Piltz (1957), and West (1958) used it to measure intellectual capacity. In recent years, however, the method has been used primarily for personality assessment. Payne (1928) and Tandler (1930) were among the first to use sentence completions for this purpose.

Over the years, sentence-completion methods have become increasingly more popular and in many clinical settings they are being used widely. According to Holtzman (Bass & Berg (eds.), 1959, p. 129), variations of the sentence-completion method provide much more suitable data for psychometric development than the Thematic Apperception Test. The essence of the method is to present the subject with a sentence fragment or stem which he or she is asked to complete. The instruction and content may vary from form to

form and may be adapted for clinical and research purposes.

This method of studying personality is a semistructured, projective technique. It is assumed that the subject reflects his or her own wishes, desires, fears, and attitudes in the sentence he or she makes. The method is most closely related to the word-association test. The major differences between sentence-completion methods is the length of the stimulus, i.e. the stems. It is hoped that the responses given are those the subject cannot help giving. The method of analysis is quite similar to that of the Thematic Apperception Test.

Some Advantages of the Sentence-Completion Method

In using the sentence completion method, there are several advantages:

1. There is freedom of response.
2. The purpose of the test is slightly disguised. What constitutes a "good" or "bad" answer is not readily apparent to most subjects.
3. Group administration is possible without loss of validity.
4. No special training is required for administration.
5. The time of administration and evaluation is relatively short.
6. The method is flexible since new sentence beginnings can be constructed or "tailor made" for particular purposes.

Some Disadvantages of the Sentence-Completion Method

In using the sentence completion method, there are also some disadvantages:

1. The method cannot be machine scored and its interpretation requires general skill and knowledge of personality analysis.

2. Other methods, like the Rorschach, have more disguise of purpose. On the contrary, with the sentence-completion method, the subject may deliberately try not to reveal certain things.

3. Insufficient material may be received from the illiterate or uncooperative. Also, application of the method requires writing and language skills to some degree if a written administration is being considered.

Some Uses Made of the Sentence-Completion Method

Murray and Mackinnon (1946) used the sentence-completion method for the evaluation of candidates for studies with the Office of Strategic Services. Kelly and Fiske (1950,1951) and Samuels (1952) used the sentence-completion method to predict the success of graduate students in clinical psychology. Touchstone (1957) used a sentence-completion test to investigate Negro-White differences and Holtzman and Sells (1954) used the method to predict the success of flight cadets. Other uses of the sentence-completion method include the work of Smith (1952)

in his comparison of stutterers and nonstutterers; the investigation by Mac Brayer (1960) of sex differences in sex perception; and Farber's (1951) assessment of differences in national character. Cameron (1938, 1938a) and Ellsworth (1951) used the technique to examine schizophrenia language, and Luft, Wishan, and Moody (1953) employed sentence completions to examine the adjustment of patients to hospital routines. Kirk (1956) evaluated counselor training by the sentence-completion method and Kahn (1950) used the method in a case study of a mass murderer.

Many sentence-completion forms, the origins of which are often obscure, have been available for use. This is understandable since the sentence-completion method is both popular and flexible (Rohde, 1948; Stein, 1949). According to Brown (1950) this type of instrument has been used to measure attitudes toward Negroes. Golde and Kogan (1959) used it to assess attitudes toward old people, and Costin and Eiserer (1949) used it to measure attitudes toward school life. Harris and Tseng (1957) used the method to determine attitudes toward peers and parents. Getzels and Jackson (1960)) used it to evaluate attitudes toward career choice, while Souelem (1955) measured attitudes toward mental hospitals with the technique. Finally, attitudinal change was investigated by Lindgren (1954).

Attempts to Standardize the Sentence-Completion Method

Several attempts have been made to develop standardized forms of sentence-completion methods (Forer, 1950, 1957, 1960; Holsopple & Miale, 1954; Rohde, 1946, 1957; Sacks & Levy, 1950; Stein, 1947). In the armed services, special, standard, sentence-completion forms were developed by Bijou (1947); Flanagan (1947); Trites, Holtzman, Templeton, and Sells (1953); and Willingham (1958). But perhaps the most rigorous attempt was made by Rotter and his associates (Rotter, 1946, 1951; Rotter & Rafferty, 1950, 1953; Rotter, Rafferty, & Lotsof, 1954; Rotter, Rafferty, & Schachlitz, 1949).

Some Questions Raised by the Sentence-Completion Method

An important question raised by critics is whether or not sentence completion is a test or a method. According to Cronbach (1960), "A test is a systematic procedure for comparing the behavior of two or more persons." In addition, Anastasi (1954) states that a psychological test is essentially an objective and standardized measure of a sample of behavior. The sentence-completion method, as commonly used, is perhaps too subjective and lacking in standardization to be considered a test. It can, however, be considered a projective technique that lends itself to the understanding of the subject's psychological processes.

Another very important question is whether or not sentence-completion responses should be treated as signs or

samples. Also, is the information tapped laden with superficial or deeper meaning? According to Rohde (1946), in unconstrained responses to sentence beginnings, the subject inadvertently reveals his or her true self, since there is no way in which he or she can anticipate the significance of his or her answers for personality study. L. K. Frank (1948), Holsopple and Miale (1954), and Sacks and Levy (1950) tend to support the ability of the sentence-completion method to provide projection responses that are useful to a clinician. On the other hand, Bellak (1950), Cattell (1951), and Murstein (1963) seriously question the relevance and validity of the technique in terms of the projection hypothesis. Campbell (1957) and Lindzey (1959) fail to place the sentence-completion method in the category of the Rorschach and the Thematic Apperception Test (TAT). They regard the sentence-completion method as more structured and tend to accept Forer's (1950) conclusion, that the method is a controlled projective device. Others, such as Hanfmann and Getzels (1953) regard the technique as mid-way between a projective instrument and a questionnaire. This would depend, however, on the degree of structure given to the sentence stems being used. Rotter and Rafferty (1950) appear to be comfortable in their regard of the method as a semi-structured technique that is capable of revealing wishes, desires, fears, and attitudes.

One particular area of controversy has been over the question of the level of personality tapped by the

sentence-completion method. Both Carr (1954, 1956, 1958) and Forer (1957) believe that different personality instruments measure personality at different levels. Sigmund Freud (1927) himself spoke of personality in terms of an iceberg depicting the conscious, preconscious, and unconscious layers. Both Sacks and Levy (1950) feel that the sentence-completion method reflects thinking and feeling at all three levels. Carr (1954, 1956) and Hanfmann (1947) tend to feel that material elicited by the sentence-completion method comes from a personality level closer to awareness than material elicited by either the Rorschach or the TAT. Hanfmann and Getzels (1953) agree that the bulk of the material elicited comes from a level close to awareness. The question now is whether or not the sentence-completion method is capable of yielding important information. Fitzgerald (1958) makes the point that a less "deep" test is not necessarily a less valuable one. He believes that the sentence-completion method may be advantageously structured to yield responses upon which inferences can be made about overt behavior. Murstein (1963) is remindful of the lack of empirical evidence to support the existence of the levels hypothesis even though it is a reasonable model. In their empirical testing of the levels hypothesis on twenty patients hospitalized for psychiatric conditions and using the WAIS, the Forer Sentence-Completion Test, TAT, Rorschach, and Draw-A-Person tests, Stone and Dellis (1960) found an inverse relationship between level of personality and the degree of

stimulus structure inherent in each of the tests. Murstein (1963), however, is critical of the work done by Stone and Dellis for a lack of necessary control, and he suggests, in addition, that most projective scoring systems emphasize unhealthy traits and that projective responses are more likely to reflect frustrations than positive thought. In general, it appears that the sentence-completion method is regarded as a projective test even though the material elicited is typically less dynamic than the materials elicited by such tests as the Rorschach, TAT, and projective drawings. The idea that tests which tap deeper layers of personality organization are better or more valid has failed to receive empirical support.

Effects of Various Types of Sentence Stems

The flexibility of the sentence-completion method allows for a variety of tailored stems developed to elicit material in specific areas of clinical interest. According to Nunnally (1959), if there is an agreed-upon public meaning for a stimulus, it is referred to as a structured stimulus. Structure is considered high if the content of the stem tends to establish narrow response classes. In the development of sentence-completion methods, the use of structured stems generally reflects the test constructor's desire to direct the responses of the subject to predetermined areas of special psychological significance.

On the matter of content areas, Forer (1950) sampled (a) various important interpersonal figures, (b) dominant needs, (c) environmental pressures, (d) characteristic reactions, (e) moods, (f) aggressive tendencies, and (g) affective level. Such an approach may yield pertinent revelations upon which inferences can be made.

The Rotter Incomplete-Sentence Blank

The Rotter Incomplete-Sentence Blank was, perhaps, the most successful attempt to standardize the sentence-completion method. It was developed out of the work done by Rotter and Willerman (1947), Shor (1946), Hutt (1945), and Holzberg, Teichner, and Taylor (1947). This particular Incomplete-Sentence Blank consists of forty items revised from a form used by Rotter and Willerman in the army. This form was, in turn, a revision of blanks used by Shor, Hutt, and Holzberg, Teichner, and Taylor at the Mason General Hospital. It is especially designed for use with college and high-school populations as well as the general adult population.

Summary

The term "personality" has been used to describe the uniqueness and totality of an individual as a social being. The description is often based on observable behavior manifested in everyday living and on projective techniques. Various types of personalities have been described.

The sentence-completion method has been popularly used by clinicians. One major advantage has been the shortness of form and the degree to which a "good" or "bad" response has been disguised. It is, however, somewhat subjective and must be clinically interpreted.

Several attempts have been made to standardize this type of personality instrument. In fact, there has developed in the field, a fast-moving trend towards producing more objective personality instruments. Some points of debate have been the question as to which layer of personality is measured by the instrument and whether or not the instrument is in fact a test or a method. The flexibility of the method has been noted and stems may be tailored as necessary. Research seems to indicate that first person neutral stems are preferable and that the method has often been instrumental in revealing a subject's needs, drives, and interests. It is, therefore, important to test the sentence-completion method's ability to discriminate between special-education groups, to respond to personality-adjustment changes, and to yield consistent results.

Hypotheses

In accordance with the purpose of the study, the following hypotheses were investigated in this research:

1. The final form of the Bacchus Sentence-Completion Method will discriminate between emotionally impaired youngsters and regular-education pupils, supporting a claim of psychometric validity.

2. The final form of the Bacchus Sentence-Completion Method will discriminate between educable mentally impaired youngsters and regular-education pupils, supporting a claim of psychometric validity.

3. The final form of the Bacchus Sentence-Completion Method will discriminate between learning impaired youngsters and regular education pupils, supporting a claim of psychometric validity.

4. The final form of the Bacchus Sentence-Completion Method will discriminate between emotionally impaired youngsters and educable mentally impaired pupils, supporting a claim of psychometric validity.

5. The final form of the Bacchus Sentence-Completion Method will discriminate between emotionally impaired youngsters and learning impaired pupils, supporting a claim of psychometric validity.

6. The final form of the Bacchus Sentence-Completion Method will discriminate between educable mentally impaired youngsters and learning impaired pupils, supporting a claim of psychometric validity.

