AN INVESTIGATION OF THE ANXIETY LEVELS OF MENTALLY HANDICAPPED CHILDREN WITH SPECIAL CONSIDERATION OF THE EFFECTS OF SPECIAL EDUCATION CLASSES

by

MARVIN S. KAPLAN

AN ABSTRACT

Submitted to the School of Advanced Graduate Studies of
Michigan State University of Agriculture and Applied
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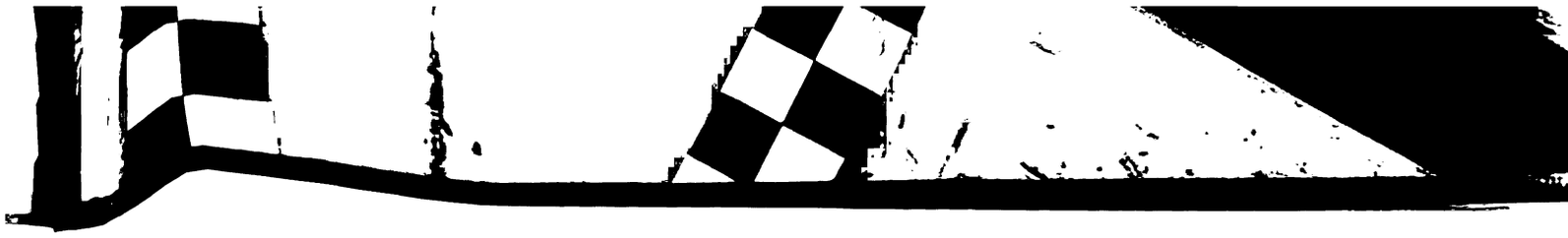


ABSTRACT

The Problem

The primary purpose of this investigation was to determine if, as theory suggests, mentally handicapped children have a higher level of anxiety than do children of average intelligence. A second part of the study was to determine the effect of special class placement on the anxiety levels of mentally handicapped children.

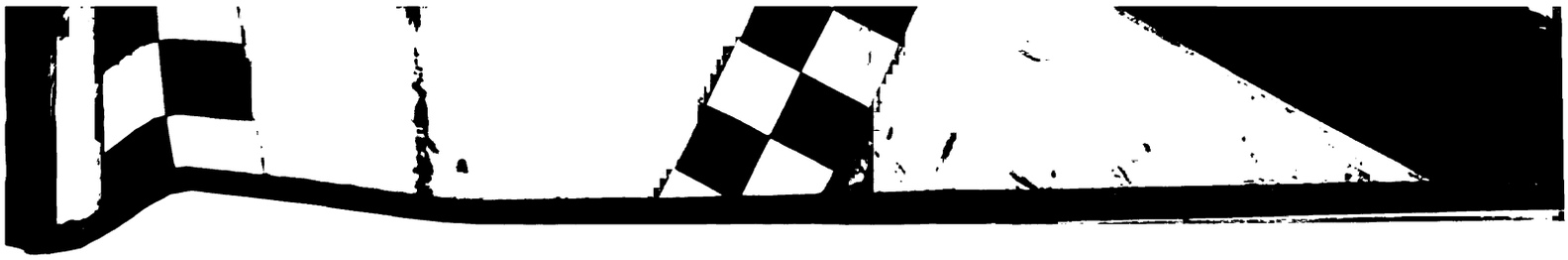
Methodology and Sample

Two groups of mentally handicapped children were used in this study: a) those who had been in special education classes for a year or more, and b) those who were placed in special education classes two or three weeks prior to the initial testing. The mentally handicapped children came from the school systems of Lansing, Jackson and Ingham County, Michigan. A control sample of children of average intelligence was randomly selected from the Jackson, Michigan, Public School System. All children were tested twice with the Children's Form of the Manifest Anxiety Scale, once immediately after the new group of mentally handicapped were placed in special classes and again five months later.

The data were statistically treated by means of analysis of variance, controlling for age, sex, intactness of home and socio-economic level.

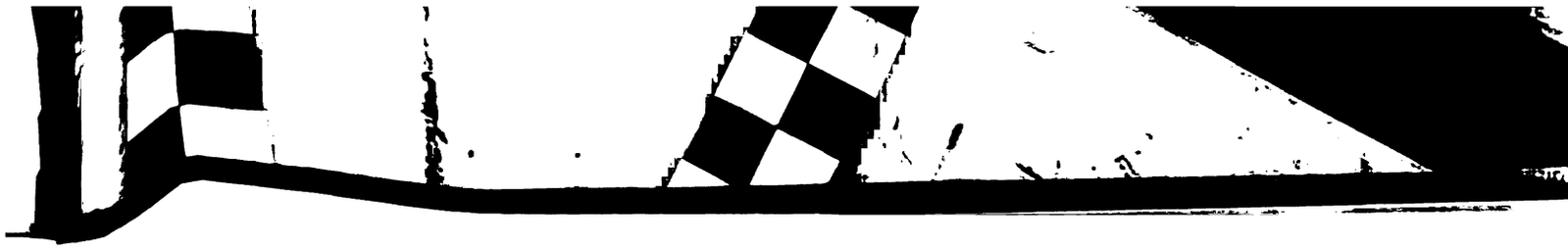
Findings

1. It was found that mentally handicapped children do, in fact, have a significantly higher level of anxiety than do children of average intelligence as measured by the Children's



form of the Manifest Anxiety Scale. It seemed possible that this higher score might reflect less sophistication on the part of mentally handicapped children in completing a personality questionnaire, or it could reflect a truly higher level of anxiety than have children of average intelligence.

2. Test results did not reflect significant changes in anxiety levels of mentally handicapped children resulting from placement in special education classes. It seemed possible that this was due to insufficient sensitivity of the instrument, the resistance to change as a result of changes in school environment, or perhaps to the absence of change in parental attitudes.
3. Although not an hypothesis of the study, it was found that age had a significant effect upon anxiety scores.



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A DISSERTATION

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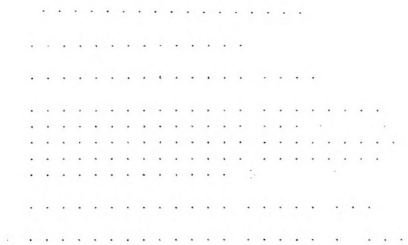

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CHAPTER I

INTRODUCTION

A review of the literature reveals relatively few experimental intestigations of the personality of the mentally handicapped.child. Hutt, who devotes the major portion of his recent book to developmental problems of the mentally handicapped, cites numerous general references regarding personality development but few specific investigations of the personality problems of the mentally handicapped. G. Orville Johnson, an authority on the mentally retarded, comments, ". . . statements concerning their characteristics (mentally handicapped children) are commonly accepted because they have been repeated over and over again and are therefore regarded as common knowledge." (34, p.119)

The topic of anxiety in regard to the mentally handicapped was selected because of the central importance of this concept in general adjustment and because of its implications for the learning process. Sarason, for example, notes that, ". . . anxiety has been considered by many personality theorists as an important factor in producing discrepancies between potential and performance. . ." (68, p. 2) Sullivan's theories of personality will be utilized in an attempt to understand the concept of anxiety and to make predictions about its development in the mentally handicapped child.

Hutt elaborates the many problems of adjustment with which the mentally handicapped child must struggle. At home, there are unrealistic expectations for performance by parents who compare their child with other children and often find their child wanting.

Frequently, Hutt notes, there is rejection of the mentally handicapped child by the parents because of his failures to perform and to achieve. As a result, even before the child reaches school age, he has had many more problems of adjustment to overcome than does the normal child. Hutt notes that the mentally handicapped child, ". . . may often develop acute anxiety states. . . . These anxiety states usually center around the child's feelings of rejection by his parents, teachers, or some significant adult in his life. . ." (31, p. 174)

When the child reaches school age, his adjustment problems are increased by direct comparison and forced association with children of his own chronological age. He becomes increasingly aware of his inability to measure up to the standards. G. Orville Johnson notes, "Mentally handicapped children have many frustrations in their home and school environment which interfere with their normal emotional development. Failure to cope with the regular school curriculum has been one obvious frustration. This failure does not give them personal adequacy, but rather results in feelings of inferiority followed by unwholesome compensatory behavior." (34, p. 119) To make matters worse, there is some evidence, obtained via sociometric devices, that mentally handicapped children generally tend to be isolated and rejected by their peer group in the regular grades. (34, p. 122) Thus there is reason to believe that the anxiety levels of these children should be considerably higher than that of average school children.

Recently there has been increased emphasis on special class programs for the mentally handicapped. These programs have aimed at

helping the mentally handicapped child make a more satisfactory adjustment to school and to life in general thus helping each child to develop up to his potential. Programs have been designed which place limited emphasis on academic kinds of achievement and which attempt to gear classwork to a level more appropriate to the mentally handicapped child's limited intellectual ability.

Statement of the problem

The purpose of the present study is to compare the levels of anxiety of three groups of elementary school children in the Lansing, Jackson and Ingham County school systems:

a) Those of average intelligence who are in the regular grades,

b) Those who are mentally handicapped and have recently been placed in special classes, and

c) Those who are mentally handicapped and have spent a year or more in special education classes.

A second purpose is to investigate the changes in levels of anxiety of identified mentally handicapped children who have spent an experimental time interval in the special education classes.

Limitations of the study

Perhaps the most basic question to be raised in regard to this study is whether anxiety can be measured by a questionnaire (or at all). Assuming that it can be measured, a second question is whether the questionnaire used is sensitive enough to indicate changes which occur in anxiety as the result of a five month (however intensive) experience. A third limitation is the adequacy of the anxiety scale used, when

applied to a group of mentally handicapped children, (assuming it is valid for children of average intelligence.) Possibly test comprehension and test-taking attitudes of mentally handicapped children differ from those of normal children, resulting in invalid assumptions about the meaning of test scores.

Limitations are also potentially imposed by the method of identification of the mentally handicapped group and by the nature of the school systems in which they are located. Results cannot be generalized to individuals who are identified in a different fashion or are located in very different school systems.

The nature of the special education classes utilized is another limitation of the study as is the specific curriculum and the aims and goals of the programs. Results cannot be generalized to programs which are significantly different from those used in this study. The control group which includes only children from Jackson, Michigan, may be another limitation.

Hypotheses

I. Mentally handicapped children as a group will have a higher level of anxiety than will a group of average children.

II. Recently placed mentally handicapped children will have more anxiety than will those who have spent a year or more in the special classes.

III. There will be a significant decline in anxiety level of mentally handicapped children (recently placed) who have spent an experimental time interval in special education classes (test-retest). This will not be true for the previously placed mentally handicapped nor for the normals.

(Hypotheses summarized)

1. Mentally handicapped have more anxiety than children of average intelligence.
2. Recently placed mentally handicapped will have more anxiety than will those who have spent a year in the mentally handicapped program.
3. Placement in the mentally handicapped program will result in a decrease in level of anxiety.

Definition of terms used in the study

Mentally Handicapped. This refers to those children who have been identified by individual examinations and generally fall within the 50-80 IQ range on either the Stanford-Binet, Form L (78), or on the Wechsler Intelligence Scale for Children. (84). They are children who have been unable to cope with the work of the regular classroom but are potentially socially competent. Some investigators have used the term "mentally retarded" in place of "mentally handicapped."

Normal or Average Child. Randomly selected children who were located in the regular fourth, fifth and sixth grade elementary school classrooms in Jackson, Michigan.

Special Education Class. Those classes which have been organized specifically for mentally handicapped children having specially trained teachers, small class size (10-15 children), and in which the school work is presented at the lower skill level of mentally handicapped children. The classes emphasize social adjustment, and later vocational success (habits and attitudes) rather than the usual academic program.

Regular Class. The typical classroom (4th, 5th or 6th grade) in the elementary schools in Jackson, Michigan.

Recently Placed. Those mentally handicapped children who have spent less than three weeks in the special education classes.

Previously Placed. Those mentally handicapped children who have spent a year or more in the Special Education classes as of September of 1960.

Anxiety Score. A score on the Children's form of the Manifest Anxiety Scale, which is believed to relate to experienced insecurity. Very high anxiety scores are believed to be detrimental to learning in general and specifically to the learning of complex tasks.

Initial Test. Children were tested twice with the Children's Form of the Manifest Anxiety Scale. The Initial Test was given to all groups less than three weeks after the beginning of the school year.

Post Test. All children were retested with the Children's Manifest Anxiety Scale five months from the date of the Initial Test.

Organization of Thesis

Chapter II will consider background theory and research on anxiety and the mentally handicapped. It will describe theories of Freud and Sullivan as to the causes of anxiety and its place in the organization of the personality. This will be followed by a brief discussion of the way that anxiety is experienced by the individual and finally the writer will describe the conditions under which one would expect a reduction to anxiety to occur, mainly in terms of Harry Stack Sullivan's theories of anxiety.