7. The scoring of the final form of the instrument will demonstrate high interscorer reliability.

8. The final form of the instrument will be able to yield results on emotionally impaired youngsters that are in agreement with teacher evaluation, attesting to concurrent validity.

CHAPTER III

METHODOLOGY

Type of Research

This research was designed to be developmental, correlational, and empirical in nature. Basic to the project was the construction of the Bacchus Sentence-Completion Method that measures emotional impairment in elementary-school pupils. The ability of the final form to discriminate between special-education groups was tested. In addition, the ability of the instrument to yield consistent scores based on an objective scoring device was tested. Furthermore, a major component of the research was to test the sensitivity of the refined instrument to treatment effects as administered to the emotionally impaired.

Research Tool

After a careful review of the literature, a preliminary selection of fifty sentence stems was developed. These fifty stems were arbitrarily chosen, with consideration to the relevant needs, drives, and possible areas of emotional concern among the elementary-school-age population. This initial form of 50 stems was field tested twice on emotionally impaired and regular education students in

different school systems. It was then refined and put into final form for use in the research.

Test Development

Population and Sample

The original instrument (see appendix I) was first field tested in the Cromwell School District on fifty emotionally impaired and fifty regular-education pupils. These pupils ranged from six to twelve years of age and came from Cromwell, a lower-middle-class suburb of Hartford, Connecticut. Two-thirds of the subjects in each category were males and one-third, females.

As a result of the initial field testing, one half of the sentence stems were deleted. This deletion was based on language-comprehension problems encountered by pupils and the results of a chi-square analysis. In addition, sentence stems that yielded a disproportionate number of one type of response were deleted.

A more refined form of the instrument (see appendix II) was then field tested in the Lakeshore School District on fifteen emotionally impaired and fifteen regular-education youngsters. These pupils ranged from six to twelve years of age and came from a middle-class background. Twelve of the subjects in each category were males and three were females. The Lakeshore School District is within the Berrien County Intermediate School District in the state of Michigan.

As a result of the second field testing, five more sentence stems were deleted. Again, this was based on

language-comprehension problems, results of a chi-square analysis, and the yielding of a disproportionate number of one type of response.

The final form of the instrument (see appendix III) was tested in the Benton Harbor School system on thirty-three emotionally impaired pupils, thirty-five educable mentally impaired pupils, thirty learning impaired pupils and thirty-nine regular-education pupils. These pupils ranged from six to twelve years of age and came from Benton Harbor, a lower socio-economic, inner-city school system within the Berrien County Intermediate School District in the state of Michigan. About two-thirds of the subjects in each category were males, while one-third were females. Special-education populations were selected in totality. Regular-education pupils used for the study were selected by stratified random sampling since proper representation of all variables in the sample was considered to be important.

Subjects selected for use in testing the capability of the instrument to respond to personality changes were totally selected from the Benton Harbor School system. These eight pupils, ranging from eight to twelve years of age, were emotionally impaired youngsters in a self-contained classroom. There were four males and four females.

All pupils used in the research under a special-education category were diagnosed and placed in their respective classifications by an Educational Planning and Placement Committee which included a school psychologist.

The Pilot Study Procedure

The initial attempt to field test the instrument highlighted the difficulty involved in the pursuit of research in special education. Supervisors of special education as well as school administrators were particularly concerned about due process, procedure, and consent, as well as being aware of past litigation in the field.

Teachers in special education as well as in regular classrooms provided the necessary help in test administration. The feedback they provided was most useful. In many instances, certain stems that were difficult to understand and above the comprehension level of students were pointed out.

The difficulty youngsters experienced completing the initial fifty stems was a major problem. The findings from the pilot study procedure suggested that a twenty-stem instrument was right for the age group investigated. Younger students found it difficult to write their responses and demanded much teacher assistance. Even though the clinician is able to assess language skills as well as fine motor ability when youngsters write their responses, it appeared preferable, in terms of efficiency, to complete the method through an oral administration. The clinician should encourage the subject to respond since omissions are classified as missing data which are not scored but which may be subject to clinical interpretation. Test administrators'

feedback, excessively disproportionate numbers of one type of response from a particular stem, and the findings from the chi-square method of statistical analysis were the major guides to final stem selection (appendices I,II,&III).

As a result of the pilot study procedure, the following stems were eliminated for the given reasons:

Stems 11, 13, 16, 29, 31, 34, 38, 48, and 50 were eliminated because of low obtained chi-square values.

Stems 2, 5, 9, 26, 33, 37, 41, 42, 44, and 47 were eliminated because of language comprehension problems encountered by respondents.

Stems 3, 8, 10, 14, 18, 22, 30, 32, 35, 39, and 46 were eliminated because of a disproportionate yield of one type of response by respondents (see appendix VII).

A Psychological Description of the Validation Age Group

Subjects used in the process of validation ranged from six to twelve years of age.

The theorists who subscribe to a psycho-analytic orientation view this period as a quiet, restful period of latency when sexual energy is sublimated or channeled into socially acceptable activities. According to this view, a great deal of energy is absorbed through the requirements of formal education.

Those who emphasize interpersonal relationships view this age group as manifesting strong social needs beyond the family. Youngsters seem to be threatened by the

possibility of social subordination, ostracism, and rejection by peers. These children seek to satisfy interpersonal needs without undue anxiety. Chum relationships allow them to validate all components of personal worth and develop sensitivity to what matters to another person.

The theorists who subscribe to a cultural emphasis on describing this age group see the youngster as determined to win approval by becoming more productive. The child feels inferior when he fails to learn proper skills and therefore faces the possibility of alienation and rejection by his culture.

The cognitive theorists describe these youngsters as becoming more realistic in their thinking and acquiring understanding of a whole spectrum of abstractions involved in adaptation to the everyday environment. This age group is seen as beginning to deal with and assess happenings in terms of intentionality. These children are viewed as developing a new global stability and relative calm in their own thinking. This period is looked upon as a period of significant development in moral thought.

Perhaps the major change in orientation for this age group is the transition from home to school. The child is now exposed to new authority figures and self concept changes appear to be inevitable. The child must acquire new skills. This places demands on him and evasion of authority may be an issue to be resolved. The move from the familiar to the threatening sees a definite decrease in parental

influence. On the other hand, there is an increase in peer influence in terms of social support, models for imitation, opportunities for learning social roles, and standards for self-evaluation. Another major influence is the particular teacher. A significant majority of handicapped youngsters are males. On the other hand, a significant number of teachers are females. For some youngsters this situation may in itself not fill their needs for identification and may present adjustment problems. In addition, other factors which may complicate the situation include domineering teachers, the influence of viewing aggression on television, and the child's new acquaintance with prejudice.

The particular group used in the final validation process consisted of inner-city students who are often subjected to a harsh environment. The general surrounding climate is often emotionally charged and the disadvantaged child has often been described as:

1. less able to tolerate delays in gratification
2. less familiar with relevant materials such as books and numbers
3. less exposed to models of adult intellectual activity
4. less advanced in language skills
5. less likely to be encouraged and rewarded
6. liable to be undernourished.

Description of the Final Form
of the Instrument

The final set of twenty stems was selected through the use of the following criteria:

1. The discrimination ability of the stem as supported by a chi-square analysis
2. The comments of respondents as well as administrators of the form through pilot testing pertaining to comprehension of the language used
3. Consideration of the length of the instrument and the difficulty experienced by respondents
4. The elimination of stems yielding an excessively disproportionate number of one type of response.

The final form consisted of twenty stems which were mostly neutral in tone and stated mostly in the first person. It was assumed that introjections as well as projections would be revealed in the responses of subjects. The following is a list and description of the final stems selected:

Stem 1: Sometimes I feel like-----

This stem seeks to elicit material in the affective domain; material which is ordinarily suppressed. It seeks out a persons' reaction to his or her overall experiences and may be indicative of the subject's coping ability or preoccupation.

Stem 2: At home-----

This stem seeks to elicit material pertinent to the subject's general attitude at home, the level

of energy expended, and activities engaged in. It may provide material for comparison to other settings. The general emotional climate of the home may be revealed.

Stem 3: I think-----

This first person stem may reveal personal thoughts, preoccupations, or opinions on important issues or persons, revelation of self-concept feelings may be obtained.

Stem 4: Sisters are-----

Responses to this stem may reveal the nature of sibling relationships or attitudes toward females in general.

Stem 5: I would like to-----

The stem provides the subject with the opportunity to share his or her wishes on matters important to him or herself. Particular needs may be revealed.

Stem 6: School-----

This stem is designed to elicit material of a general nature. It may reveal feelings of happiness or annoyance over school. It may also reveal general satisfactions over academics, peer relations, or teacher interactions.

Stem 7: I think my friends-----

This stem provides an opportunity to share what the subject is feeling about peers. Social isolation, satisfaction within the peer group, or self-concept may be revealed.

Stem 8: My parents-----

This stem may elicit material that represents a general reaction or attitude towards parents. The response may be more relevant to one parent or the other. Therefore, the clinician may attempt to seek out the dominant parental figure.

Stem 9: I believe-----

This stem is open ended and the subject may share a hidden fear or reveal an issue that is, for the subject, rather current. Self-concept feelings may also be revealed.

Stem 10: People think I-----

The material elicited by this stem may be a projection on the part of the subject. It may also represent an internalization of the environment.

Stem 11: My only trouble is-----

This stem provides an opportunity for the subject to zero in on one specific area in which energy has been invested. Responses may involve a school subject or person. A determination of academic or social concern may be made.

Stem 12: When I am alone-----

This stem is designed to measure need for social relationships. Tendencies toward withdrawal may be revealed. Responses may provide clues to ego strength and ability for sublimation of energy.

Stem 13: I-----

This stem is open. It forces the subject towards self-analysis and appraisal. The clinician should be concerned about a temporary state or condition as opposed to a general and overall attitude.

Stem 14: Brothers are-----

This stem may reveal sibling rivalry or the subject's reaction to males in general.

Stem 15: My teacher-----

Pupil-teacher relationships will be revealed by this stem. Also, the subject may present an overall appraisal of the school experience and ability to deal with structure.

Stem 16: I am-----

This is another open stem designed to reveal feelings about self. Concerns about behavior, sexuality, or the denial of a particular experience may be presented.

Stem 17: School work-----

This stem is specific and is designed to reveal the degree to which success experiences have been obtained through academics. Toleration for structure and ego strength in face of challenge may be revealed.

Stem 18: I wish-----

This stem is fairly open and somewhat equivalent to the Jersild question of wishes. The subject may express

a desire to gain something of significance or a desire to be rid of an annoyance. The response to this stem may be a current issue with the subject.

Stem 19: My nerves-----

This stem allows the subject to evaluate his or her own neurological functioning and coping ability. Anxieties and frustration level may be alluded to.

Stem 20: I really-----

This last stem is emphatic and climactic. Much affect may be invested in the response. It is tailored in the first person and neutral in tone. A realistic measure of emotional energy may be revealed.

Method of Analysis

The pilot instrument, comparing the responses of regular-education and emotionally impaired youngsters, as defined and placed by school personnel within the school system, was scored according to the prescribed criteria. The statistical treatment, the chi-square test of independence, was applied to test for the stems that tended to discriminate between the emotionally impaired group and regular education youngsters. All stems were scored and arranged in cells according to the following format: emotionally impaired and regular education categories were placed in rows while columns were composed of the various scores obtained under the headings negative, denial, neutral, acceptance, and

positive. The categories were assumed to be independent with equal proportions in each cell. Test administrator's feedback and an awareness of a disproportionate number of one type of response were useful guides to stem selection and analysis.

All regular-education students used for the sake of comparison were selected at random. The responses of all the groups studied were scored and the overall mean, median, and standard deviations were determined for each category based on fully completed protocols. A nonparametric sign test of significant difference between medians was used to determine which groups performed differently on the instrument, with the alpha level being set at .05 or less. The use of a nonparametric test was based on the fact that intact groups were being studied--a reality which precluded the making of assumptions pertaining to random sampling, normal distribution, and homogeneity of variance. Placement on the continuum of personality adjustment was determined on the basis of the average stem value calculated for each group. In addition, the differential placement of regular-education youngsters on the normal-distribution curve was considered important.

Tests of inter-scorer reliability were made on the ratings of four clinicians according to the Pearson-r formula computed on the raw scores. Six correlation coefficients were therefore determined.

The pretest-posttest investigation involved administering the final form of the Bacchus Sentence-Completion Method to emotionally impaired youngsters twice, the second time at the end of one year to test for treatment effects. The difference in scores made by subjects on the pretest as well as the posttest were compared in relation to teacher evaluation of progress or regression in the program. A t-test was used to determine whether or not the differences between the pretest and posttest scores were significant. However, there was no interest in the ability of the program to effect changes, but only in the ability of the instrument to detect personality changes as they occurred. Furthermore, program evaluation in terms of producing personality changes was not part of the investigation. Therefore, statistical analysis of significant change between the pretest and posttest scores was designed only to strengthen the psychometric validity of the instrument in that detection of a significant change was superior to the detection of an insignificant and possibly chance variation.

Procedure

The developed pilot instrument (see appendix I) was administered to regular-education students at the elementary-grade level as well as to pupils at the same level who were described and labelled by the school system as emotionally impaired. The major instruction to teachers who administered the instrument, was to have the pupils fully complete the forms in any fashion. Teachers were contacted

for feedback as to length of administration and items that were confusing and relatively difficult for pupils to understand. The Cromwell School District, located in Cromwell, a lower-middle-class suburb of Hartford, Connecticut, was used for the first pilot study.

The responses were scored according to the prescribed scoring procedures. The Chi-square method of statistical analysis was used to select a more refined form consisting of twenty-five stems. Stems that tended to discriminate between the two groups were considered for selection.

The refined form was pilot tested again. This time, regular-education and emotionally impaired youngsters were chosen from the Lakeshore School District, a school district within the Berrien County Intermediate School District in the state of Michigan. The new set of responses was scored and analyzed by means of the Chi-square method of statistical analysis. Twenty stems comprised the final form of the instrument.

The Benton Harbor School System, a lower socio-economic, inner-city school system within the Berrien County Intermediate School District in the state of Michigan, was used for the administration of the final form of the instrument. This final form was administered to all elementary school youngsters in the Benton Harbor schools who were classified as learning impaired ($N = 30$), educable mentally impaired ($N = 31$), and emotionally impaired ($N =$

33). These groups were chosen to facilitate a comparison of the performance of various groups on the instrument. Regular-education students (N = 33), chosen for the sake of comparison, were selected at random through the use of a random set of numbers after they had been ranked. The ability of the instrument to discriminate among the four groups was tested by comparing the medians for the various groups and analyzing the position of each group on the continuum of the personality-adjustment scale.

A random set of responses was developed for the purpose of testing for inter-scorer reliability. Four school psychologists were trained and tested on the scoring procedures. These clinicians, with no knowledge of the subjects' identity, rated the responses according to the numerical scoring device. The four sets of numerical ratings were compared according to the Pearson-r formula, and six inter-scorer reliability coefficients were determined.

The final form of the instrument was tested on emotionally impaired youngsters to determine the sensitivity of the instrument to treatment effects. This group was tested, continued in their assigned program, and later retested. It was assumed that the program was designed to promote personality adjustment. The posttest was administered to emotionally impaired students who were eventually judged by their teacher to have made significant gain or regression in the program to which they were assigned. Since the instrument is projective in nature, and

since it is difficult for a respondent to determine what is a good or bad response, it was hoped that the pretest would not significantly influence the posttest results. In addition, it was hoped that the time between the pretest and posttest was long enough to prevent subjects benefiting from the test itself. The teacher selected to participate in this particular phase of the experiment was certified to teach the emotionally impaired and had more than one year of teaching experience in a classroom for the emotionally impaired. Knowledge of emotional impairment and ability to remediate were important considerations. A t-test was used to determine whether or not the difference between the pretest and posttest scores was significant. The results of the investigation were interpreted in terms of personality theory and assessment, and the ability of semiprojective techniques to measure personality adjustment changes.

Scoring

The Bacchus Sentence-Completion Method was designed to be used by school psychologists in a one-to-one setting. It was also designed to be administered as part of a test battery in a full scale psychological evaluation. The responses were scored and weighted according to the following scoring and weighting criteria.

Omission responses

Omission responses were designated as those for which no response was given or for which the thought was incomplete. This type of response would not be scored since the notion of an omission response being representative of psychopathology has not been fully supported by research. When more than 25 percent of a test by a particular subject were omissions, the entire test was disqualified and no attempt to determine group classification was made. When a pupil presented less than 25 percent omissions, the unfinished sentences were treated as missing data. A median score was therefore established on available data and considered to be more meaningful than a mean score. A test of significant differences between medians was conducted, using only fully completed protocols.

Negative responses

Negative responses included responses characterized by hostility, pessimism, inferiority feelings, hopelessness, hatred, aggression, fear, and extreme anxiety or withdrawal. These feelings might have been self- or others-directed. A negative response suggested psycho-pathological functioning. This type of response was given a weighted score of 1.

- Examples:
- (1) I think-----people are mean.
 - (2) I am-----stupid.
 - (3) School work-----is foolish.
 - (4) I believe-----I am going to die.

Denial responses

A denial response was determined by any or all of the following means:

1. An indication of refusal to accept the reality of a real-life situation
2. Being inappropriately and unreasonably positive
3. A significant deviation from the general tone of the overall responses from being negative to being extremely positive

A denial response was given the weighted score of 2.

- Examples:
- (1) I think-----I am the greatest person.
 - (2) I am-----perfect all the time.
 - (3) School work-----is the easiest thing
I've ever done.
 - (4) I believe-----I have no problems.

Neutral responses

Neutral responses were classified on a simple descriptive level. They were generally passive statements reflecting flat affect. Responses denoting "good" or "nice" were considered neutral because of their everyday common use. This type of response was given a weighted score of 3.

- Examples:
- (1) I think-----you are ok.
 - (2) I am-----a boy.
 - (3) School work-----is all right.
 - (4) I believe-----you are nice.

Acceptance responses

An acceptance response was classified as the opposite of a denial response and was determined by either or both of the following means:

1. An indication of willingness to accept the reality of a real-life situation. Such a response will often include words such as "but" and "even though".
2. Being somewhat appropriately and reasonably matched in affect, with regards to an issue or phenomenon.

This type of response was given a weighted score of 4.

- Examples:
- (1) I think-----school is hard but I need to go.
 - (2) I am-----an ok person even though I have
some faults.
 - (3) School work-----is important even though it
is often hard.
 - (4) I believe-----I am doing badly but I am
trying.

Positive responses

A positive response denoted extreme satisfaction, optimism, hope, good self-feelings, good feelings toward others, and friendliness. This type of response was given a weighted score of 5.

- Examples:
- (1) I think-----most people are great.
 - (2) I am-----doing quite well in school.
 - (3) School work-----is fun.
 - (4) I believe-----I am doing great.

Hypotheses

In accordance with the purpose of the study, the following null hypotheses are stated here.

1. The final form of the Bacchus Sentence-Completion Method will not discriminate between emotionally impaired youngsters and regular-education pupils, therefore not supporting a claim of psychometric validity.

2. The final form of the Bacchus Sentence-Completion Method will not discriminate between educable mentally impaired youngsters and regular-education pupils, therefore not supporting a claim of psychometric validity.

3. The final form of the Bacchus Sentence-Completion Method will not discriminate between learning impaired youngsters and regular-education pupils, therefore not supporting a claim of psychometric validity.

4. The final form of the Bacchus Sentence-Completion Method will not discriminate between emotionally impaired youngsters and educable mentally impaired pupils, therefore not supporting a claim of psychometric validity.

5. The final form of the Bacchus Sentence-Completion Method will not discriminate between emotionally impaired youngsters and learning impaired pupils, therefore not supporting a claim of psychometric validity.

6. The final form of the Bacchus Sentence-Completion Method will not discriminate between educable mentally impaired youngsters and learning impaired pupils, therefore not supporting a claim of psychometric validity.

7. The scoring of the final form of the instrument will not demonstrate high interscorer reliability.

8. The final form of the instrument will not be able to yield results on emotionally impaired youngsters that are in agreement with teacher evaluation, therefore not attesting to concurrent validity.

CHAPTER IV

VALIDITY AND RELIABILITY

In the development of any usable psychological instrument, major concerns relate to instrument validity and reliability. The American Psychological Association (1974) places heavy emphasis on these two standards.

Description of the Personality Adjustment Continuum

The personality adjustment scale shown in figure 3 assumes that personality adjustment ranges on a Negative, Denial, Neutral, Acceptance, and Positive continuum.

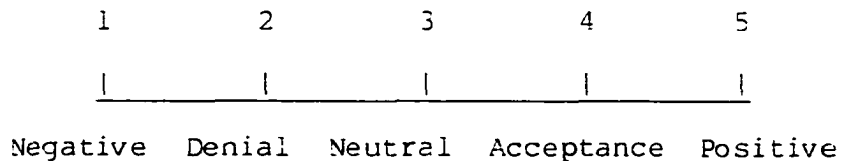


Fig. 3. Personality Adjustment Scale

A person may react negatively to an experience, may deny its existence or impact, or remain neutral and unaffected. In a higher sense, indicative of relatively high ego development and emotional growth, a person may choose to accept an

experience, cope with a painful situation in a realistic manner, or remain realistically positive in face of environmental stress or threat. In general, for example, an average performance of 3 will describe a youngster as mostly passive in orientation to his or her environment, while an average performance of 1 will describe a pupil as negative and oppositional.

The growing child is dependent on the two major factors of genetic endowment and development dependent on environmental factors. By the process of introjection, environmental experiences are assimilated. The socialization process, in a supportive way, provides warmth and nurturance necessary for emotional growth. Theoretically, the growing child attempts to maximize pleasure and minimize the experience and effect of painful experiences. In a real way, these experiences predispose the child towards the nature of the projections he or she makes on and towards his or her environment.