The section on anxiety will be followed by a brief discussion of terminology in the field of mental subnormality and the definition of the mentally handicapped as it is being used in this study. Etiology of the mentally handicapped is described as are the problems of the mentally handicapped child at home and in school with reasons indicated for believing that the mentally handicapped child will suffer from more

anxiety than will the child of average intelligence. Some of the experimental evidence regarding the adjustment and anxiety levels of mentally handicapped children and the available experimental evidence about special class placement effects upon the adjustment of mentally handicapped children will conclude this chapter.

Chapter III deals with the sample, the instruments and methods for obtaining and evaluating the data. The nature, organization and purposes of the special education programs in the three communities from which the sample was drawn will be described followed by a description of the school systems and the communities in which they are located. The writer will then describe how the mentally handicapped children were selected and identified, presenting the specific criteria for selection. This will be followed by a description of the sample of children of average intelligence who were located in the regular classrooms of one of the communities. Problems of selection of an instrument to measure anxiety will be discussed followed by a description of the development, reliability and validity of the children's form of the Manifest Anxiety Scale. The chapter will conclude with the method of administration and testing procedures used and a description of methods to be utilized in the analysis of the data obtained.

Chapter IV will include an analysis of the data and chapter V will contain the implications of the results and a summary of the investigation.

CHAPTER II

BACKGROUND, THEORY AND RESEARCH

Theories of Anxiety

Importance

Rollo May notes that Kierkegaard preceded Freud in the recognition of the crucial importance of anxiety in understanding human behavior but that Freud was the first in the scientific tradition to call attention to anxiety as the basic question for the understanding of emotional and psychological disorders. (51, p. 113) Sarason states that "anxiety is a central variable which is intimately related to all other personality and developmental variables." (68, p. 271) Sarason notes the need for a better understanding of the causes, nature and effects of anxiety in order to handle better the practical problems in education. (68, p. 271) Anxiety is widely viewed as an important aspect of personality.

The concept of anxiety is at the heart of Harry Stack Sullivan's theory of personality and his concepts will be elaborated below on the points which are important to this study, namely the primary cause of anxiety, later life causes and the possibilities for reduction of anxiety. Segments of other theories will be described for contrast or elaboration of Sullivan's concepts.

Sullivan views anxiety as one of the more basic tensions which operate to influence human behavior. He divides tensions into two groups, those associated with physiological processes (need for sleep, food, water, etc.) and those connected with disapproval by the

significant others in the environment. According to Sullivan the security (approval-disapproval) tensions play a more important role in the development of personality than do the physiological needs and much of the behavior of the human being is directed toward the maintenance of security and the concomitant avoidance of the tension of anxiety. "I believe that it is fairly safe to say that anybody and everybody devotes much of his lifetime . . . and a good part of his effort in dealing with others, to avoiding more anxiety than he already has and, if possible, to get rid of this anxiety." (75, p. 11)

Thus for Sullivan, anxiety is a central variable in human behavior and personality development.

Origin—Sullivan and Freud

As already noted anxiety arises as the result of the disapproval of the significant others in the child's environment but this may be divided roughly into two phases. The first phase occurs during infancy before the child is capable of discriminating gestures of disapproval by the mother. (74, p. 20) During this phase Sullivan believes that a sense of discomfort is conveyed to the infant empathically by the mood of the mother. If the mother is anxious, angry or upset this becomes empathically transmitted causing discomfort and anxiety in the infant. "Anxiety about anything in the mother produces anxiety in the infant." (75, p. 74) Sullivan notes that this concept of empathic transmission is a vague one and he admits that he can not describe how it occurs. The second phase occurs when the child is capable of discriminating gestures of disapproval by significant others whom he is aware his comfort, and discomfort, depend. (75, P. 118) Thus anxiety, for Sullivan, is an interpersonal phenomenon which develops as a

consequence of the child's relationship with significant others in his environment.

Freud maintains a more physiological view of the origins and causes of anxiety as compared with Sullivan's clearly interpersonal genesis. Freud defines anxiety as an unpleasurable affective (or emotional) state with efferent motor discharge along specific pathways (breathing and heart rate) together with perception of this state by the individual. The prototype of this emotional state is the birth experience. At birth the immature organism is flooded with painful tensions which it is unable to master. Other anxiety reactions later in life are reproductions of this early traumatic experience. (21, p. 72)

Later focal points of anxiety are fears of castration, superego or conscience, and death. (21, p. 79) The unifying concept in these focal points of anxiety is the concept of separation from the object. At birth it is separation from mother, at age four it is separation from genitals (castration), later it is separation from social group (or loss of love) and finally separation from life or death anxiety (which Freud doesn't elaborate upon greatly.)

The child or adult fears object loss as such loss makes it impossible to gratify his needs. Anxiety is the product of the psychic helplessness of the infant or the feeling of psychic helplessness on the part of the adult. (21, p. 77) Anxiety is also caused by the blocking off of the expression of instinctual impulses, again causing flooding of the adult organism with stimuli which it, like the infant, is unable to master. (21, p. 81) It is, however, an external danger which makes impossible the expression of instinctual forces arousing

fear of separation from the object with the resulting non-gratification of needs.

Goldstein from his perspective of work with brain injured persons emphasizes coping with the demands of a situation as the cause of the onset of severe anxiety states. He says, " . . . anxiety appears when it has become impossible for an organism to cope in any way with tasks which are commensurate to its real nature. This is the endangering situation." (23, p. 295)

He believes that in such a situation the person fears dissolution of his personality. (23, p. 295)

Methods For Handling Anxiety—Sullivan

In order to cope with threats to security the child develops what Sullivan calls the "self dynamism" or "self system" whose effect is to focus the child's concern upon those aspects of his thoughts and behavior which are of concern to significant others. The child adopts protective measures and supervisory controls so that, for example, he can avoid punishment by conforming to parental wishes. (25, p. 139 Thus a relatively enduring configuration of habits and attitudes is created which protects that child from anxiety (threats to security). This enduring configuration also excludes information which is incongruous with its present organization and thereby reduces the ability of the individual to learn from experience. (25, p. 139) Sullivan defines the self dynamism as follows: "It is an organization of educative experience called into being by the necessity to avoid or minimize incidents of anxiety." (75, p. 165)

Nature and Effects

Sullivan describes anxiety as being like a hammer blow on the head which blocks out memory for that which immediately preceded it. The person has an amnesia for a few moments, useless confusion and useless disturbance of the ability to perceive stimuli immediately preceding the onset of anxiety. (75, p. 151) It causes a closing off of awareness and a constriction of personality. Anxiety always interferes with the satisfaction of other needs with which it coincides and it prevents action for the relief of other tensions (i.e., physiological needs for sleep, drink and food.) (75, p. 44)

> "Anxiety in its most severe form is a rare experience after infancy, in the more fortunate courses of personality development, and anxiety as it is a function in chronologically adult life, in a highly civilized community confronted with no particular crisis, is never very severe for most people. And yet it is necessary to appreciate that it is anxiety which is responsible for a great part of the inadequate, inefficiently unduly rigid, or otherwise unfortunate performance of people. . . . whether one is getting more or less anxious is in a large sense the basic influence which determine interpersonal relations. . . . directs the course of their development." (75, pp. 159-161)

Cameron describes anxiety as a state in which a person's tensions interfere seriously with his satisfactions, reduce his competence, disturb his rest and transform everyday tasks into gargantuan labors. (9, p. 248) Noting that some degree of anxiety is a normal characteristic, he defines chronic anxiety as follows, "The chronic anxiety is characterized by the presence of persistently heightened skeletal and visceral tensions, which disturb a person's habitual rhythms of living and presidspose him generally to give exaggerated and inappropriate responses on relatively slight provocation." (9, p. 249) The chronically anxious person states that he can not think clearly,

concentrate or remember as he once could and he can not stick to any one task for long. Persons who are chronically anxious have difficulty in setting their own tasks and providing sufficient motivation to keep themselves at them until they are completed. (9, p. 250) As a result we would expect that chronic anxiety would interfere greatly with school achievement.

Reduction of Anxiety

The self dynamism is a relatively unchanging configuration of habits and attitudes made up of the reflected appraisals made by others of the child. (74, p. 22) If the appraisals have been mainly derogatory then there will be a derogatory self dynamism and this will ". . . facilitate hostile, disparaging appraisals of itself." (74, p. 22) Thus if self esteem is not well founded even the suspicion that other people are critical results in a threat to security and a state of anxiety. (75, p. 114)

Sullivan believes, however, that changes in the self dynamism are possible as the result of favorable experiences.

> "The life long tendency of the self system to escape profit from experience is not absolute. . . . because of the general effect on personality which accompanies every newly matured need or capacity in the early stages of each developmental phase, the functional activity of the self system invariably does change somewhat in direction and characteristics; and it is at these times that the self system is peculiarly open to fortunate change. The self system, so far as I know, can, in any personality system, be changed by experience. . . ." (75, p. 192)

As a result of favorable classroom experience and with the support of the peer group, the self system may expand and begin to doubt some of the harsh puritanical restrictions which have been incorporated into

it. Sullivan notes that the restrictions may not disappear and, throughout life in times of stress may manifest themselves. Nevertheless, ". . . the experience of the school may head the self dynamism in another direction which will make for much greater opportunity for contented living, for mental health." (54, p. 306)

Sullivan notes that there are ". . . in all well regulated homes and schools a group of rewards and approbations for successes. These are not accompanied by this particular type of discomfort (anxiety), and when that discomfort is present and something is done which leads to approbation, then this peculiar discomfort is assuaged and disappears . . . ." (74, p. 20) Carl Rogers also suggests, from a slightly different framework, that "Under certain conditions, involving primarily complete absence of any threat to the self structure, experiences which are inconsistent with it may be perceived, examined, and the structure of the self revised to assimilate and include such experiences." (63, p. 517) Thus if a permissive non-threatening situation is provided where pupils are working at tasks commensurate with their abilities and where frequent successes can be experienced (or in Goldstein's terms there is an environment with which the child can cope), there may be changes in the self-structure, improved adjustment, more self-assurance and a resulting decline in level of anxiety.

Mentally Handicapped

Terminology

Terminology in the field of mental subnormailty varies greatly depending upon the authority and his purpose in making the

classifications. There is an abundance of terms referring to essentially the same group of children and adults whose major characteristic is mental subnormality. Terms found in the literature include: mental defective, mentally retarded, intellectually defective, feebleminded, oligophrenic, amental, exceptional, slow learning, etc.

Perhaps the most widely quoted authorities in the field are Edgar A. Doll (16) and A. F. Tredgold (79). Both of these writers speak of mental deficiency. Tredgold defines mental deficiency as " . . . a state of incomplete mental development of such kind and degree that the individual is incapable of adapting himself to the normal environment of his fellows in such a way as to maintain existence independently of supervision, control, or external support." (79, p. 4) Sarason (68, p. 7) is very critical of this definition since he believes that the idea of a "normal environment" is too ambiguous a term. Tredgold's definition fails to take into account the IQ score and the information obtained in the social interaction in which it is derived. (68, p. 4) Doll's definition includes more than the social competency which is emphasized by Tredgold and more than the simple IQ score which is criticized as inadequate criterion by Tredgold.

Doll states:

> "If we look to the substantial work in this field prior to the recent abuses of mental tests in the diagnosis of mental deficiency, we observe that six criteria by statement or implication have been generally considered an adequate definition and concept. These are (1) social incompetence, (2) due to mental subnormality, (3) which obtains at maturity, (4) is of constitutional origin, and (5) is essentially incurable." (16, pp. 214-219)

Doll also makes a distinction between feeblemindedness and mental retardation noting that in the former there is intellectual inadequacy, the likelihood of social incompetence and essential incurability, whereas, in the case of mental retardation, there can be social-economic adequacy. (17, pp. 456-459)

The current study is concerned with the group which Doll calls "mentally retarded" and Kirk and Johnson (38) call "mentally handicapped." Kirk and Johnson describe the mentally handicapped child as follows: "1) The mentally handicapped child is one who has some degree of educability in the social area. . . The diagnosis of social competency under favorable circumstances would differentiate the mentally handicapped child from the feebleminded child who can not be educated to be socially competent. 2) The mentally handicapped child should have some degree of educability in occupational areas. To be occupationally competent, the child must develop to the point where he can earn a living partially or totally. Occupational adequacy, or the prognosis of occupational adequacy, is another criterion which differentiates the mentally handicapped child from the feebleminded. 3) Like the mentally deficient, using Doll's criterion, the mentally handicapped child is thought to have developmental retardation. This factor is not an important one since all that is known in most cases is that the child is retarded at school age. Whether retardation existed at birth is in many situations impossible to determine. The major criterion is: does intellectual retardation exist to such a degree that the child is unable to profit from instruction in the regular classroom and requires special education for his maximum growth and development?" (38, pp. 10-11)

The preceding is the general definition of the mentally handicapped child in this study.

Etiology

In a recent book, Masland, Sarason, and Gladwin (66) comprehensively reviewed the causes of mental subnormality from the biological, psychological and cultural point of view. Masland, an assistant director of the National Institute of Neurological Diseases and Blindness, writes: "On a statistical basis, it is certain that the overwhelming majority of patients suffering from mental retardation are handicapped by reason of some prenatal factor. It is certainly not known at the present time to what extent this factor is a genetic one, to what extent it is an environmental one, and in which cases one or the other factors predominates." (66, p. 25)

Defective genetics is only one of a large number of biological causes of mental subnormality. Other factors capable of causing mental subnormality are prenatal environmental factors such as infectious diseases which cause damage to the nervous system, damage to the cerebral blood vessels of the fetus, blood incompatibility of fetus and mother, prematurity, birth injuries and asphyxia occurring during birth, and postnatal inflamatory and degenerative diseases are among the factors which can cause mental subnormality. (66, pp. 11-141) Masland, in his introduction states that: "I consider it likely, however, that the factor of brain injury can operate throughout the whole range of intelligence, and, in fact, that minor degrees of injury are far more common than are severe and grossly evident ones. Pathological studies of the brains of mildly retarded persons show

minor developmental abnormalities in a large proportion of cases, although the significance of these changes has not been established by meticuous correlation with the intellectual traits of normal and retarded persons." (66, p. 11)

In contrast to Masland's view, Sarason and Gladwin believe that there are certain types of subnormal children whose difficulties in learning do not stem from biological or hereditary causes but rather are due to environmental and cultural conditions. They believe that these children constitute the majority of the high grade institutional cases and the majority of those in special classes outside of institutions. "Mentally retarded individuals. . . the majority of those in special classes and the majority of our 'high grade' institutional cases—these individuals presumably do not have any central nervous system pathology." In addition, it is noted that: "They almost invariably come from the lowest social classes." (66, p. 152) Sarason and Gladwin state that: "In the absence of detectable pathology there is at present no valid explanation of a child's retardation except a deficit in learning. . . we must assume that the deficit results from the foundation of skills, attitudes, emotional sets, and social and intellectual habits the child brings to that (school) environment. This foundation is built in the cultural and individual milieu of his home and peer group. (66, pp. 290-291)

In an earlier book, Sarason reviews some of the literature regarding child training practices noting the fact that:

> ". . . . certain child training practices and experiences during the first year of life have a deleterious effect on intellectual and emotional growth has been revealed by clinical and

> experimental studies. The prolonged absence of the mother or the effects of the lack of 'mothering' seem to reduce the degree of the child's responsiveness or awareness of ongoing activities. Since the mother is the almost exclusive source of the child's external stimulation, it would be expected that his responsiveness would be a function of the degree of stimulation by her. In the absence of gratification, responsiveness is more likely to be extinguished than reinforced." (67, p. 137).

Thus there is a multiplicity of causes of mental subnormality due to organic disorders, most of the causes of mental subnormality are not hereditary. In addition, there are a large number of psychological and cultural factors which may in themselves cause mental retardation. (66, p. 6) The mentally subnormal do not constitute a homogeneous group. Cultural, biological and other environmental conditions can contribute to, or cause the condition. No attempt will be made in the present study to determine the cause of the mentally handicapped condition. Rather, the criteria were that the child was unable to profit from instruction in the regular classroom. This definition will be made more precise later.

Development

Although it may be expected that mentally handicapped children will vary greatly in their personalities and adjustment to life conditions, they appear to face certain problems in development which are directly related to their slowness in maturing intellectually, physically, and socially. It seems likely that with increasing subnormality, there would be decreasing chances for adequate emotional adjustment because of consistent failure to meet expectations of parents, teachers, and peers.

Hutt and Gibby (31) discuss the problems of adjustment of mentally handicapped children and they point out that the handicapped child does not have any kinds of problems which are qualitatively different from those of children of normal intellectual capacities. They note that maladaptive behaviors, "are not the primary result of their retarded intellectual capacities. Rather, they are the result of incomplete or distorted personality functions associated with mental retardation." (31, p. 156). The intellectual factors play a secondary rather than a primary role in the production of maladaptive behavior. However, as the result of delayed intellectual and other maturation processes, the mentally handicapped child is not ready to master the tasks with which the average child can cope. They are not ready for such things as weaning, bowel training and socialization when the child of normal intellectual capacities is ready to accomplish these tasks and in addition, Hutt and Gibby (31) note:

> "The mentally retarded child shows delayed speech and walking. He has difficulty in visual-motor functions--that he finds it hard to coordinate muscular activities with vision and to manipulate objects accurately. Later, he finds it very difficult to tie his shoe laces and to perform similar complex motor activities. The parent often expects too much from the child during this period, and as a consequence, the retarded child begins to see himself as 'inferior' and 'inadequate'." (31, p. 159)

Sloan, in a study of the motor proficiency of mentally subnormal children (not believed to be organic), found that their motor proficiency was, in fact, significantly less adequate than that of the normals. (71, P. 134). Because the neighbor's child is able to accomplish many of the developmental tasks, the mother often presses the handicapped child to accomplish tasks for which he is not ready. (31, pp. 56-59). The result is that he is reluctant to give up

infantile modes of satisfaction and his emotional development is slowed and he is prone to have more emotional problems than does the child of average intelligence. McLachlan comes to a similar conclusion from his observations of institutionalized mentally retarded children. (48, pp. 323-330)

Thus, as a result of his inability to meet the expectations of parents, and because of the parent's hurt pride in having a handicapped child (whom they may feel reflects upon their own adequacy), there is a strong tendency for the mentally handicapped child to be rejected by his parents. According to Walker (83, p. 132): "Parental rejection, in my opinion, always exists to some degree even though unexpressed or camouflaged by overconcern or protectiveness." Similar thinking is expressed by Pearson, who notes that parents observe that their child learns more slowly and so they try to force him to develop more rapidly or they do things for him which he can do for himself. They deny there is anything wrong and every act of care for the child is directed by their narcissistic injury. The child senses that parents do not love him, the parents are repulsed by his backwardness. The child feels insecure and frustrated and responds with aggression which is responded to by the parents with counter aggression. A cycle of further insecurity, frustration and further rejection is set in motion. The lack of love interferes with the child's ability to do what he is in reality capable of doing. (61, pp. 137-138) It may be added that these things make him more prone to suffer from anxiety and anxiety states.

When the mentally handicapped child reaches school age, his problem becomes even more apparent because of his forced association and the resulting comparison of his skills with those of his age mates. In addition to his difficulties with school achievement, his immaturity resulting from a failure to solve earlier problems of development, his expectation of failure, his expectation of rejection by significant adults, there is also some evidence to indicate that he is poorly accepted by his peers. G. O. Johnson (33) in a sociometric study of mentally handicapped children in the first through fifth grades, found that mentally handicapped children were more often rejected by their peers than were average children. In addition, Johnson found that the lower the IQ score (among the mentally handicapped group) the more isolates and the fewer the favorites were indicated by peers. (33, p. 85) The children claimed that they rejected the mentally handicapped not because of poor achievement, but because of unacceptable behavior. Rejection did not appear to be associated with either the slightly greater age of the mentally handicapped child nor with their slightly lower socioeconomic level. (33, p. 86)

Thus, mentally handicapped children have many strikes against them including poor relationships with parents (the tendency for many of the parents to either overtly or covertly reject them), their inability to cope with tasks commensurate with age including the pre-school tasks, difficulty in passing through the stages of development, unrealistic pressure from parents whose narcissistic pride is hurt and whose sense of guilt is aroused, followed by direct association and comparison in the school setting with age mates with whom

they can compete neither academically nor physically. In addition, they are often rejected by their age mates. It is hypothesized that as a result of these difficulties and the derogatory self-systems thus obtained, the mentally handicapped child is more prone than is the average child, to suffer from high levels of anxiety. The high levels of anxiety are further crippling to the handicapped child's potential for achievement.

Hutt and Gibby (31) note that: ". . . due to his more severe problems and lesser capacities to tolerate stress, his anxieties are more readily aroused, and he has more need to engage in defensive reactions." (31, p. 151)

Hutt and Gibby also state:

> "He may often develop acute anxiety states. . . These anxiety states usually center around the child's feelings of rejection by his parents, teachers or some significant adult in his life. He is fearful that he will lose the love of the person who is most important to him (usually the mother) . . . The basic core of the anxieties of the mentally retarded child is his fear of rejection—and there are many instances in reality to support such feeling." (31, p. 174)

Thus, the conditions seem to exist for the mentally handicapped child to acquire a derogatory self-system and to accumulate greater disapproval than does the child of average intelligence.

Experimental Studies--Adjustment of Mentally Handicapped

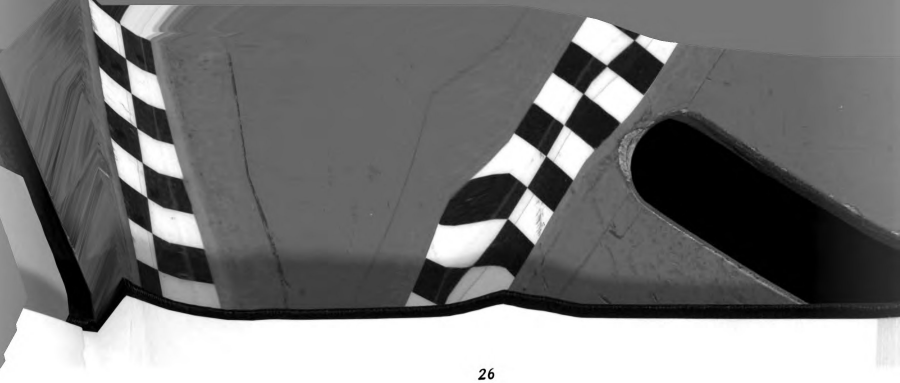
As noted previously experimental studies regarding the emotional adjustment of the mentally handicapped have been few in number. Most of the material in the literature is made up of the impressions of observers who have worked with the mentally handicapped for long periods of time. G. O. Johnson (34) notes that the "Information concerning the physical, intellectual and emotional characteristics of mentally handicapped children and adults is scarce. . . statements concerning their characteristics are commonly accepted because they have been repeated over and over again and are therefore regarded as commonplace knowledge." (34, p. 191)

The experimental literature which is available, however, is contradictory in nature. Klausmeir and Check (39) in a comprehensive study of forty mentally handicapped children (IQ's between 50 and 80), forty average children (IQ's 90-110) and forty children of superior intelligence (IQ's 120 or higher) found that their sample of mentally handicapped children did not differ significantly from either the average or above average children in emotional adjustment, achievement in relation to capacity, integration of self concept, expression of emotional behavior patterns and estimates of their own abilities. (39, p. 1067) All groups were equally divided between males and females and all were between nine and ten years of age. Klausmeir and Check made use of clinical interviews, Rorschachs, Thematic Apperception Tests and rating scales. In another study (1) which also made use of the Thematic Apperception Test, the themes of 14-18 year old mentally handicapped girls were compared with those of

normal girls. The records of the mentally handicapped indicated more anxiety, more negative emotion and more concern with separation and rejection. The records of the mentally handicapped had fewer aggressive, family and social themes, than the sample of normal girls.

In regard to social acceptance two sociometric studies (27, 33) are available which indicate that the mentally handicapped are not accepted by their age mates in regular classrooms. Johnson noted that the mentally handicapped were less accepted and more frequently rejected by their peers and that the lower the IQ score the more often the children were isolates. The children indicated that they rejected the mentally handicapped chidfly because of unacceptable behavior (bullying, fighting, swearing, etc.) rather than because of their low academic achievement. Whereas Johnson's study included children from first through fifth grades, Halstead's sample included only those of junior high school level. Both studies involved mentally handicapped children who were in the regular classrooms.