Performance of the Various Groups on the Instrument

The total scores of all subjects on the instrument were calculated. A nonparametric sign test of differences between medians (see table 1) revealed that there was a statistically significant difference ($p < .05$) in the performance on the instrument of all special-education groups compared with regular-education youngsters. This performance was the major function the instrument was designed to

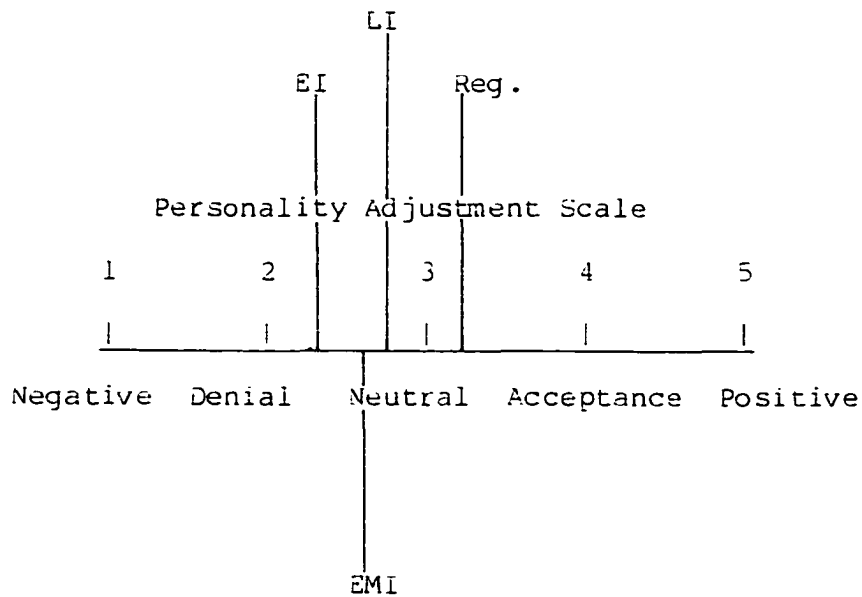
fulfill, which is in keeping with the theory surrounding the use of semistructured, projective techniques in diagnosing personality maladjustment. In addition, and in keeping with a rational approach to educational performance, it might be expected that the emotionally impaired youngster would be most different from the regular-education youngster in personality status. Although a significant difference between the educable mentally impaired and the learning impaired, when compared to regular-education youngsters, was established at the $<.05$ level, a greater statistical difference ($<.001$) between the emotionally impaired and regular-education groups was seen (see table 1). However, the compared difference in placement of the three special-education groups among themselves on the personality adjustment continuum was not statistically significantly different. This was a secondary concern. Besides, this limited performance does not necessarily reflect on the instrument's inability to discriminate. On the contrary, this finding may be indicative of a high and common level of emotionality among inner-city, special-education groups.

TABLE 1
CHI-SQUARE VALUES ON GROUPS STUDIED

Category	Required X	Obtained X	df	P
Emotionally impaired vs. Regular pupils	3.84	27.00	1	<.001
Educable mentally impaired vs. Regular pupils	3.84	8.30	1	<.01
Learning impaired vs. Regular pupils	3.84	5.33	1	<.05
Emotionally impaired vs. Learning impaired pupils	3.84	3.02	1	>.05
Educable mentally impaired vs. Learning impaired pupils	3.84	.33	1	>.05
Emotionally impaired vs. Educable mentally impaired pupils	3.84	3.00	1	>.05

Alpha level was set at .05

Although special-education groups were placed at different points on the continuum of personality adjustment (see fig.4), a finding which appears to be of practical use in a differential diagnostic attempt, the important possibility of a chance variation has to be acknowledged. The following averages were achieved: emotionally impaired--2.3, educable mentally impaired--2.6, learning impaired--2.7, and regular education youngsters--3.2.



EI-----Emotionally Impaired

LI-----Learning Impaired

EMI----Educable Mentally Impaired

Regular-----Regular-Education Students

Fig. 4. Placement on Personality Adjustment Scale

Normative Data Based on the Raw Scores
of Fully Completed Protocols

Regular-education pupils, who were randomly selected, achieved an average raw score of 60.9 with a standard deviation of 5.43 (table 2). On the Wechsler Intelligence Scale for Children--Revised (WISC-R), the cut-off point for an educable mentally impaired classification is two standard deviations of 15 IQ points below the mean of 100 which is equal to 70. Using the same cut-off point of two standard deviations, it seems reasonable to expect emotionally impaired pupils to fall below an average of 49.64. The average achieved by emotionally impaired was 45.79, which is closer to three standard deviations. This extremely low performance of the emotionally impaired on the instrument may be partially accounted for by the inner-city nature of the emotionally impaired population studied. The educable mentally impaired group performed almost two standard deviations below the mean, while the learning impaired achieved at one standard deviation below the mean. Therefore, the emotionally impaired can be categorized on the basis of two standard deviations below the mean which is an average of 49.64 or less, employing the principle upon which the determination of mental retardation has been made using the WISC-R.

TABLE 2

NORMATIVE DATA

Category	Mean	Median	Standard Deviation
Emotionally impaired	45.79	47.00	7.97
Educable mentally impaired	51.25	52.00	9.08
Learning impaired	55.12	54.50	7.60
Regular education	60.90	60.50	5.43

Figure 5 depicts the various standard-deviation placements of the normal sample used.

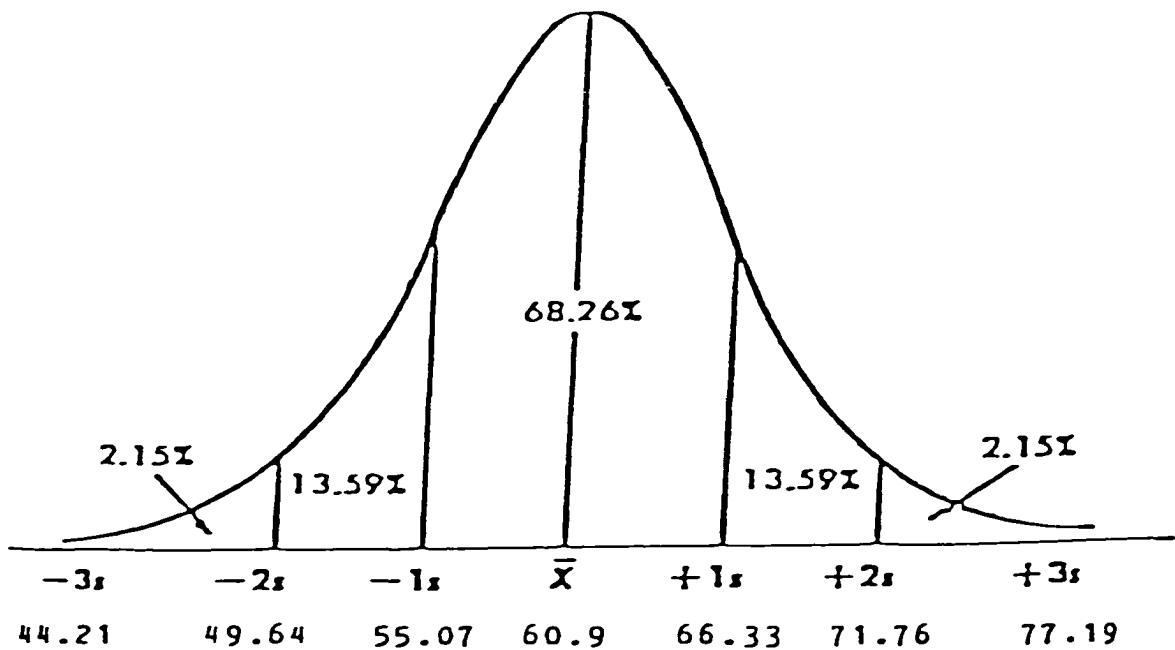


Fig. 5. Normal Distribution Curve

Inter-Scorer Reliability

Since the instrument was designed for use by school psychologists, it was felt that these clinicians should be involved in establishing inter-scorer reliability. The scoring system and examples provided were studied by four school psychologists. Several sessions were used to answer questions and provide clarifications. The scoring was done without a knowledge of the respondent's identity. The profiles used to ascertain a reliability coefficient were randomly selected and later scored by the four school psychologists. Correlation coefficients of inter-scorer reliability of .96, .98, 1.00, .98, .96, and .98 were yielded (see appendix V & table 3). The six reliability coefficients obtained were all high and close in value. Six coefficients, instead of one, also added strength to the outcome of consistency. These correlation coefficients suggest that clinicians will present significantly consistent scoring of the instrument. Subjective biases, therefore, do not appear to significantly influence the determination of emotional impairment. In addition, an average inter-rater correlation of .98 was obtained using the Z-score conversion method of calculation.

TABLE 3
CORRELATION MATRIX

Psychologist	I	II	III	IV
I	---	.96	.98	1.00
II	.96	---	.98	.96
III	.98	.98	---	.98
IV	1.00	.96	.98	---

The Process of Test-Retest Validation

The procedure of test-retest validation was designed to evaluate the ability of the instrument to measure changes in personality adjustment over time. Emotionally impaired youngsters were pretested and then posttested after involvement in a structured program designed to improve personality adjustment. In every case, as performance on the instrument improved or worsened, teacher evaluation was in agreement with the changes (table 4). Scoring of protocols was done without a knowledge of the respondent's identity and prior to receiving the teacher's evaluation.

The data yielded by the test-retest investigation was corrected for direction and absolute differences were compared. A statistically significant difference ($t=5.08$, $df=7$, $p<.05$) was seen between the pretest and posttest results. Although the measurement of program changes was not part of the investigation, the ability of the Bacchus Sentence-Completion Method to detect a significant change as

opposed to a possible chance variation, adds strength to a claim of psychometric validity. The Bacchus Sentence-Completion Method was able to detect a significant change in the personality status of the youngsters measured. This finding and the strong agreement with teacher evaluation attested to significant concurrent validity for the Bacchus Sentence-Completion Method.

TABLE 4
RESULTS OF TEST-RETEST INVESTIGATION

Subject	Pretest	Posttest	Teacher Evaluation
1	30	42	Better
2	48	30	Worse
3	56	50	Worse
4	48	50	Better
5	48	58	Better
6	46	57	Better
7	44	50	Better
8	54	60	Better

$$t = 5.08 \quad df = 7, \quad p < .05$$

Unfortunately, a controlled experiment was impossible since all emotionally impaired students are mandated by federal legislation to be assigned to a special-education prescribed program. It was hoped that, since subjects were unaware of what a "good" or "bad" response might be, and since there was a period of about one year between pretesting and posttesting, there was no significant influence of pretesting on the posttest results. Besides, there were no changes in teachers during this period.

The evaluation by the teacher was provided freely, under the agreement of anonymity and freedom from threat. It is therefore assumed that the subjects used in this particular phase of the investigation progressed or regressed in their particular program and were measured accordingly with some accuracy through the use of the Bacchus Sentence-Completion Method. Research studies (Beilin, 1959; Bower, 1958; Bower, 1958; Maes, 1966; & Stouffer, 1952) have demonstrated that teachers are capable of making valid judgments about classroom behavior, since they are in a unique position to identify emotional problems through prolonged observation. It was somewhat significant that the teacher did not evaluate any of the pupils as remaining the same, although in one case there was little measured change. This may suggest a need for success on the teacher's part. However, one pupil who was rated "better" by the teacher and measured by the instrument to have improved was reported to have subsequently displayed serious physical aggression without provocation towards a peer. This incident raises the question as to the ability of the instrument to tap hidden, deeper pathology.