Two studies in the literature were discovered which attempt to compare the adjustment of children who have spent a time interval in special education classes for the mentally handicapped with a group of mentally handicapped children who were located in the regular classrooms. Both studies (4, 18) made use of teacher ratings in order to determine adjustment. In both instances teacher ratings indicated that the mentally handicapped children in the special education classes were better adjusted than were the mentally handicapped in the regular classes. The teacher rating method appears to be poor since the teacher who rates must inevitably compare the child with a reference group of children with which she is familiar. Thus the mentally



handicapped child in the regular grade is compared with the average child in the regular grade, whereas the mentally handicapped child in a special class is compared with the average mentally handicapped child in the special education class. Thus, ratings by the teachers may be biased because the milieu in which the ratings are made are dissimilar. Interestingly, one of the researchers (4) also made use of the California Test of Personality and in this instance found no difference between the adjustment of the mentally handicapped in special classes and those in the regular grades. A study by Buss (5, p. 158-159) indicates that children in special education classes did make significant gains in skills (reading, arithmetic, vocabulary) and that there were significant and positive attitude changes toward school.

Thus the evidence from experimental studies is contradictory, both as to the adjustment of mentally handicapped children as compared with children of average intelligence, and mentally handicapped children in special classes as compared with mentally handicapped children in regular elementary school classes.

CHAPTER III

METHODOLOGY

Programs for the Mentally Handicapped

The special educational programs for the mentally handicapped are subsidized by the State of Michigan under an act of the legislature. The programs in Jackson, Lansing and Ingham County qualify for state re-imbursement thus indicating that personnel (both teachers and diagnosticians) fulfill the special state requirements for personnel for these programs. The special requirements include studies of development, problems and curriculum for the mentally handicapped child. (Criteria appended.) Accordingly there are similar basic requirements which are fulfilled by the personnel of the three communities utilized in this study.

Criteria for placement in the mentally handicapped programs have been previously described. According to the state law the programs (Type A Programs for the Mentally Handicapped) are for those children who are potentially socially competent. (15, p. 5) The major emphasis of the program is on the social adequacy of the child rather than upon the aspects of academic achievement. (13, p. 2)

The mentally handicapped children are segregated from the children of average ability and placed in classrooms in the regular school building. There are two elementary school groups, a younger one, ages 6-10 and an older group ages 11-13 years. Class size ranges from ten to fifteen pupils.

The purpose of the programs is to help the child eventually make a good adjustment to his home, community, and the world of work. This is to be accomplished via a program which places emphasis upon social adjustment rather than upon the academic learning. "Although subject matter is not ignored, its place should be included as a natural part of activities, excursions, work and play. For special class pupils . . . emphasis should be placed on development of skills and competencies required in daily living." (15, p. 7) A typical curriculum outline is appended.

The apparent changes in situation as compared with the typical elementary education classes are as follows:

1. The classroom group is considerably smaller than is that of the typical elementary school class.
2. Explanation and expectations are at the level of the group rather than beyond their abilities as occurs when the mentally handicapped are placed in the regular elementary classes.
3. The academic goals are decidedly limited with emphasis being placed upon adjustment to the group setting, working effectively together and establishment of more adequate peer and authority relationships.
4. Teachers have had special course work and have specific interest in working with mentally handicapped children. They know that the development of these children is slower than is that of the average child.
5. As a result of both the small class size and special course work, teachers have more understanding of the problems of

mentally handicapped children. Special class teachers are able to individualize the work for these children and to provide more support, encouragement and closer supervision than can be provided in a regular elementary school classroom.

6. Class work is presented which is more suitable to the child's level of skills and abilities. There is, therefore, less opportunity for failure and more frequent opportunity to experience successful acquisition of skills. There is also more opportunity for the mentally handicapped child to develop positive relationships.

7. Other children within the special education class are not decidedly superior in the valued achievements (both on the playground and in the classroom) and therefore the mentally handicapped child is able to form a friendship group in which he is not markedly inferior, i.e., he is not a rejected participant in the group.

Thus within the special education class the mentally handicapped child has greater opportunity to form a closer and more adequate relationship with his teacher, relate to a peer group with whom he is capable of competing and thus form peer friendships and to experience success in the acquisition of skills and abilities. A situation therefore exists, of markedly fewer threats to personal security and adequacy, a situation where strong adult disapproval need not be experienced. In accordance with theory it is hypothesized that as a result of these conditions, the mentally handicapped child will experience a reduction in level of anxiety.

Sample

Communities

The sample for this study was drawn from Ingham County, of the City of Lansing, and the City of Jackson. Lansing is located in Ingham County. The three areas are located in central Michigan.

In a recent economic and population study (58), it was concluded, based upon commuter travel, that Ingham County can be considered a part of metropolitan Lansing. It was found that in the tri-county area (metropolitan Lansing), the population is 55% urban, 16% rural farm, and 28% rural non-farm. The study indicated that the population of Ingham County is 216,860 while the population of Lansing alone is about 100,000. In the tri-county area, 28% of the labor force is engaged in manufacturing, 18% in retail and wholesale work, 17% in services, 11% in government, and 8% in agriculture. The remainder of the work force is employed in construction, transportation, and finance.

Approximately 43% of the population of Ingham County (including Lansing) earned incomes between $4000 and $7000 per year while one in six households earned an income of less than $2500. One household in 14 had an income of more than $10,000. The main employers in the area are the manufacturers of motor vehicles, state government, and a state university.

The City of Jackson is a county seat and has a population of over 50,000 (82). There are forty industrial plants, making this an important manufacturing center. The railroads maintain extensive repair shops in Jackson thus adding additional industry (32).

Both metropolitan Lansing and Jackson are relatively prosperous urban areas located in central Michigan. The major activity is manufacturing and there are varying degrees of emphasis on state government, county government, and higher education.

Mentally Handicapped

All elementary school special education classrooms in Lansing, Jackson and Ingham County were tested in entirety. The mentally handicapped children used in this study were all children between the ages of nine and thirteen years, located in these special classes. It should be noted that in most instances these children remained in the regular grades until the third grade and in some cases to the sixth grade.

Methods of identification are similar in each of the communities. There has been an interchange of the state certified examiners who do the screening for these special education programs and this has added to the uniformity of selection procedures. (One examiner worked in each of the communities.) The kinds of children identified and placed in special classes have previously been described by Kirk and Johnson. These are children: (1) whose intellectual retardation exists to such a degree that it is believed that they cannot profit from the regular classes. (2) They are believed to be potentially economically and socially competent with proper training.

Specific criteria used by examiners and the administrative procedures used by the school systems in discovering and identifying the Mentally Handicapped are indicated below:

1) Generally the child has been referred to the Psychological

Services division of the Jackson, Ingham County, or Lansing Boards of Education by his classroom teacher and principal because of difficulties in learning and/or behavior and

2) His abilities have been studied by a state certified diagnostician (Michigan) and found to qualify for special class placement utilizing the following criteria:

a) Considerably below average achievement in the classroom.

b) Difficulty in following instructions in the regular classroom.

c) Low achievement on individually administered tests, i.e., reading, arithmetic.

d) IQ scores on individual tests (Stanford-Binet or Wechsler Intelligence Scale for Children)which fall between 50 and 80 and are believed to be adequate estimates of intelligence (i.e., not artifically reduced due to emotional distress or other extenuating circumstances.)

e) Believed to be children who are capable of making a satisfactory adjustment to the vocational world and to be capable of getting along with little or no supervision as adults. These are not believed to be children who require custodial care, but rather these are considered "educable" children.

The recently placed mentally handicapped are those children who were placed in the special classes for the first time in September of 1960. The remaining mentally handicapped children, the previously placed mentally handicapped attended the special classes the previous school year or a number of previous years.

The mentally handicapped sample includes 174 children of whom 41 were recently placed and 133 who had spent a year or more in the special education classes. The children come from the communities of Lansing, Jackson, and Ingham County, Michigan, with 43% coming from

Lansing, 36% from Jackson, and 21% from Ingham County. Table 1 summarizes this data. The mentally handicapped children come from 26 different classrooms. All of the children in the sample range in age from nine to thirteen years and were divided into younger and older groups in the same manner as they are within the school setting. (Older group 11-13, younger group 9-10 years).

All of the mentally handicapped children were given individual intelligence tests (either the Stanford-Binet, Form L, or the Wechsler Intelligence Scale for Children) prior to placement in the special education classes. Means and Standard deviations are presented in Table 2. The mean IQ score for the total mentally handicapped group is 70.75 with a standard deviation of 8.64.

Additional information was collected from the children's school record forms and this will be described in the section entitled, Supplementary Data.

Normals

Six Jackson schools were randomly selected and within these schools a fourth, fifth (sometimes a fifth and sixth grade combination class) and a sixth grade class were selected. Thus the normal children came from eighteen Jackson elementary school classrooms. All children in the sample are between the ages of nine and thirteen years. All children in each of the classrooms were tested. There were 362 children from the regular elementary grades of whom 218 were between nine and ten, and 144 were between the ages of eleven and thirteen. Table 2 presents the number, mean, and standard deviations of the

TABLE 1

DISTRIBUTION OF MENTALLY HANDICAPPED BY LOCATION, AGE AND TIME OF PLACEMENT

Location	Recently Placed		Previously Placed		Total	Percent
	Young	Old	Young	Old		
Lansing	15	7	20	33	75	43
Jackson	4	5	14	40	63	36
Ingham County	4	6	2	24	36	21
Total	23	18	36	97	174	100

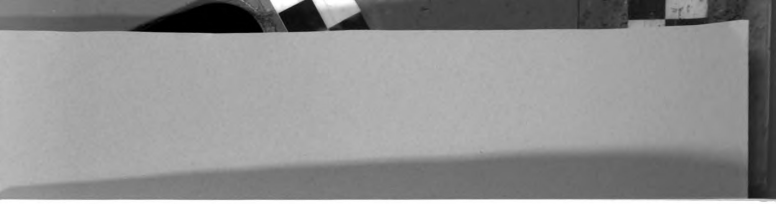


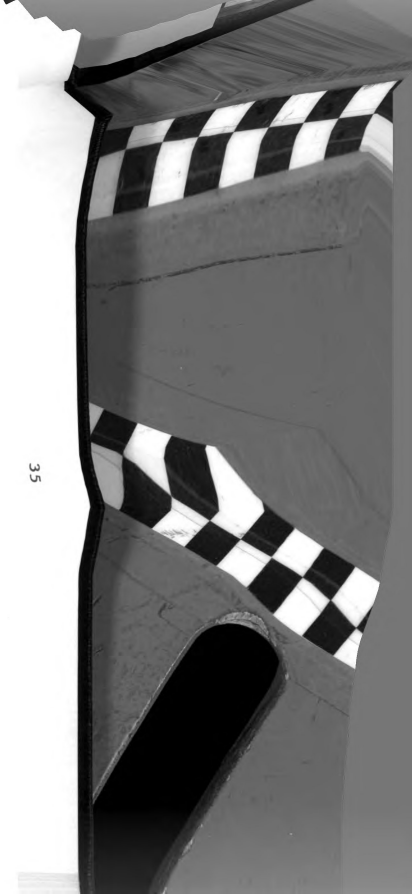
TABLE 2

NUMBERS, MEANS, AND STANDARD DEVIATIONS OF THE INTELLIGENCE SCORES OF THE MENTALLY HANDICAPPED AND NORMAL CHILDREN

	Normals*			Mentally Handicapped**				
				Recently Placed		Previously Placed		
	Young	Old	Total	Young	Old	Young	Old	Total
Number	218	144	362	23	18	36	97	174
Mean	107.23	106.05	106.76	70.87	71.89	70.42	70.63	70.75
Standard Deviation	12.74	12.85	12.78	5.83	12.08	8.97	8.93	8.64

* Represents scores on the Lorge-Thorndike Intelligence Tests levels four and five (43). Mean 100, Standard Deviation 16.

** Represents combined scores of the Wechsler Intelligence Scale for Children (84), mean of 100 standard deviation 15 and the Stanford-Binet, Form L, (78) means 102.7 to 101.0 and standard deviations of 16.4 to 17.9, depending upon age.



intelligence test score of the normal group by age. The group obtained a mean IQ score of 107.76 and a standard deviation of 5.83 on the Lorge-Thorndike (44) group test of intelligence. This control group comes from only one of the communities because of the reluctance of school administrators in the other two districts to permit testing of children in the regular grades for research purposes. However, as is indicated in the section describing the communities, the three communities are similar in being located in central Michigan, and in being predominantly manufacturing centers. Further evidence as to the adequacy of the control sample is the similarity of the means and standard deviations of anxiety scores of the control group and Casteneda's normative data. (10)

Instruments

Problems of Selection

The adequate measurement of personality variables for research and clinical purposes is one of the major stumbling blocks of psychological science. No method of measurement appears to be beyond criticism and without limitations whether use is made of ratings by experts (whose differing points of view interfere with reliable and valid measurement) or projective tests (which have been widely criticized in the research literature) or objective empirical scales. Thus any method of measurement chosen for this study will inevitably be found to have some limitations due essentially to the stage of development of theories and knowledge of personality. Despite limitations of instruments and theory, research continues and provides valuable although perhaps only suggestive information.

After reviewing the literature, the investigator found that the Children's form of the Taylor Manifest Anxiety Scale (10) was the best instrument available to do the job necessary for this study. There is evidence that the children's form is measuring essentially the same thing as is the adult form and a well known investigator, Bitterman, stated his confidence in the Taylor Manifest Anxiety Scale as a measure of anxiety as follows: " . . . there is considerable evidence to suggest its validity." (3, p. 248) Since the children's form is an adaptation of the adult form the evidence regarding the adult form will first be presented followed by evidence regarding the relationship between the two scales and finally the evidence regarding the Children's Manifest Anxiety Scale will be presented.

Taylor Manifest Anxiety Scale (Adult Form)

Janet Taylor developed the Taylor Manifest Anxiety Scale (77) and as a starting point she chose items from the Minnesota Multiphasic Personality Inventory (26) which appeared to be related to anxiety. The items were then submitted to five clinicians who were to rate them using Cameron's (9) description of chronic anxiety (quoted earlier). Fifty items were thus obtained about which there was general agreement among the clinicians. Evidence indicating considerable stability was noted by Taylor. (77, p. 287) Evidence regarding validity is indicated by numerous investigators. Good agreement was found between the rating of the anxiety of patients by psychiatrists and Taylor Manifest Anxiety Scale scores. (5, 81, 69) Good agreement was found between the anxiety level ratings by counselors of their clients and Taylor Manifest

Anxiety Scale scores (30) and between ratings of pairs of nurses as to the anxiety levels of TB patients and Taylor Manifest Anxiety Scale scores (37). Evidence was found in the expected directions for psychiatric groups (i.e., anxiety neurotics high in anxiety, psychopathic personalities low in anxiety.) (69, p. 139)

High self-esteem was also found to go with low anxiety scores. (69, p. 139) Positive correlations were found between an independent scale of neuroticism and anxiety scores (29) and also positive correlations between anxiety scores and difficulty in making decisions (36). High positive correlations were found between grouped subtests of the Wechsler Adult Intelligence Scale believed to be influenced by anxiety. (70) although not between individual subtests and anxiety (24). Also, a significant relationship was found between admitted stress and anxiety level. (85)

As is inevitable, not all of the evidence regarding the validity of the scale is favorable. Some authors have been highly critical of the scale because of contradictory results obtained in discrimination learning experiments. (2) A factor analytic study indicated that there was an anxiety factor but that it accounted for only a part of the variance. (49) Personality studies of high and low scorers on the Taylor Manifest Anxiety Scale have been made and indicate "unreasonable" fears as well as over-reaction to more reasonable stimuli" to be characteristic of high scorers. (7, 20)

I. Sarason (65) in his summary of the recent research on anxiety scales (referring chiefly to the Taylor Manifest Anxiety Scale but also to the Children's Manifest Anxiety Scale and other anxiety scales)

finds that persons who obtain high anxiety scores are more affected by stressful conditions than are those who obtain low anxiety scores. He notes that: "The result is consistent with the view that high anxious emit personalized, self-oriented interfering responses when threat is perceived in the environment. Under non-threat conditions such responses would not be expected." (65, p. 411) Sarason believes that some of the studies utilizing anxiety scales failed to obtain results in the predicted directions because of the absence of threat in the situation presented to the subjects. He notes the absence of significant correlations obtained in studies of the physiological indicators of anxiety and Children's Manifest Anxiety Scale scores. He suggests that the lack of significance obtained may have been due to the absence of perceived threat or stress in the situation. (65, p. 411) In other words there may have been a predisposition to anxiety in the high anxiety scorers but that the situation was not such as to cause the autonomic symptoms to become manifest.

The Taylor Manifest Anxiety Scale as indicated by the literature appears to be a useful measure of anxiety.

Children's Manifest Anxiety Scale

Casteneda, McCandless and Palermo (10) adapted the Taylor Manifest Anxiety Scale for children in fourth, fifth and sixth grade levels. Forty-two of the original items were adapted and modified for comprehensibility by the sample. Items were submitted to elementary school officials for critical comment regarding comprehensibility and it was then administered to 60 children and revised again. Finally it was

administered by teachers to 361 children in fifteen classrooms in four different schools and then readministered again one week later. In further researches involving learning the test authors demonstrated the similarity of results obtained with the adult and children's forms of the test. In a number of researches with the adult form (11, p. 329) hypotheses were confirmed which suggested that subjects with high anxiety scores would have more difficulty with complex learning than those with low anxiety scores and that conversely those with high anxiety scores would be superior to those with low scores on simple learning tasks. Similar results are reported in two separate investigations with the children's form of the scale. (11, 59) These studies also appear to offer considerable evidence as to the construct validity of both scales.

Reliability and Validity

Considerable stability is indicated by test-retest correlations over a one week period of .90 for the anxiety scale. (10, p. 322) In another study by Palermo (60) with a sample of both fourth, fifth and sixth grade Negro and white children, the children's position in the group tended to remain constant over a one month period. (60, p. 56) Trent, (80), sampling a population of institutionalized delinquents including Negroes, whites and those of Puerto Rican extraction, found a split half reliability of .78. (80, p. 380) Thus the reliability, whether measured by split half method or by the test-retest method, appears to be adequate.

Face Validity. Since the original items were selected by agreement of five clinical psychologists, items can be considered to have good face validity. (77) Furthermore the test is related to a well respected forebear, the Minnesota Multiphasic Personality Inventory. (26).

Concurrent and Construct Validity. Concurrent validity will be reported in terms of the Children's Manifest Anxiety Scale in correlation with other independently derived measures and also by its ability to differentiate between known groups. Bruce (8) found that Children's Manifest Anxiety Scale scores correlated well with self acceptance (as measured by an actual and ideal self discrepancy scale) and it was also noted that increased insecurity (noted by observers) was greater for the high anxiety group. Children with high anxiety were found to be both more insecure and less accepting of themselves. (8, p. 237) Muuss (56) hypothesized that children who had less understanding of the dynamics of their own behavior and that of others would have higher anxiety scores as measured by the Children's Manifest Anxiety Scale. His results confirmed the hypothesis. (56, p. 122) Trent (80) found that delinquent boys had significantly higher Children's Manifest Anxiety Scale scores than did the standardization population. (80, p. 381) The extent to which this finding supports the validity of the Children's Manifest Anxiety Scale is not clear since the diagnostic categories into which the boys fell is not provided. (i.e., it might be expected that delinquents diagnosed as psychopathic personalities would obtain low anxiety scores.) Trent (80) also found that there was a significant negative relationship between anxiety scores and popularity (although not between anxiety and

rejection by the group.) (80, p. 343) McCandless, et al, also found the more anxious less popular. (46, p. 389) Sarason, (68), et al, constructed two tests of anxiety in children, one of which was aimed specifically at measuring test anxiety (Test Anxiety Scale), the other general anxiety (General Anxiety Scale). He also made use of the Children's Manifest Anxiety Scale and he notes that there is considerable relationship between the Children's Manifest Anxiety Scale and his two tests. He suggests that children selected on the basis of any of the tests is not likely to be different from children selected on the basis of any other test. (68, p. 187)

Smock (72) hypothesized that children with high anxiety scores would manifest more perceptual rigidity and have more need for closure. The hypotheses were confirmed. (72, p. 246) Kaplan and Hafner (35) failed to find a significant relationship between the anxiety scores of children admitted to a hospital for surgery and those admitted for non-surgical reasons. (35, p. 302) It seems possible that children admitted for any reason to a hospital would experience considerable anxiety and thus the result might be accounted for. Wirt and Broen (86) failed to find a positive relationship between the ratings of psychologists and Children's Manifest Anxiety Scale scores of children. (86, p. 482) This failure could be attributable to the inadequacy of the rating scales used by Wirt and Broen. I. Sarason (65) notes that: "Poorly constructed rating scales will inevitably lead to low-order relationships with other measures." (65, p. 410) The reason for the failure is not clear and their report is a brief one which provides few details. As previously noted in indicating the relationship between adult and children's forms, Casteneda, et al, in two

separate studies (11, 59) hypothesized that high levels of anxiety would interfere with the learning of complex tasks (because there would be competing tendencies) and it would facilitate the learning of simple tasks. (11, p. 330) He also found a significant decrease in errors (on tasks presented) for the low anxious but not for the high anxious. (59, p. 336)

Bruce (8) (reported earlier) also made use of the Children's Manifest Anxiety Scale as a measure of change as the result of training, ". . . designed to help each pupil develop a 'causal' analytical orientation towards his environment." (8, p. 230) He found, " . . . significant differences on measures of anxiety and observed insecurity between classes having had the program for two years . . ." and each of his other groups. (8, p. 234)

SUMMARY

Thus there is much evidence in the literature which suggests that the Children's Manifest Anxiety Scale provides a relatively reliable and valid measure of anxiety. Some studies are reported which do not support this contention and this must be accepted as one of the limitations of this study derived from the state of current psychological theory and the complexity of human behavior and motivation. Measurements of human personality variables must be considered as suggestive of trends rather than as indicative of conclusive evidence.

It should be noted also that the Children's Manifest Scale is an anxiety scale which was designed for use with children, is adequately comprehended by them, and can be administered by teachers to groups of children. An additional and important characteristic of the scale is

that it will take a minimum of time from classroom instruction.

Administrative and Testing Procedures

All children were tested in their classrooms by their regular classroom teachers. Standardization might have been improved if the examiner had aministered all of the tests, but this was not possible because all of the children had to be tested within the first two weeks of the school year. In addition, another artifact (an examiner who is a stranger) might then have been introduced into the setting and possibly have made the children less frank in their responses to test questions. It seemed possible that they might be more frank and honest with their own teacher, although the converse can also be argued.

The children were all tested twice, once within the first two weeks of the school year and again approximately five months later. The teachers were presented with a mimeographed set of instructions (appended) which also included a vague description of the purposes of the study ("and to help us to understand children more adequately.") Materials were then sent to the school administrative offices by the teachers.

The test instructions and test material were read to the children by their teachers in order to eliminate difficulties in reading. The instructions read as follows: (appended):

> I will read each question to you. Listen carefully. Put a circle around the word YES if you think it is <u>true</u> about you. Put a circle around the word NO if it is <u>not</u> true about you.

The teachers were instructed not to elaborate on any question but rather to instruct the children to answer as best they were able. If

the children asked what the test was for the answer, "To help us understand children better," was to be given. In general the teachers reported that the children enjoyed taking the test and seemed to understand both the instructions and the content adequately.

Later, the examiner reviewed the children's school record forms in order to obtain intelligence test scores which were previously administered by the school systems involved. In the case of the mentally handicapped children there were individual test scores while in the case of the normals only group test scores were available.

Supplementary Data

Although not a major part of this study and not suggested by theory, review of the literature regarding anxiety and the particular test instrument suggested that there might be the need to control for factors of age, sex, socio-economic level and the intactness of the child's home situation.

Sex and age were obtained from the record forms filled out by the children while the remaining information was obtained from the children's indivisual school record forms. "Home situation which was not intact," was defined as any home in which the child was not living with both of his biological parents. School records were often incomplete and in such cases it was assumed that the home was intact perhaps artifically reducing the number of children who came from broken homes as defined.

Although an attempt was made to determine both the father's educational level and his occupation, it was found that records too

TABLE 3

CHARACTERISTICS OF THE NORMAL AND THE MENTALLY HANDICAPPED SAMPLE

	Mentally Handicapped		Normals	
	N	%	N	%
Characteristic				
Young (9-10)	55	32	218	60
Old (11-13)	119	68	144	40
Broken Home	41	24	29	8
Intact Home	133	76	333	92
Upper Socio-economic	50	29	219	60
Lower Socio-economic	124	71	143	40
Males	105	60	184	51
Females	69	40	178	49
Total	174		362	

often omitted any indication of father's educational level. Therefore it was necessary to estimate socioeconomic level from father's occupation. This was done by comparing the father's occupation with ratings of occupations obtained by North and Hatt study. (57) Each Child was assigned a number which indicated his family's position in the socio-economic hierarchy. The median occupation was computed (restaurant cook or truck driver) and, for the purposes of this study, all occupations falling above this level were considered upper group and all of those falling below were considered lower group.

Intelligence test scores were also collected from the children's individual school record forms. For the children in the regular classes they are the Lorge-Thorndike Level Four and Five tests. (44) For the mentally handicapped children the tests were always individual ones being either the Stanford-Binet, Form L, (78) or the Wechsler Intelligence Scale for Children. (84) A summary of the means and standard deviations of intelligence test scores for each of the groups is presented in Table 2.