Summary

The criterion-related study supported a statistically significant difference ($p < .05$) between the special-education groups, emotionally impaired, educable mentally impaired, and learning impaired, and regular education pupils. However, the fine distinction between the

three special-education groups on the personality adjustment continuum was not supported by a test of statistical significance. Therefore, a chance variation has to be acknowledged as a real possibility. However, this was of minor significance to the study and may only suggest a high and common level of emotionality among inner-city special-education pupils.

Construct validity for the Bacchus Sentence-Completion Method may be rationally inferred on the following basis. The two independent groups, the emotionally impaired and regular education youngsters, were defined by the school system in relation to the construct of personality adjustment. The instrument was then administered to both groups yielding a statistically significant difference ($<.001$). The emotionally impaired, as a group, was defined by an Educational Planning and Placement Committee which included a certified school psychologist, while the regular-education group remained in the mainstream of education having an absence of a legitimate emotional handicap. Construct validity can be reasonably claimed for the Bacchus Sentence-Completion Method since emotionally impaired subjects, as predicted, received significantly lower scores on the construct which the instrument measures than did regular-education subjects.

The data yielded by the test-retest investigation and the close correspondence to teacher evaluation support a

claim of concurrent validity for the Bacchus Sentence-Completion Method.

The high correlation coefficients obtained on the test of inter-scorer reliability and the high average inter-rater coefficient obtained suggest that the Bacchus Sentence-Completion Method can be objectively scored with a high degree of consistency.

Overall, the Bacchus Sentence-Completion Method appears useful in detecting personality changes over time, and is useful in the process of categorizing elementary-age youngsters as emotionally impaired for special education programming.

CHAPTER V

SUMMARY AND ANALYSIS OF RESEARCH FINDINGS

The following are the important research findings:

1. On the continuum of personality adjustment, with a scale ranging from negative adjustment to positive adjustment, inner-city subjects were placed in the order: emotionally impaired, educable mentally impaired, learning impaired, and regular-education students.

2. The various special-education groups surveyed performed statistically significantly different ($p < .05$) in relation to regular-education pupils on the instrument. This was the major function the Bacchus Sentence-Completion Method was designed to fulfill.

3. The objective, quantitative, scoring device makes for high scoring consistency. Inter-scorer reliability coefficients of .96, .98, 1.00, .98, .96, and .98 were obtained, yielding an average inter-rater coefficient of .98.

4. The findings suggest that the Bacchus Sentence-Completion Method is capable of and useful in measuring changes in personality adjustment over time. However, the research findings also suggest that the instrument mostly reflects surface features of personality.

5. From a clinical analysis of the findings throughout the investigation, neutral stems stated in the first person

appeared to increase the psychometric validity and usefulness of the final form of the Bacchus Sentence-Completion Method. The responses may therefore reflect self-concept levels. Whether or not this is the case is a matter for further investigation in the future through the comparison of findings on self-concept measures.

6. From an analysis of the feedback received from teachers, twenty stems appear to be within the limits of comfort for elementary-aged pupils.

7. From a clinical analysis of the responses yielded at different stages of the investigation, negative stems appear to produce mostly negative responses. Negative stems were therefore eliminated from the final form of the Bacchus Sentence-Completion Method.

8. Regular education students produced more positive responses while emotionally impaired students produced more negative responses. This finding appears to be in keeping with general personality theory.

9. There were a limited number of acceptance responses produced, suggesting an overall tendency towards anxiety in this population.

10. Educable mentally impaired subjects and learning impaired subjects were placed in very close positions on the continuum of personality adjustment.

11. The efficiency of an oral administration of the method was established, even though a written performance

would yield a useful sample of language and fine motor skills.

12. Educable mentally impaired subjects, learning impaired subjects, and emotionally impaired subjects produced mostly neutral and negative responses while regular-education pupils produced mostly neutral and positive responses. Therefore, in diagnosis, a clinician should expect the emotionally impaired, the learning impaired, and the educable mentally impaired to produce a high percentage of neutral and negative responses.

13. Neutral responses were produced more frequently than other types of responses, suggesting a general passivity in the population studied.

14. There was no statistical difference in placement on the personality continuum between the following groups:

- (a) Educable mentally impaired and learning impaired
- (b) Educable mentally impaired and emotionally impaired
- (c) Emotionally impaired and learning impaired

The emotionally impaired, the educable mentally impaired, and the learning impaired were very close in emotional status. Any difference could have been a true but insignificant difference or a chance variation.

15. The emotionally impaired, on the normal distribution curve, achieved a mean score that was close to three standard deviations below the mean achieved by regular education youngsters. The educable mentally impaired performed about two standard deviations below the mean while the learning

impaired achieved at one standard deviation below the mean. Based on the data, the emotionally impaired, using a two-standard deviation cutoff, may be so classified upon obtaining a score of 49.64 or less on the Bacchus Sentence-Completion Method.

Content Analysis of Responses

The responses produced by the various categories were clinically analyzed in terms of (1) the percentage of the various continuum-defined responses which included negative, denial, neutral, acceptance, and positive responses; (2) the underlying content of the themes developed by the respondents.

Emotionally Impaired Youngsters

Thirty-four percent of all responses made by the emotionally impaired were negative. Also 5 percent of all responses by this group were denial responses. Forty-nine percent of all responses made by this group were neutral responses. Approximately 3 percent of all responses were acceptance responses and 6 percent of all responses were positive. The scoring of the emotionally impaired on this instrument may therefore be described as mostly neutral and negative (see fig.6).

Furthermore, the emotionally impaired presented more "escape" responses, more "fear" responses, more "person or body inferiority" responses, and more "hate and aggression" responses than any other group.

In sum, the performance of the emotionally impaired on the Bacchus Sentence-Completion Method suggests that this group, though generally passive, can sometimes be negative, be fearful, have a tendency to escape from reality, feel inferior about self, and entertain some degree of hateful, aggressive feelings.

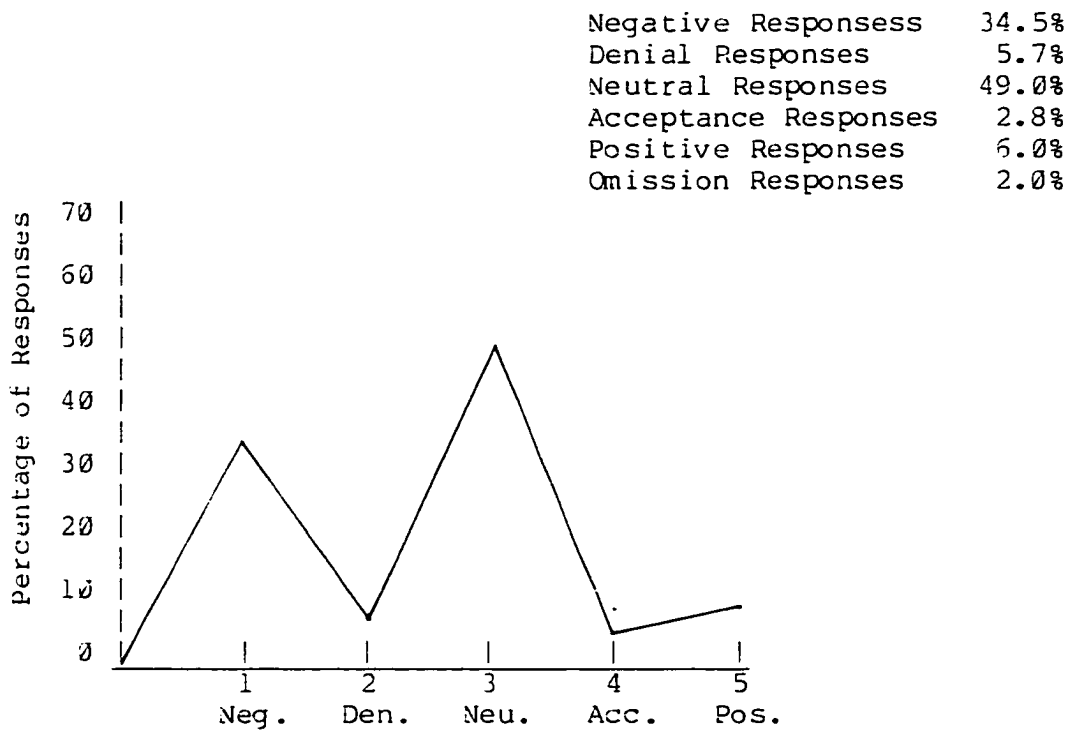


Fig. 6. Emotionally impaired students

Table 5 presents the performance of the emotionally impaired on the various stems.

TABLE 5
PER-STEM PERFORMANCE--EMOTIONALLY IMPAIRED PUPILS

	1	2	3	4	5
	Neg.	Den.	Neu.	Acc.	Pos.
1. Sometimes I feel like _____	15	1	15	1	1
2. At home _____	3	1	27	0	1
3. I think _____	11	2	18	1	1
4. Sisters are _____	13	0	17	1	2
5. I would like to _____	8	0	25	0	0
6. School _____	7	2	20	0	3
7. I think my friends _____	9	0	22	2	0
8. My parents _____	5	0	21	0	5
9. I believe _____	7	3	22	0	0
10. People think I _____	23	4	5	0	0
11. My only trouble is _____	30	0	2	0	0
12. When I am alone _____	22	1	8	1	0
13. I _____	7	2	19	0	3
14. Brothers are _____	10	0	22	1	0
15. My teacher _____	3	1	21	2	1
16. I am _____	9	5	17	1	0
17. School work _____	7	3	15	5	2
18. I wish _____	19	0	11	0	0
19. My nerves _____	26	2	4	0	0
20. I really _____	7	6	14	1	5

Educable Mentally Impaired Youngsters

The educable mentally impaired group were somewhat less negative than the emotionally impaired. This group produced 25 percent negative responses. Like the emotionally impaired, this group may be described as neutral and negative, even though 10 percent more neutral responses were made (see fig. 7). Educable mentally impaired pupils, on the Bacchus Sentence-Completion Method, produced the most "play" and "omission" responses, suggesting a desire towards involvement in an unstructured situation, a deficit in language skills, and limited achievement motivation.

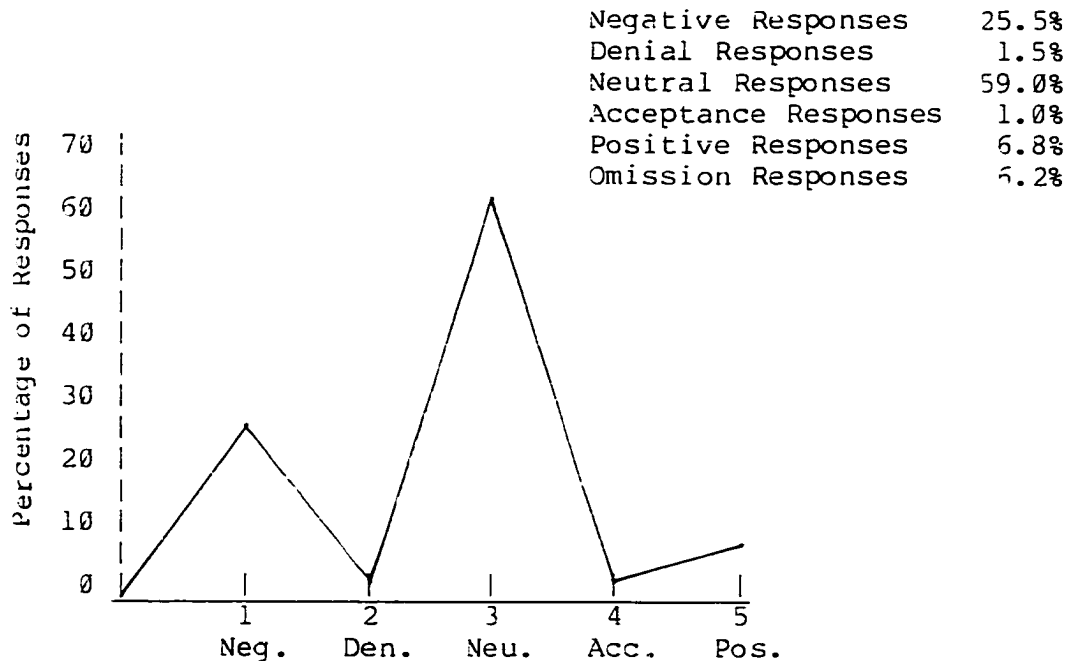


Fig. 7. Educable mentally impaired students

Table 6 presents the performance of the educable mentally impaired on the various stems.