The Technical Manual of the Lorge-Thorndike indicates that a mean of 100 and a standard deviation of 16 was assumed for the Lorge-Thorndike test. (pg. 5) The Wechsler Intelligence Scale for Children has a standard deviation of 15 and a mean of 100 (84, p. 4) resulting in only a slight difference in the meaning of the Wechsler and the Lorge-Thorndike scale scores. The Binet, of course, varies in standard deviation depending upon age. However, for the ages with which we are concerned, it varies only from a standard deviation of

16.4 to 17.9. (78, p. 40) Thus as Wechsler notes, comparison of the Binet and the Wechsler Intelligence Scale for Children at the numerical level is not too unreasonable. (84, p. 4) Thus, Table 2 combines the intelligence test results, and distortion should be slight.

Statistical Method

Analysis of variance was used to evaluate each of the hypotheses statistically. It was necessary to control for those factors which the literature suggests may have a significant effect upon level of anxiety by themselves or in interaction with one another. The following factors will be controlled in the analysis for the first hypothesis: age, sex, socio-economic level and condition of the home (broken or intact). Since controlling for all of the above factors in one analysis would be excessively complicated, the first analysis was controlled for sex and age. As a result of this analysis, it was found that sex did not play an important role in anxiety and, therefore, hypothesis I was tested by a four level analysis of the variances between the mentally handicapped and normals (intelligences) controlling for the factors of age, socio-economic level and condition of the home. Since it was found in hypothesis I that only age (and the interaction of age and intelligence) were factors related to anxiety, as here measured, only age was controlled in the subsequent tests of hypotheses II and III.

Since the number of scores in each cell must be equal for analysis of variance, the number in each cell was equalized by computation

of the harmonic mean of the number of test scores. The sum of scores and sum of squares of scores were adjusted to the level of the new number of scores. The means and variances remained unchanged. The corrected number of scores was computed and adjustments were made prior to each of the analyses. Each of the tables will therefore report the adjusted number of cases. Actual number of cases may be found in tables describing the sample.

CHAPTER IV

ANALYSIS OF THE DATA

In this chapter, the writer will present an analysis of the results of the statistical data in relation to the hypotheses and he will attempt to explore possible meaning of the results.

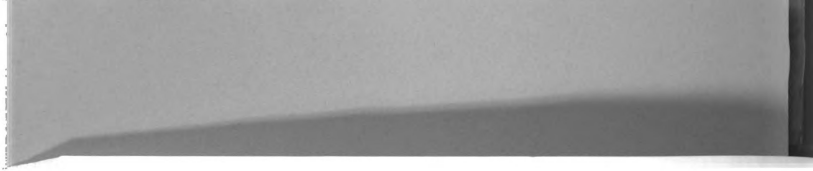
Anxiety Levels

Normals and Mentally Handicapped

Hypothesis I states that mentally handicapped children will have a higher level of anxiety than will the randomly selected children of normal intelligence found in the regular school classes. In null form this hypothesis states that there will be no difference between the anxiety scores of the mentally handicapped and the normals and what differences do exist will be attributable to chance.

Sullivan's theory indicates that as the result of threats to interpersonal security and fear of rejection by significant others, children will suffer from anxiety. Previous sections of this investigation describe the problems encountered by the mentally handicapped child, as contrasted to the normal child, in the process of growing up. As a result of these difficulties, the mentally handicapped children should have a higher level of anxiety than do normal children.

An initial three level analysis of variance controlling for sex and age indicated that sex does not play a significant role in anxiety level and, therefore, this control variable was discarded in all further analyses. This data is presented in Table 4. A four level



analysis controlling the influences of socioeconomic level, nature of home (broken or intact) and age, was performed and the analysis, in addition to indicating a rejection of the null hypothesis at better than the one percept level of confidence, also indicated that the nature of homes and socio-economic level have little influence upon anxiety as here measured. This data is presented in Table 5. Therefore, it was not necessary to control for sex, socio-economic level or nature of homes in tests of the subsequent hypotheses.

Table 6 presents the means and standard deviations of the total mentally handicapped and normal groups and indicates that the mean of the mentally handicapped is higher than that of the normal group. The significant differences between the normal and the mentally handicapped are in the direction predicted by the hypothesis. The means and standard deviations for the normals are very similar to the results obtained for the standardization sample.(10) Thus the theory which concludes that the mentally handicapped have more anxiety than do normals is confirmed. The results are therefore in disagreement with those of Klausmeir and Check (39) who found no differences in the adjustment of the mentally handicapped and normals and they are supportive of the findings of Bier, Gorlow and Stacy (1) who found that mentally handicapped girls manifested more anxiety on the Thematic Apperception Test than did normal girls.

Recently and Previously Placed Mentally Handicapped

The second hypothesis states that the mentally handicapped who have recently been placed in special education classes will have a

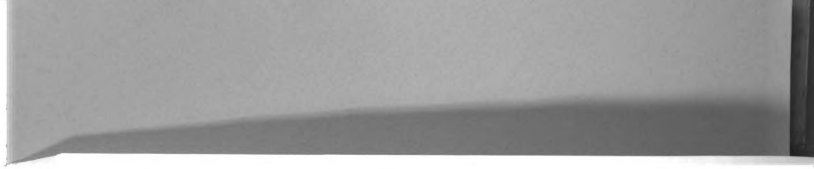


TABLE 4

INITIAL TEST DATA

ANALYSIS OF VARIANCES BETWEEN INTELLIGENCES CONTROLLING FOR SEX AND AGE

Source of Variation	Sum of Squares	df	Mean Square	F
Between Intelligences	3883.47	1	3883.47	67.66**
Between Sexes	167.24	1	167.24	2.91
Between Ages	402.36	1	402.36	7.01**
Intelligence x Sex	41.65	1	41.65	.73
Intelligence x Age	49.72	1	49.72	.87
Sex x Age	3.30	1	3.30	.06
Intelligence x Sex x Age	10.00	1	10.00	.17
Within	22328.43	389	57.40	
Total	26886.17	396		

**Significant at the 1% level of confidence

TABLE 5

INITIAL TEST DATA

ANALYSIS OF VARIANCES BETWEEN INTELLIGENCES CONTROLLING FOR HOME CONDITIONS, SOCIO-ECONOMIC LEVEL AND AGES

Source of Variation	Sum of Squares	df	Mean Square	F
Between Intelligences	1651.94	1	1651.94	43.3**
Between Home Conditions	41.59	1	41.59	1.09
Between Socio-economic Levels	.06	1	.06	+
Between Ages	128.69	1	128.69	3.37*
Between Intelligence and Home	55.12	1	55.12	1.44
Between Intelligence and Socio-economic Levels	87.44	1	87.44	2.29
Between Home and Socio-economic Levels	63.40	1	63.40	1.66
Between Ages and Home	11.42	1	11.42	+
Between Ages and Socio-economic Levels	38.18	1	38.18	1.00
Between Intelligence x Age	158.98	1	158.98	4.16*
Between Intelligence x Home x Socio-economic Levels	19.73	1	19.73	+
Between Ages x Home and Socio-economic Levels	42.56	1	42.56	1.12
Between Intelligence x Age x Home	11.02	1	11.02	+
Between Intelligence x Age x Socio-economic Levels	1.00	1	1.00	+
Between Intelligence x Age x Socio-economic Levels x Home	24.81	1	24.81	
Within	9886.62	259	38.17	+
Total	12221.56	274		

**Significant at the 1% level of confidence
*Significant at the 5% level of confidence
+Not computable

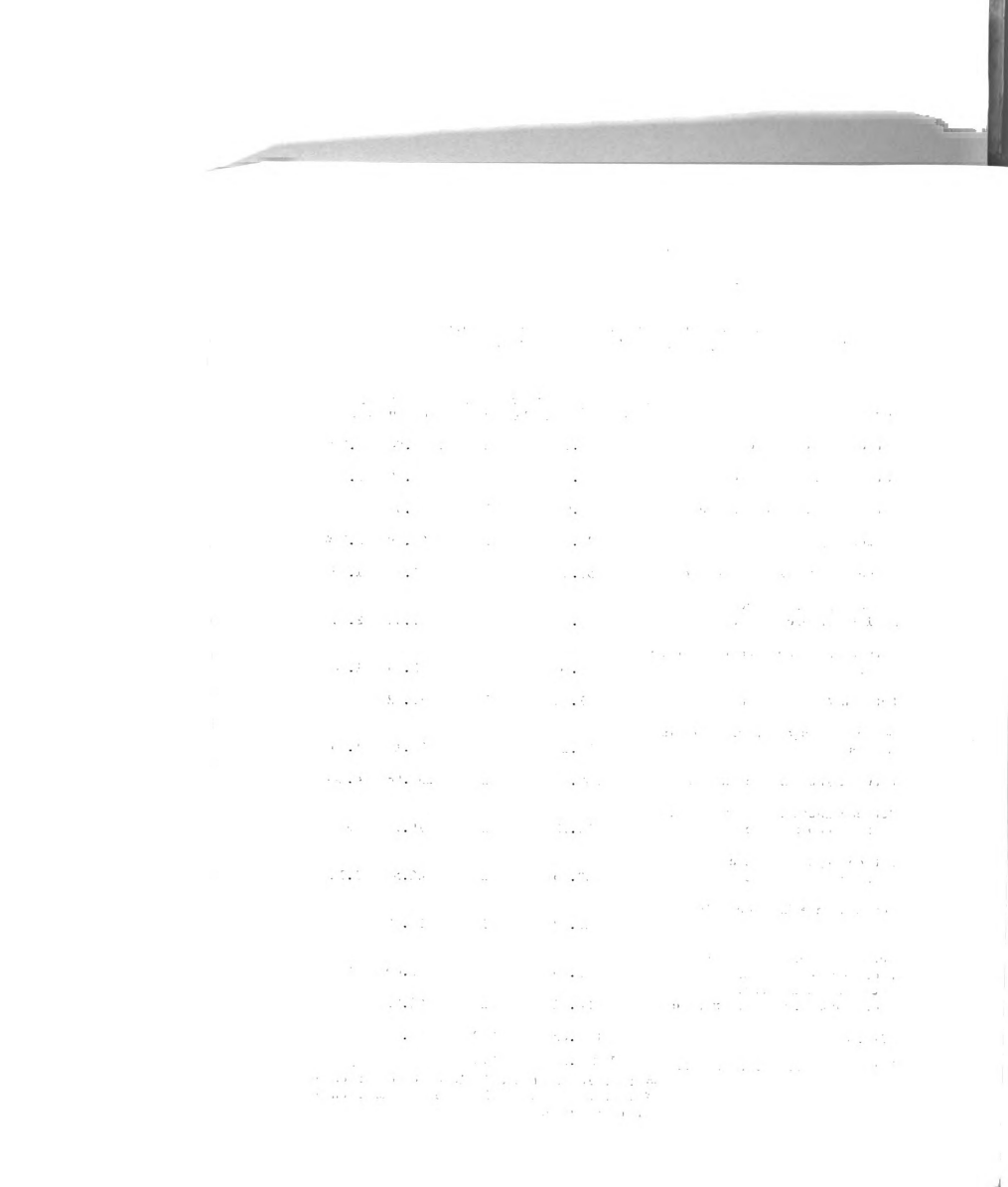


TABLE 6

INITIAL TEST DATA

MEANS AND STANDARD DEVIATIONS OF ANXIETY SCORES OF THE NORMALS AND THE MENTALLY HANDICAPPED

	Mentally Handicapped	Normals
Number	137.60*	137.60*
Mean	22.78	17.88
Standard Deviation	7.02	5.71

*The number of scores indicated represents the harmonic mean of the actual number of cases utilized. The adjustment was made based upon the sixteen cell analysis of variance presented in TABLE 5.

TABLE 6

INITIAL TEST DATA

MEANS AND STANDARD DEVIATIONS OF ABILITY SCORES OF THE NORMALS AND THE MENTALLY HANDICAPPED

	Mentally Handicapped	Normals
Number	137.00*	137.00*
Mean	22.78	17.88
Standard Deviation	7.02	3.71

*The number of scores indicated represents the harmonic mean of the actual number of cases utilized. The adjustment was made based upon the sixteen cell analysis of variance presented in TABLE 5.

higher level of anxiety than will those who have been placed in special classes previously (a year or more earlier). In null form, this hypothesis states that there will not be significant differences between the anxiety scores of the recently placed and previously placed mentally handicapped and that such differences which do exist will be attributable to chance.