TABLE 6
PER-STEM PERFORMANCE--EDUCABLE MENTALLY IMPAIRED PUPILS

	1	2	3	4	5
	Neg.	Den.	Neu.	Acc.	Pos.
1. Sometimes I feel like _____	12	0	19	0	0
2. At home _____	3	0	24	0	2
3. I think _____	3	0	24	0	1
4. Sisters are _____	10	0	11	0	7
5. I would like to _____	3	0	28	0	0
6. School _____	2	0	20	0	3
7. I think my friends _____	10	0	15	0	5
8. My parents _____	4	0	24	0	3
9. I believe _____	4	0	24	0	1
10. People think I _____	14	1	11	2	1
11. My only trouble is _____	16	1	13	1	0
12. When I am alone _____	11	0	13	0	1
13. I _____	6	0	23	0	0
14. Brothers are _____	9	0	17	0	4
15. My teacher _____	6	0	23	0	2
16. I am _____	4	3	19	0	3
17. School work _____	3	2	20	1	2
18. I wish _____	6	0	23	0	0
19. My nerves _____	20	2	4	0	3
20. I really _____	7	0	20	2	2

Learning Impaired Youngsters

Learning impaired students were as negative as the educable mentally impaired. About half the responses given by the learning impaired group were neutral. However, the learning impaired produced about two and one-half times the number of positive responses made by either the emotionally impaired or the educable mentally impaired (see fig. 8). Although this group may be described as somewhat neutral and negative, there was evidence of a more positive outlook as compared with the two previous categories. The learning impaired produced the most "sadness and depression" responses which may result from academic frustration.

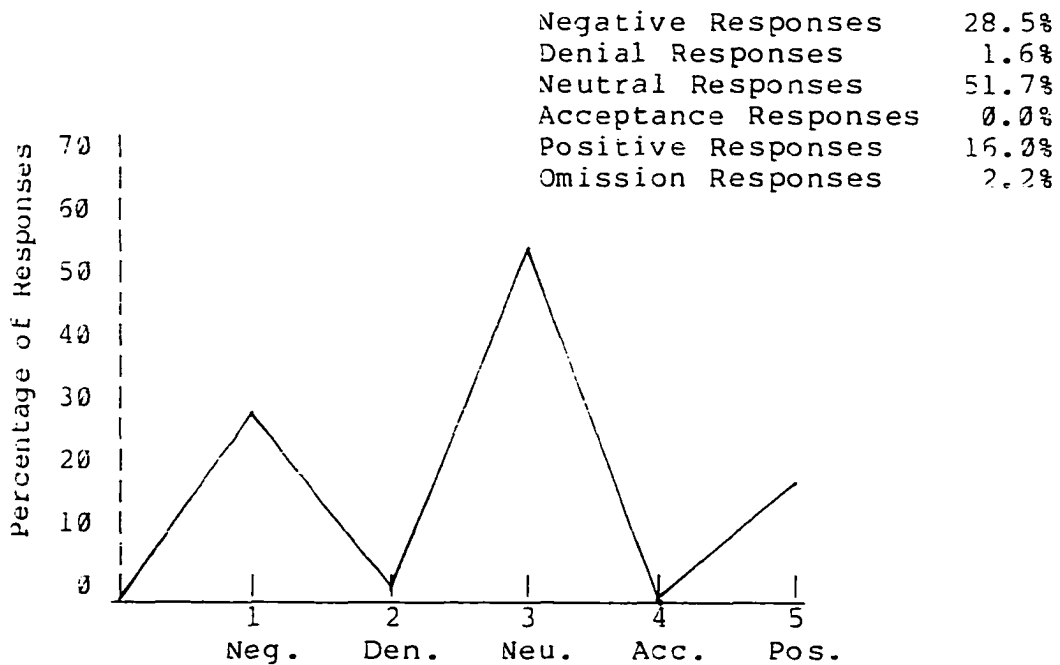


Fig. 8. Learning impaired students

Table 7 presents the performance of the learning impaired on the various stems.

TABLE 7

PER-STEM PERFORMANCE--LEARNING IMPAIRED PUPILS

	1	2	3	4	5
	Neg.	Den.	Neu.	Acc.	Pos.
1. Sometimes I feel like _____	12	0	16	0	1
2. At home _____	3	0	25	0	2
3. I think _____	2	2	21	0	4
4. Sisters are _____	11	0	12	0	7
5. I would like to _____	3	1	24	0	1
6. School _____	3	0	11	0	15
7. I think my friends _____	5	0	15	0	6
8. My parents _____	2	0	23	0	5
9. I believe _____	4	1	22	0	3
10. People think I _____	12	0	14	0	4
11. My only trouble is _____	15	0	13	0	0
12. When I am alone _____	19	0	9	0	1
13. I _____	2	0	20	0	6
14. Brothers are _____	12	0	7	0	10
15. My teacher _____	2	0	23	0	5
16. I am _____	11	2	14	0	3
17. School work _____	9	0	9	0	12
18. I wish _____	13	0	16	0	1
19. My nerves _____	25	1	1	0	3
20. I really _____	4	2	17	0	7

Regular-Education Youngsters

Regular-education youngsters produced 60 percent neutral responses and three times the number of positive responses made by the emotionally impaired. They were much less negative but very neutral (see fig. 9). From a clinical analysis of the content, regular-education pupils produced the most "people-related" responses, which is indicative of willingness for social intercourse and which may suggest a fairly healthy adjustment.

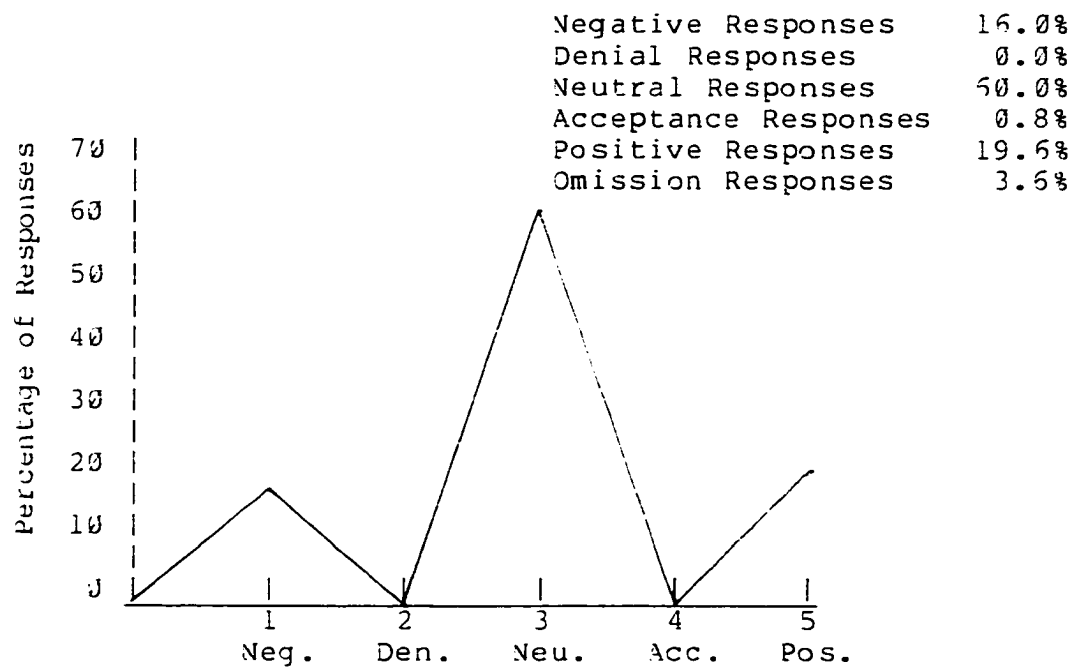


Fig. 9. Regular education students

Table 8 presents the performance of the regular-education students on the various stems.

TABLE 8

PER-STEM PERFORMANCE--REGULAR EDUCATION PUPILS

	1	2	3	4	5
	Neg.	Den.	Neu.	Acc.	Pos.
1. Sometimes I feel like _____	5	1	21	1	5
2. At home _____	1	1	27	1	2
3. I think _____	4	1	20	1	6
4. Sisters are _____	3	1	23	1	2
5. I would like to _____	1	1	27	2	2
6. School _____	1	1	12	1	16
7. I think my friends _____	3	1	16	1	12
8. My parents _____	1	1	17	0	14
9. I believe _____	7	1	22	1	2
10. People think I _____	8	1	14	1	9
11. My only trouble is _____	19	1	9	2	1
12. When I am alone _____	14	1	15	1	1
13. I _____	5	1	18	2	7
14. Brothers are _____	4	1	20	1	5
15. My teacher _____	1	1	23	1	7
16. I am _____	4	1	24	1	3
17. School work _____	3	1	15	2	12
18. I wish _____	5	1	22	1	1
19. My nerves _____	14	2	8	1	3
20. I really _____	1	1	17	1	12

Testing the Hypotheses

Hypothesis 1: The final form of the Bacchus Sentence-Completion Method will not discriminate between emotionally impaired youngsters and regular-education pupils, therefore not supporting a claim of psychometric validity.

On a nonparametric sign test of significant difference between the medians of emotionally impaired and regular-education pupils, a Chi-square of 6.64 was required for significance at the 1-percent level. A Chi-square of 27 was obtained. The null hypothesis was therefore rejected at the 1-percent level of significance, suggesting that the samples came from different populations with different medians.

Hypothesis 2: The final form of the Bacchus Sentence-Completion Method will not discriminate between educable mentally impaired youngsters and regular-education pupils, therefore not supporting a claim of psychometric validity.

On a nonparametric sign test of significant difference between the medians of educable mentally impaired and regular-education youngsters, a Chi-square of 5.64 was required for significance at the 1-percent level. A Chi-square of 3.3 was obtained. The null hypothesis was therefore rejected at the 1-percent level of significance suggesting that the samples came from different populations with different medians.

Hypothesis 3: The final form of the Bacchus Sentence-Completion Method will not discriminate between learning impaired youngsters and regular education pupils, therefore not supporting a claim of psychometric validity.