Theory would lead to the expectation that the mentally handicapped who had recently been removed from the regular classrooms where they suffered from much failure and rejection, would manifest more anxiety than would those mentally handicapped who had spent considerable time in the special education classes. Although the children were beginning the school year (September 1960) it was assumed that the recently placed mentally handicapped children would bring expectations of failure with them from the regular classrooms, while the mentally handicapped who had spent considerable time in special education classes would have reduced expectations of threat and would therefore manifest less anxiety.

Analysis of variance was performed controlling for age because it appeared to have influenced anxiety scores in previous analyses. The results indicate that the null hypothesis can not be rejected and that although the means differ in the predicted direction the difference, with the influence of age controlled can only be attributed to chance factors. Tables 7 and 8 summarize this data.

If the Children's Manifest Anxiety Scale provides an adequate measure of anxiety, then the failure of prediction can be attributable to: a) the theory which assumes that the mentally handicapped become

TABLE 7

ANALYSIS OF VARIANCES BETWEEN THE RECENTLY AND PREVIOUSLY PLACED MENTALLY HANDICAPPED CONTROLLING FOR THE EFFECTS OF AGE

Source of Variation	Sum of Squares	df	Mean Square	F
Between Recently and Previously Placed	81.96	1	81.96	1.36NS
Between Ages	30.26	1	30.26	NS
Between Ages and Placement	.07	1	.07	NS
Within	5461.53	90.76	60.18	NS
Total	5573.82	93.76		

more anxious as the result of threat, and less anxious as the result of a decrease in threat is incorrect, or b) the conditions of threat in the regular classroom and the special education classroom, are not significantly different, or c) there is a significant difference between the conditions of threat in the two classrooms, but that these differences are not measurable, or d) that anxiety is more intimately associated with contemporary parental attitudes toward the child, and these do not change through placement in special classes, or e) that anxiety is so permanent a part of the structure of the personality that it is not susceptible to change by conditions found within the school setting.

It is the writer's impression that threat is reduced significantly by the conditions within the special education classes and that the failure of prediction may be due to a combination of factors including insufficient sensitivity of instrumentation, lack of changes in parental attitude, and also the self-perpetuating nature of the self-system which resists changes despite alterations in the environment. Sarason, et al, (68) cite evidence suggesting that children continue to worry about school achievement even when the pressures for such achievement is eliminated from the school situation. Working from a psychoanalytic point of view, they suggest that the worries stem from basic personality processes rather than from the immediate conditions within the school. (68, p. 41)

TABLE 8

INITIAL TEST DATA

MEANS AND STANDARD DEVIATIONS OF THE ANXIETY SCORES OF THE RECENTLY AND PREVIOUSLY PLACED MENTALLY HANDICAPPED

	Mentally Handicapped	
	Recently Placed	Previously Placed
Number	47.38*	47.38*
Mean	24.60	22.74
Standard Deviation	7.77	7.62

*The number of scores represents the harmonic mean of the actual number of cases.

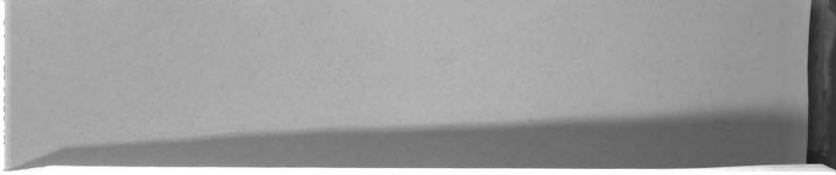


TABLE 9

ANALYSIS OF VARIANCES OF THE DIFFERENCES BETWEEN THE INITIAL AND SUBSEQUENT ANXIETY SCORES OF THE RECENTLY AND PREVIOUSLY PLACED MENTALLY HANDICAPPED CONTROLLING FOR AGE

Source of Variation	Sum of Squares	df	Mean Square	F
Between Ages	20.58	1	20.58	NS
Between Recently and Previously Placed	3.82	1	3.82	NS
Placement x Age	6.89	1	6.89	NS
Within	6176.73	112.72	54.80	NS
Total	6208.02	115.72	53.65	

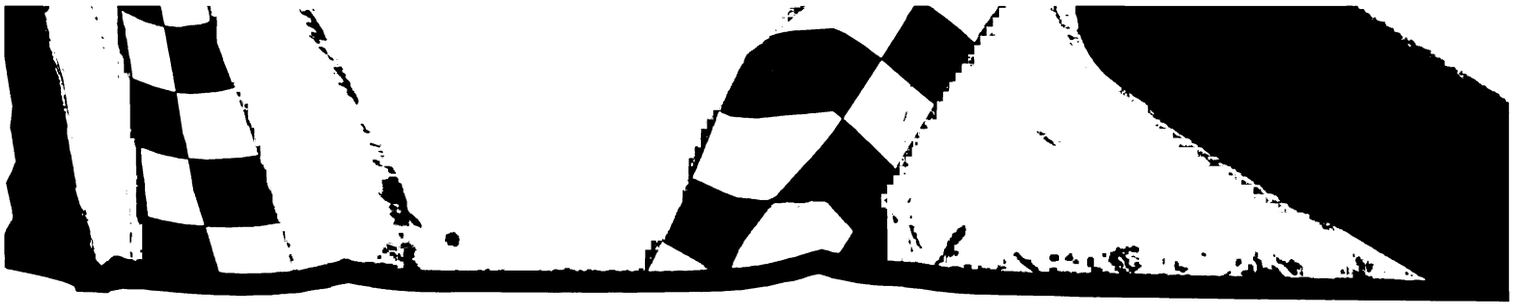
Changes in Anxiety Levels of Recently Placed Mentally Handicapped

Hypothesis III states that there will be significant decline in the anxiety levels of the mentally handicapped who have spent an experimental time interval (five months) in the special education classes and that this decline will not occur in the previously placed mentally handicapped nor in the normals. In null form this hypothesis states that differences in anxiety levels among the three groups will not be significantly different from chance.

In order to test this longitudinal hypothesis (in contrast to hypothesis II which is essentially cross sectional), it was necessary to compute the differences between the initial and the post test anxiety scores and to perform an analysis of variance.

Tables 9 and 10 indicate that the variances between the different groups are not significantly different from chance thus failing to reject the null hypothesis. There appear to be neither significant differences between the decline in anxiety of the previously placed mentally handicapped and the recently placed mentally handicapped, nor between the recently placed mentally handicapped and the normal group.

Table 11 indicates that the scores of the recently placed did decline more than did the score of the previously placed and that the total mentally handicapped group did decline more than did that of the normals (without age controlled). The difference, however, as indicated by analysis of variance with age controlled is not a significant one and appears to be due to chance. This data is presented in Table 9.



The lack of apparent influence of special education classes on anxiety tends to be contradictory to the findings of Elenbogen (18) and Blatt (4). Both Elenbogen and Blatt found that children in the special education classes were better adjusted than were the mentally handicapped in the regular elementary school classes. However, as previously noted, both studies made use of teacher ratings and the adequacy of this method may be questioned since the teachers had different referents in making their judgments. Interestingly, Blatt (4) also made use of the California Test of Personality, and via this more objective instrument, he did not find significant differences between the adjustment of the mentally handicapped in special education classes and those in regular elementary school classes.

Reasons for the failure of prediction of this hypothesis are essentially those presented in discussion of the preceding hypothesis.

Hypotheses Generated by the Date

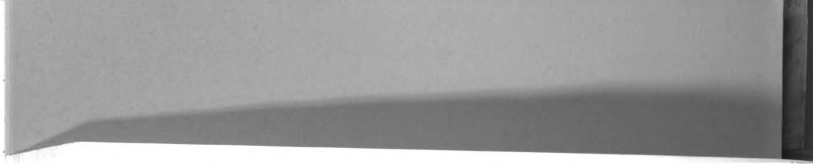
An interesting finding of this study, not predicted by theory, is that age appears to have a differential effect on anxiety (not based on chance) depending upon whether a child is mentally handicapped or normal in intelligence. This data is presented in Table 5. Table 12 indicates that although the older normal children seem to have less anxiety than do the younger normal children, this is not true in the case of the mentally handicapped. It might be hypothesized that with increasing age, there is a decrease in anxiety for the normals, but not for the mentally handicapped. Caution is, however, important since the data is cross sectional rather than longitudinal. Possibly normals

TABLE 10

ANALYSIS OF THE VARIANCE OF THE DIFFERENCES BETWEEN THE INITIAL AND SUBSEQUENT ANXIETY SCORES OF THE NORMALS AND THE RECENTLY PLACED MENTALLY HANDICAPPED

Source of Variation	Sum of Squares	df	Mean Square	F
Between Recently Placed Mentally Handicapped and Normals	87.40	1	87.40	1.63
Between Ages	38.92	1	38.92	+
Intelligence x Age	38.61	1	38.61	+
Within	7528.87	140.76	53.49	+
Total	7693.80	143.76	53.52	

+Not computable



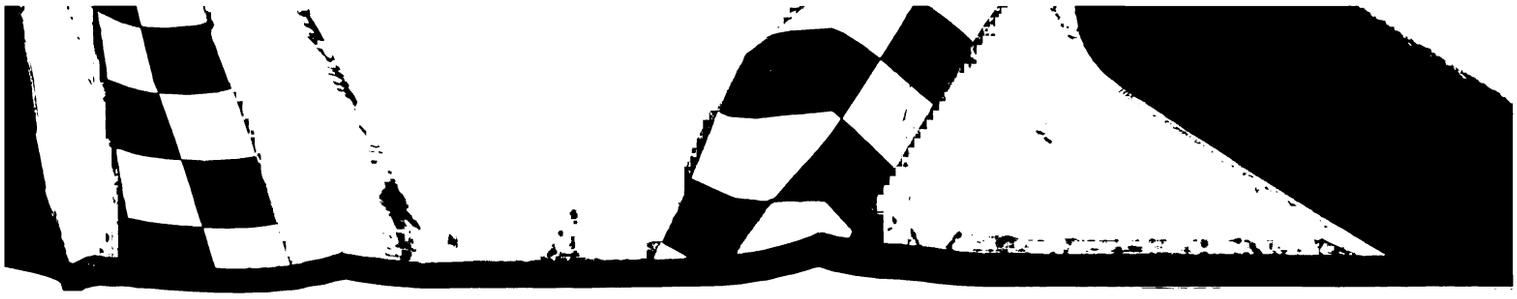


TABLE 2

DIFFERENCES BETWEEN THE INITIAL AND POST-TEST ANXIETY SCORES FOR THE MENTALLY HANDICAPPED AND NORMALS

	Mentally Handicapped		Normals
	Previously Placed	Recently Placed	
Number	58.36*	58.36*	116.72*
Mean	2.91	3.28	.99
Standard Deviation	8.30	6.26	5.59

*The number of cases indicated represents a figure adjusted to the harmonic mean of the actual number of cases.

TABLE 12

INITIAL TEST DATA

ANXIETY SCORES OF THE MENTALLY HANDICAPPED AND NORMALS BY AGE

	Mentally Handicapped		Normals	
	Young	Old	Young	Old
Number	68.80*	68.80*	68.80*	68.80*
Mean	22.71	22.88	19.33	16.45
Standard Deviation	7.61	6.43	7.53	8.21

*The number of cases indicated represents the harmonic mean of the actual number of scores.

develop more adequate defenses against anxiety as they increase in age and this is not true for the slower learning mentally handicapped. The decreasing anxiety level of the normals is surprising in view of the general belief that the early periods of adolescence are periods of increasing stress and perhaps therefore of increasing anxiety. According to this theory, anxiety should be higher for each of the older groups. If preadolescence is a period of increasing stress, then perhaps the decrease in anxiety level of the normals does not represent a true decline in anxiety, but merely more sophistication in completing a personality questionnaire.

The evidence in the literature regarding the objective findings that normals decline in anxiety on the Children's Manifest Anxiety Scale, is contradictory. Casteneda (10) found no significant difference between grade level and anxiety while Palermo did find such differences. (60)

CHAPTER V

SUMMARY AND CONCLUSIONS

The Problem

The primary purpose of this investigation was to study mentally handicapped children in order to determine whether, as theory would lead us to believe, they have a higher level of anxiety than do normal children. A second part of the study was to determine the effect of placement in special education classes on the anxiety level of mentally handicapped children. The question was asked whether the special education classes effectively reduce threat and thereby reduce anxiety. Three hypotheses were tested:

I. Mentally handicapped children as a group will have a higher level of anxiety than will a group of average children.

II. Recently placed mentally handicapped children will have more anxiety than will those who have spent a year or more in special classes.

III. There will be a significant decline in anxiety level of mentally handicapped children (recently placed) who have spent an experimental time interval in special education classes (test-retest). This will not be true for the normal or the previously placed mentally handicapped.