On a nonparametric sign test of significant difference between the medians of learning impaired and regular-education pupils, Chi-squares of 3.84 and 5.41 were required for significance at the 5-percent and 2-percent levels, respectively. A Chi-square of 5.33 was obtained. The null hypothesis was therefore rejected at the 5-percent level of significance suggesting that the samples came from different populations with different medians.

Hypothesis 4: The final form of the Bacchus Sentence-Completion Method will not discriminate between emotionally impaired youngsters and educable mentally impaired pupils, therefore not supporting a claim of psychometric validity.

On a nonparametric sign test of significant difference between the medians of emotionally impaired and educable mentally impaired youngsters, a Chi-square of 3.84 was required for significance at the 5-percent level. A Chi-square of 3.0 was obtained. The null hypothesis was therefore retained at the 5-percent level of significance suggesting that the samples did not come from different populations with different medians.

Hypothesis 5: The final form of the Bacchus Sentence-Completion Method will not discriminate between emotionally impaired youngsters and learning impaired pupils, therefore not supporting a claim of psychometric validity.

On a nonparametric sign test of significant difference between the medians of emotionally impaired and learning impaired youngsters, a Chi-square of 3.84 was required for significance at the 5-percent level. A Chi-square of 3.02 was obtained. The null hypothesis was therefore retained at the 5-percent level of significance suggesting that the samples did not come from different populations with different medians.

Hypothesis 6: The final form of the Bacchus Sentence-Completion Method will not discriminate between educable mentally impaired youngsters and learning impaired pupils, therefore not supporting a claim of psychometric validity.

On a nonparametric sign test of significant difference between the medians of educable mentally impaired and learning impaired youngsters, a Chi-square of 3.84 was required for significance at the 5-percent level. A Chi-square of .33 was obtained. The null hypothesis was therefore retained at the 5-percent level of significance suggesting that the samples did not come from different populations with different medians.

Hypothesis 7: The scoring of the final form of the instrument will not demonstrate high inter-scorer reliability.

Six pairs of scores were obtained after the final form of the instrument was scored by clinicians. Correlation coefficients ranging from .96 to 1.00 were obtained suggesting high stability and consistency of rating by clinicians for whose use the method was designed. An average inter-rater coefficient of .98 was obtained. The null hypothesis is therefore rejected.

Hypothesis 8: The final form of the instrument will not be able to yield results on emotionally impaired youngsters that are in agreement with teacher evaluation, therefore not attesting to concurrent validity.

In every case, a reduction or increase in performance on the instrument was correspondingly matched by a worse or better evaluation. The Bacchus Sentence-Completion Method was able to measure significant personality adjustment change ($t = 5.08$, $df = 7$, $p < .05$). However, since only one teacher of the emotionally impaired was involved, the null hypothesis cannot be conclusively rejected.

CHAPTER VI

RESEARCH IMPLICATIONS, CONCLUSIONS, AND RECOMMENDATIONS

The Bacchus Sentence-Completion Method proved to be a valid and objective instrument capable of measuring personality status and personality change with consistency. The Personality Adjustment Continuum created for the investigation appears to be a reasonable model on which to base a diagnosis of emotional impairment. The performance of the instrument in separating the emotionally impaired student from the regular-education student was both rational and statistically significant and in keeping with current personality theory concerning the ability of semistructured projective techniques in diagnosing emotional impairment. The instrument is therefore a useful tool to be used in the diagnosis of emotional impairment as a handicap.

On the continuum of the personality adjustment scale, in an upward direction, the emotionally impaired group was placed in the lowest position, followed by the educable mentally impaired, the learning impaired, and lastly the regular education group.

Although the various special-education groups were placed on the continuum of personality adjustment in a particular order, the need to determine primary manifestations using other techniques is still paramount,

since the difference in placement of the three special-education groups among themselves might have been through a chance variation.

The emotionally impaired are so diagnosed on the basis of a primary handicap of emotional disturbance, based on previous trauma. It was therefore not surprising, and in keeping with personality theory, that this group was placed at the lowest end of the personality adjustment scale. Emotionally impaired youngsters should generally manifest unpredictable emotional disturbance behaviors, whether overt or hidden, which clearly represent a blockage to learning and socialization.

The educable mentally impaired will often manifest behaviors which stem from frustration over academic difficulty. This group has often been described in terms of a flat profile performance, lacking in awareness and lethargic in response. The possibility of a lower mental development correlating with restricted emotional development is a real possibility. This group, therefore, was placed second from the lower end of the personality adjustment scale. In addition, the educable mentally impaired produced the most omission responses which may be a reflection on limited language skills or limited achievement motivation. Clinicians should continue to look for a "flat profile" in diagnosing educable mentally impaired subjects. Special caution should be exercised in distinguishing the educable mentally impaired from the learning impaired since these two

groups performed closely on the continuum and often manifest overt signs that may appear to be similar in nature.

The learning impaired will often manifest emotional symptoms that stem from frustration over academics, as well as neurologically based behaviors. Therefore, the learning impaired should continue to be diagnosed on the basis of an emphasis on neurological impairment. Factors such as poor impulse control, inability to concentrate, distractibility, hyperactivity, poor fine and gross motor skills, and perseveration are key signs.

The performance of regular-education students may be described as clearly neutral and somewhat passive. The overall placement of this group on the personality adjustment scale was towards the upper end of the continuum, even though the mean was barely beyond neutral. This description appears to be significantly consistent with the psychological description of the validation age-group made by many a theorist in the field.

In part, this investigation focused on the nonbiased assessment of minority subjects. Caution should be exercised in diagnosing emotional impairment among inner-city subjects. It appears that the emotional climate in this setting could be influenced by extreme and difficult circumstances such as unstable home conditions, absent parents, harsh discipline, and violence. Therefore, a high degree of surface emotionality will inevitably be displayed. Emotional impairment, however, is beyond this display of

symptoms and unpredictability of behavior is often the major distinguishing characteristic. In addition, the question of pupil satisfaction within a structured school setting may be raised. Is the influential factor on behavior the setting, with the teacher as the authority figure, or are the pupils' behavioral manifestations from within? One may question whether or not a youngster will perform better on the developed instrument were it to be administered at home.

This investigation represents an attempt to make personality adjustment more objective. This is in keeping with the current thrust in the field. In addition, the findings appear to add validity to the constructs that relate to personality study. The outcome suggests that personality can be evaluated and measured, and that the personality adjustment status of special-education groups considered together is different from regular-education youngsters.

The question relating to the level of personality measured by the method has been debated by many a theorist. The findings of this investigation suggest that the Bacchus Sentence-Completion Method, based on a clinical analysis of the content of responses and the test-retest findings, elicits material at a surface level. The Thematic Apperception Test and the Rorschach Psychodiagnostic Technique, having been established as measures of deeper personality levels, should be used in conjunction with the Bacchus Sentence-Completion Method in a comprehensive evaluation of evaluation of emotional impairment. Therefore,

the Bacchus Sentence-Completion Method may be used as an initial screening device prior to an extensive evaluation. Personality appears to be very much multi-level in nature. The Rorschach Psychodiagnostic Technique claims to elicit material from an unconscious level through unfamiliar picture stimulation. The Thematic Apperception Test may elicit material from a preconscious level through familiar picture stimulation. On the other hand, the Bacchus Sentence-Completion Method, through language stimulation, may elicit material from a conscious level. The subject would be reasonably well aware of the themes and feelings contained in his or her responses. Therefore, material elicited by this method can be easily related to by a subject and therefore serve as a basis for psychotherapy and counseling. Figure 10 depicts the various levels possibly measured by major personality instruments.

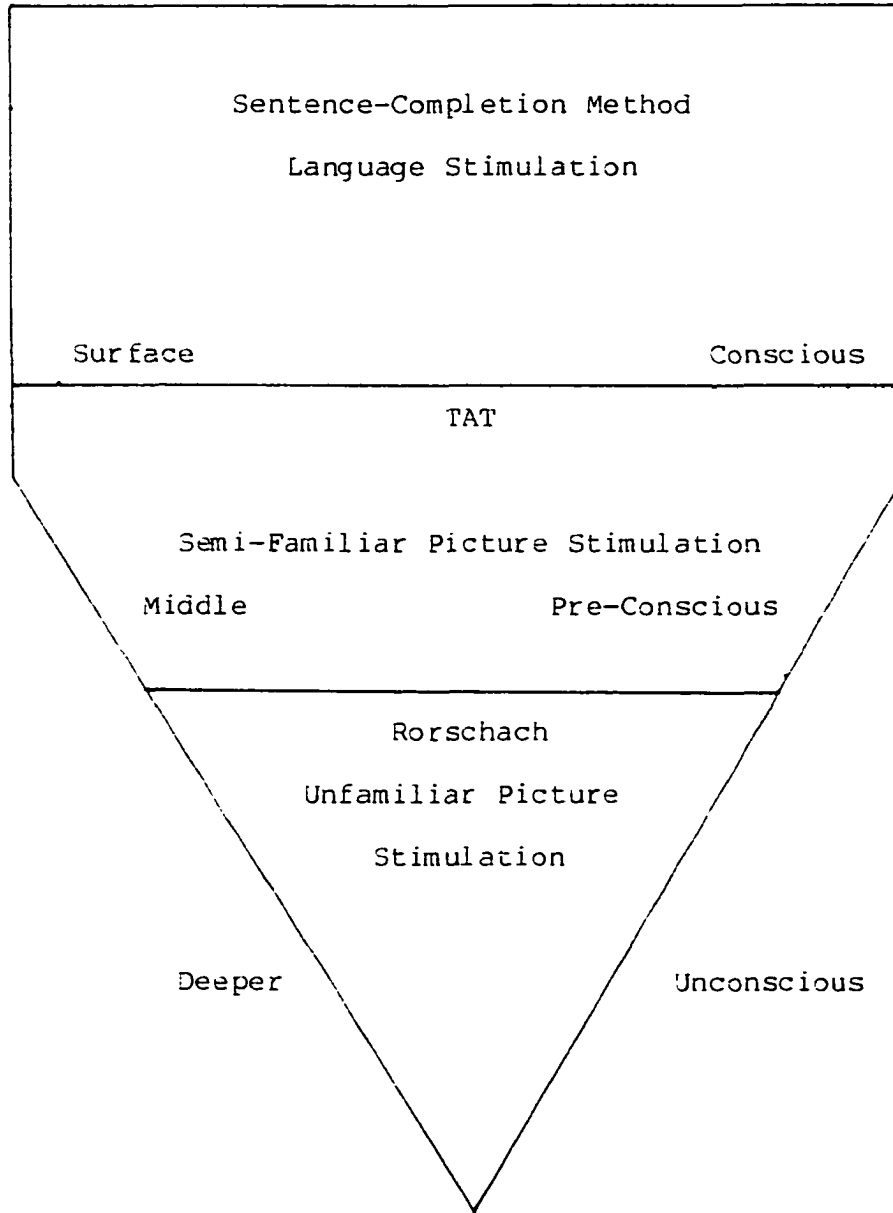


Fig. 10. Rorschach--T.A.T.--Sentence-Completion Method

The strength of affect in responses was the major consideration in assigning scores to the responses even though the expressed themes were clinically evaluated for content. The clinician should consider both features in the analysis of responses.

Experienced teachers of the emotionally impaired may provide valuable subjective information on these types of subjects. They may assist with the rating of progress in a particular program and be part of the multidisciplinary team as mandated by Public Legislation 94-142. These school personnel may be involved in the observation of subjects referred for psychological evaluation prior to determination of handicap. This type of involvement may be a constructive use of special-education personnel, if arrangements can be made.

If the Bacchus Sentence-Completion Method is administered last in a comprehensive psychological evaluation battery after all historical, medical, and academic data have been obtained, responses to the instrument may serve as a take-off point for the initial interview in a counseling or psycho-therapeutic situation.

An important consideration is that all evaluation was conducted within a school setting. The setting itself may have influenced the nature of the responses and it is likely that subjects would respond differently in a different setting. There is, therefore, room for further research. In

addition, data gathered from the home may prove to be useful in verifying school behaviors.

One major question raised by the research is whether or not the responses reflect on possible behavior or actual behavior. The imposed structure of the school environment may not allow for overt behavioral manifestations and some subjects may hold themselves in check only to respond in another environment that is less structured and imposing. The question itself may be lacking in meaningfulness since disturbances within or acted out may indeed interfere with learning and the realization of a subject's potential.

Two major problems were encountered in the research. Firstly, it was rather difficult to obtain permission to investigate in special education. Secondly, a control group was not practical since noninvolvement in a special-education program ran the risk of nonrehabilitation and violation of federal and state mandates. School administrators should be encouraged to facilitate more research in the area.

The production of a more objective instrument designed to measure personality adjustment represents a step further in the direction of consistency in the evaluation of all pupils. Furthermore, since the data was obtained on inner-city minority subjects, the tool may be more applicable in the field of the nonbiased assessment of inner-city minority children. Public Law 94-142 specifically prohibits

racial or cultural discrimination in the selection of evaluation instruments and procedures. The investigation adds to objectivity and consistency in scoring and forces a clinician to be aware of the high level of emotionality among special-education groups. When used in other cultural settings, it is possible that the instrument may demonstrate clearer discrimination ability.

The findings do not imply that an objective approach should be used exclusive of any degree of subjectivity. For example, test behavior should be clinically evaluated and interpreted in a comprehensive evaluation. However, nondiscriminatory assessment as well as federal guidelines demand that findings be definitive and defensible. It is toward this end that the investigation was conducted.

The greater percentage of responses for each group were neutral in tone. This may be a reflection of a tendency to sublimate energy into passive and productive channels. In addition, the youngster at this age must deal with the threat of school, social subordination, and authority figures. A possible passive orientation, reaction to a harsh environment, dependency which may originate from home and community and which is reinforced at school, all make for a passive, perhaps self-defeating, attitude at this age.

Conclusions

Recent court decisions have highlighted the continued attack against the misuse of psychological instruments. This investigation represents an attempt to add objectivity to the assessment process as well as specifically reduce the subjectivity that surrounds the area of personality assessment. There is a paucity of objective personality tools, and the validation of the Bacchus Sentence-Completion Method is significant because this method is popular with most clinicians. In addition, psychologists often play an influential role in the decision-making process because of their training and experience. It is vital, therefore, that the conclusions they reach through evaluation be valid and reliable. The scoring device adds to consistency of scoring and a reduction of subjectivity and bias. The findings are particularly applicable to the inner-city population and may help to reduce the tension that has existed over the possible misclassification of inner-city children.

The research findings suggest that personality can be objectively measured and that special-education groups are different in personality adjustment status. The Bacchus Sentence-Completion Method appears to be sensitive to personality adjustment changes and the scale devised to measure personality appears to be a reasonable model. The method itself is an efficient method. The stems that appear to perform best are first person neutral stems. In using the

method, a clinician should analyze responses for affect level as well as content. All medical, academic, and historical records should be studied.

In summary, the Bacchus Sentence-Completion Method is an objective tool for use in diagnosing emotional impairment at the elementary-school level. The instrument is fairly simple to administer and score, and would cost very little in time and money. The use of the instrument makes early intervention possible, while providing a safeguard from misclassification, labelling, and possible stigmatization. Baseline data on the specialized population studied has been provided and the instrument supports the intent of Public Legislation 94-142 and the Rehabilitation Act of 1973.

Recommendations

The following recommendations are made for discussion, consideration, and adoption:

1. More research with this method should be conducted on different populations.
2. Replication of the study on different inner-city populations seems necessary.
3. Other assessment tools, such as the Rorschach Psychodiagnostic Technique and the Thematic Apperception Test should be used in a comprehensive evaluation of emotional impairment since they appear to measure personality at deeper levels than the Bacchus Sentence-Completion Method.

4. Program effectiveness with the emotionally impaired should be evaluated. The Bacchus Sentence-Completion Method may be a useful measuring device.

5. The performance of the instrument on the severely emotionally impaired is an area for further investigation.

6. Passivity among elementary-age pupils may be self-defeating and worthy of further investigation.

7. The performance of subjects in different settings such as the home as opposed to the school should be investigated.

8. Further research is needed on the consistency of different raters of emotional impairment such as teachers and parents as compared to performance on the Bacchus Sentence-Completion Method.

9. The Bacchus Sentence-Completion Method should be administered by clinicians trained in test administration and rapport. Subjects should be encouraged to respond readily.

10. The effect of discipline and structure on emotionally impaired youngsters should be explored.

11. More research on racial or sexual differences is necessary.

12. The Bacchus Sentence-Completion Method should be used to measure the effects of home education, affect education, and therapeutic counseling.

13. There is a need for more research testing the validity of the instrument. Higher socio-economic levels should be involved to further determine the instrument's

discrimination ability on different populations and special-education groups within such populations.

14. District-wide action is needed to alleviate tension. The high level of emotionality seen in inner-city pupils has serious implications for urgent social-services intervention.

15. Further attempts to determine construct validity should be made. Cross validation through the use of other projective techniques as well as categorical assignment based on observed pathology by clinical psychologists is recommended.

16. Since misconduct due to poor discipline as well as social misperception may not be indicative of emotional impairment, it is recommended that the Bacchus Sentence-Completion Method be administered only after at least one of the following conditions are met:

- (a) Identification of previous emotional trauma in the youngster's background,
- (b) The incidence of negative behavior which is clearly unpredictable by adult figures such as the teacher,
- (c) A failure to learn in light of emotional manifestations.

APPENDIX I
PILOT INSTRUMENT

APPENDIX I--PILOT INSTRUMENT

Age: _____ Sex: _____ Grade: _____

Sometimes I feel like _____
 I find _____
 What annoys me _____
 I think _____
 For me _____
 I would like to _____
 My only trouble is _____
 I don't _____
 My mind _____
 I feel mean when _____
 My health _____
 I think my friends _____
 The future _____
 I can't understand what makes me _____
 My parents _____
 I get _____
 People think I _____
 I worry _____
 When I am alone _____
 I believe _____
 School _____
 I hate _____
 My teacher _____
 I _____
 Brothers are _____
 I suffer _____
 Sisters are _____
 I really need _____
 My desk _____
 I can't _____
 On the playground _____
 I regret _____
 If only I dared I would _____
 I would like to know _____
 When things go wrong _____
 I wish _____
 Why would anybody _____
 I tend to _____
 My greatest fear _____
 I am _____
 What pains me _____
 I seldom _____
 My nerves _____
 I always _____
 School work _____
 I don't _____
 Paying attention _____
 I have _____
 At home _____
 At night _____

APPENDIX II
REFINED PILOT INSTRUMENT

APPENDIX II

REFINED PILOT INSTRUMENT

Name: _____

Age _____ Sex _____ Grade _____

1. Sometimes I feel like _____
2. Paying attention _____
3. I feel mean when _____
4. At home _____
5. When things go wrong _____
6. I think _____
7. Sisters are _____
8. I would like to _____
9. School _____
10. I think my friends _____
11. My parents _____
12. I believe _____
13. People think I _____
14. I really _____
15. When I am alone _____
16. I _____
17. Brothers are _____
18. I seldom _____
19. My teacher _____
20. I am _____
21. School work _____
22. My desk _____
23. I wish _____
24. My nerves _____
25. My only trouble is _____

APPENDIX III
FINAL FORM OF THE INSTRUMENT

APPENDIX III

FINAL FORM OF THE INSTRUMENT

Name: _____

Age: _____ Sex: _____ Grade: _____

1. Sometimes I feel like _____

2. At home _____

3. I think _____

4. Sisters are _____

5. I would like to _____

6. School _____

7. I think my friends _____

8. My parents _____

9. I believe _____

10. People think I _____

11. My only trouble is _____

12. When I am alone _____

13. I _____

14. Brothers are _____

15. My teacher _____

16. I am _____

17. School work _____

18. I wish _____

19. My nerves _____

20. I really _____

APPENDIX IV

RAW SCORES ON FULLY COMPLETED PROTOCOLS

APPENDIX IV

RAW SCORES ON FULLY COMPLETED PROTOCOLS

EI	EMI	LI	Reg	
59	64	76	72	
55	64	64	70	
55	64	64	68	
54	61	64	66	
53	60	62	66	
53	58	60	65	
52	58	60	64	
51	56	59	64	
50	56	58	64	
48	54	58	63	
47	53	56	62	EI Median---47
47	52	55	61	EMI Median---52
47	52	54	60	LI Median---54.5
45	51	52	60	Reg Median---60.5
44	50	50	59	
44	49	50	59	
43	46	50	58	EI Mean---45.79
43	46	49	56	EMI Mean---51.25
41	46	49	56	LI Mean---55.12
40	45	48	56	Reg Mean---60.9
34	40	47	56	
33	40	46	54	
32	34	46	52	
29	31	46	52	
1079	1230	1323	1463	

APPENDIX V
INTER-SCORER RELIABILITY

APPENDIX V
INTER-SCORER RELIABILITY

Psych. 1	Psych. 2	Psych. 3	Psych. 4
1	1	1	1
3	3	3	3
2	2	2	2
3	3	3	3
3	3	3	3
4	4	4	4
1	1	1	1
3	3	3	3
3	3	3	3
1	1	1	1
1	1	1	1
1	2	1	1
1	1	1	1
5	5	5	5
3	3	3	3
2	2	2	2
2	1	1	2
1	1	1	1
4	4	4	4
1	1	1	1

APPENDIX VI
POLITE SENTENCE COMPLETION TEST AND MANUAL

PLEASE NOTE:

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_____109-110_____

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APPENDIX VII
ELIMINATION OF STEMS

APPENDIX VII

ELIMINATION OF STEMS

Stems Eliminated because of Low Chi-square values

11. My health _____
 13. The future _____
 16. I get _____
 29. My desk _____
 31. On the playground _____
 34. I would like to know _____
 38. I tend to _____
 49. I have _____
 50. At night _____

Stems Eliminated because of Comprehension Problems

2. I find _____
 5. For me _____
 9. My mind _____
 26. I suffer _____
 33. If only I dared I would _____
 37. Why would anybody _____
 41. What pains me _____
 42. I seldom _____
 44. I always _____
 47. Paying attention _____

Stems Eliminated because of disproportionate responses

3. What annoys me _____
 8. I don't _____
 10. I feel mean when _____
 14. I can't understand what makes me _____
 18. I worry _____
 22. I hate _____
 30. I can't _____
 32. I regret _____
 35. When things go wrong _____
 39. My greatest fear _____
 46. I don't _____

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