Methodology and Sample

The children selected for investigation in this study were two groups of mentally handicapped children, a) those who had been in the special education classes for a year or more and b) those who were

placed in special education classes two or three weeks prior to initial testing. The mentally handicapped came from the school systems of Ingham County, and the cities of Jackson and Lansing, Michigan. A control group of fourth, fifth and sixth grade normal children was randomly selected from classrooms in Jackson, Michigan. All children were tested twice with the Children's Form of the Taylor Manifest Anxiety Scale, once immediately after the new group of mentally handicapped were placed in special education classes and again five months later. Intelligence test scores were collected for all children. The mentally handicapped obtained a mean IQ of 70.75 with a standard deviation of 8.64 on the combined scores of the Wechsler Intelligence Scale for Children and the Stanford-Binet, Form L. The normal children obtained a mean IQ of 106.76 with a standard deviation of 12.78 on the Lorge-Thorndike Intelligence tests, levels four and five.

The data were statistically treated by means of analysis of variance controlling for such factors as age, sex, socio-economic level and intactness of home.

Findings

1. It was found that the null hypothesis for hypothesis I was rejected at better than the one percent level of confidence. This result strongly suggests that the mentally handicapped children have more anxiety than do randomly selected children of average intelligence.
2. In testing hypothesis II, it was found that there was no significant difference between the anxiety scores of the recently and previously placed mentally handicapped.

3. A significant decline in the anxiety scores of the recently placed mentally handicapped attributable to movement from the more to the less threatening special education classes, was not found. Hypothesis III was therefore not confirmed.
4. Although not an hypothesis of this study, it was found that age had an effect on level of anxiety which was not attributable to chance.
5. Although not an hypothesis of this study, it was found that there was an interaction between intelligence and age which could not be attributed to chance. Thus in a cross sectional study, it was found that the normals declined in anxiety with increasing age although this was not true of the mentally handicapped.

Conclusions

1. Mentally handicapped children obtain higher scores on the Children's Form of the Taylor Manifest Anxiety Scale than do children of average intelligence. This may mean that mentally handicapped children have a true level of anxiety which is higher than is that of average children, or, it may indicate that mentally handicapped children are not as capable of distortion because they are less aware of the socially appropriate response.
2. Special education classes do not have a significant effect on the anxiety level of mentally handicapped children as measured by the Children's Form of the Taylor Manifest Anxiety Scale. The failure to find a decline in anxiety despite the fact that the classes do appear to be less threatening to mentally handicapped children than

are the regular grades, may be due to insufficient sensitivity of the measuring instrument. It also seems possible that anxiety is so deep seated a characteristic that it is not subject to change by environmental manipulation, or perhaps that in the absence of change in parental attitude there can be little change in anxiety despite other environmental changes.

Implications for Further Study

The experimental literature is sparse on the personality of the mentally handicapped child and his problems of adjustment and more research in this area would appear to be warranted. Specifically, this investigation reveals a need for more comprehensive studies of the effects of special class placement on the mentally handicapped and the manner in which threat in the classroom can be reduced for these children. This investigation suggests an effect of age upon anxiety level which could be associated with the failure of the mentally handicapped to develop adequate defense mechanisms. The effects of age upon the anxiety of mentally handicapped children appears to be another area worthy of further investigation.

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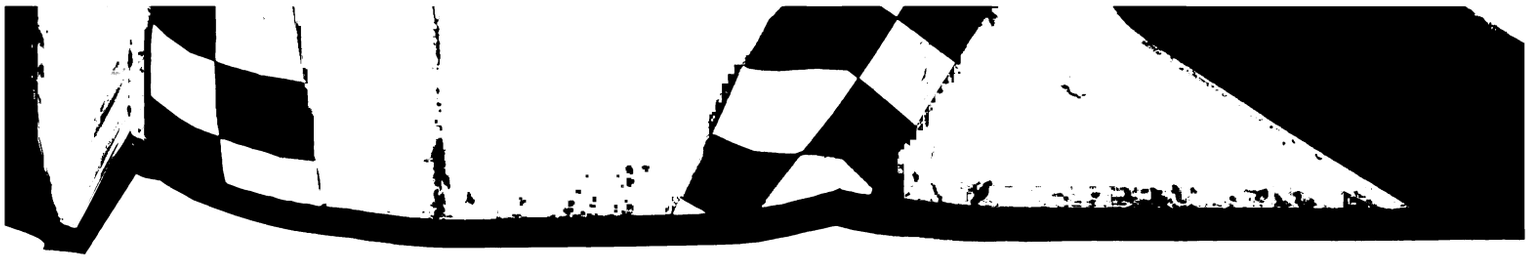

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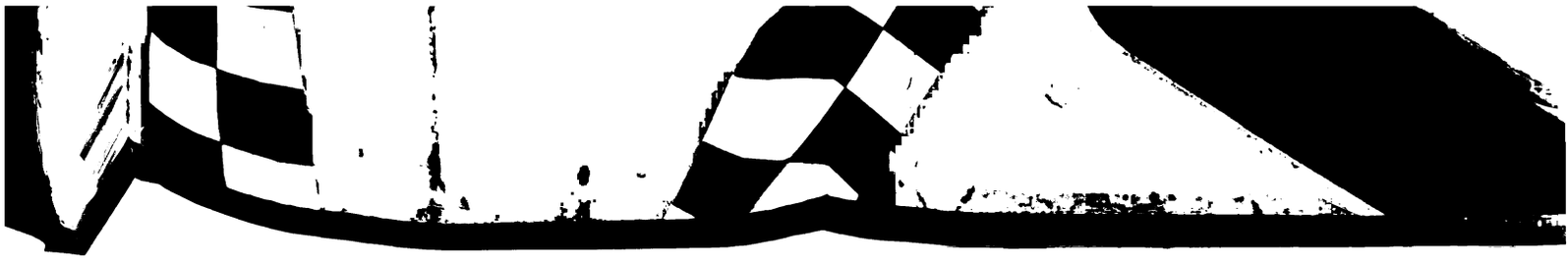

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APPENDIX

Dear Teacher

This is part of an in vestigation designed to help us to understand children more adequately and thus to design more effective school programs. Completing the enclosed material will take less than two hours (one hour now and one hour later in the year when the test will be repeated.) You will be sent a brief description of the results of this study and invited to attend a meeting for further elaboration. Information is being collected in Lansing, Jackson and Ingham County. Thank you for your help in this matter.

Marvin S. Kaplan, School Diagnostician

General Instructions

1. Direct the children to write their first and last names, age, grade, sex, and school.

2. Read the printed instructions on the questionnaire aloud and then proceed to read each of the questions having the children circle their answers as you read. If a child asks what this is for simply say that it is to: "Help us to understand children better." Do not elaborate on any question. Simply tell the children to answer as best they can.

YES NO 10. I would rather win than lose in a game.

YES NO 11. I am secretly afraid of a lot of things.

YES NO 12. I feel that others do not like the way I do things.

YES NO 13. I feel alone even when there are people around me.

YES NO 14. I have trouble making up my mind.

YES NO 15. I get nervous when things do not go the right way for me.

YES NO 16. I worry most of the time.

YES NO 17. I am always kind.

YES NO 18. I worry about what my parents will say to me.

YES NO 19. Often I have trouble getting my breath.

YES NO 20. I get angry easily.

YES NO 21. I always have good manners.

YES NO 22. My hands feel sweaty.

YES NO 23. I have to go to the toilet more than most people.

YES NO 24. Other children are happier than I.

YES NO 25. I worry about what other people think of me.

Name_____ Age_____ Sex_____

Grade_____ School_____

Instructions: I will read each question to you. Listen carefully. Put a circle around the word YES if you think it is true about you. Put a circle around the word NO if you think it is not true about you.

YES NO 1. It is hard for me to keep my mind on anything.

YES NO 2. I get nervous when someone watches me work.

YES NO 3. I feel I have to be best in everything.

YES NO 4. I blush easily.

YES NO 5. I like everyone I know.

YES NO 6. I notice my heart beats very fast sometimes.

YES NO 7. At times I feel like shouting.

YES NO 8. I wish I could be very far from here.

YES NO 9. Others seem to do things easier than I can.

YES NO 10. I would rather win than lose in a game.

YES NO 11. I am secretly afraid of a lot of things.

YES NO 12. I feel that others do not like the way I do things.

YES NO 13. I feel alone even when there are people around me.

YES NO 14. I have trouble making up my mind.

YES NO 15. I get nervous when things do not go the right way for me.

YES NO 16. I worry most of the time.

YES NO 17. I am always kind.

YES NO 18. I worry about what my parents will say to me.

YES NO 19. Often I have trouble getting my breath.

YES NO 20. I get angry easily.

YES NO 21. I always have good manners.

YES NO 22. My hands feel sweaty.

YES NO 23. I have to go to the toilet more than most people.

YES NO 24. Other children are happier than I.

YES NO 25. I worry about what other people think of me.

YES NO 26. I have trouble swallowing.

YES NO 27. I have worried about things that did not really make any difference later.

YES NO 28. My feelings get hurt easily.

YES NO 29. I worry about doing the right things.

YES NO 30. I am always good.

YES NO 31. I worry about what is going to happen.

YES NO 32. It is hard for me to go to sleep at night.

YES NO 33. I worry about how well I am doing in school.

YES NO 34. I am always nice to everyone.

YES NO 35. My feelings get hurt easily when I am scolded.

YES NO 36. I tell the truth every single time.

YES NO 37. I often get lonesome when I am with people.

YES NO 38. I feel someone will tell me I do things the wrong way.

YES NO 39. I am afraid of the dark.

YES NO 40. It is hard for me to keep my mind on my school work.

YES NO 41. I never get angry.

YES NO 42. Often I feel sick in my stomach.

YES NO 43. I worry when I go to bed at night.

YES NO 44. I often do things I wish I had never done.

YES NO 45. I get headaches.

YES NO 46. I often worry about what could happen to my parents.

YES NO 47. I never say things I shouldn't.

YES NO 48. I get tired easily.

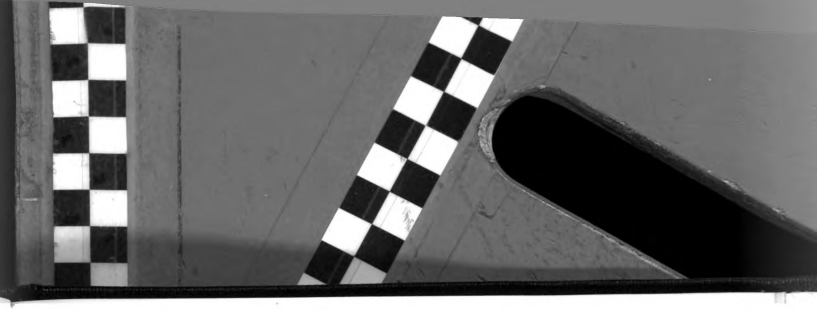
YES NO 49. It is good to get high grades in school.

YES NO 50. I have bad dreams.

YES NO 51. I am nervous.

YES NO 52. I never lie.

YES NO 53. I often worry about something bad happening to me.



DEPARTMENT OF PUBLIC INSTRUCTION
Lansing, Michigan

Educational Requirements for Teachers of Exceptional Children

A. Requirements for teachers of exceptional children in the several special education fields are determined by Michigan institutions which obtain approval of the State Board of Education for these programs of teacher education. Persons who have made considerable progress toward meeting these requirements, as previously in force, or applicants from other states who have considerable credit in special education and have obtained temporary approval, will be advised by the Department of Public Instruction in terms of the requirements previously in effect and described below; persons currently enrolled in Michigan institutions or those given temporary approval, who do not have more than a minimum amount of credit in special education should consult with the authorities of an institution approved by the State Board of Education for offering the program of their choice.

1. Michigan Life or Provisional-Permanent Certificate with a major in the specified area of special education in which the candidate plans to teach.

2. Bachelor's Degree.

3. Four semester hours of directed teaching in the field of special education in which the candidate plans to teach.

4. Twenty-four additional semester hours of credit in course work in special education and related subjects to be distributed as follows:

   a. Required courses. . . . . as indicated below
   b. Specific courses. . . . . as indicated below
   c. General and related courses . sufficient semester hours to make up the balance of 24 semester hours

B. Teachers of such special subject areas as arts, crafts, home economics, shop teachers and physical education teachers who have a major in their field of specialization must have a minimum of 15 semester hours in special education courses, all of which are to be directly related to each of the types of children taught, until the specific courses have been exhausted. Four hours of practice teaching in their field of specialization is required.

1. Michigan Life or Provisional-Permanent Certificate with a minor in the specific area of special education in which the candidate plans to teach, and a major in thesspecial subject.

2. Bachelor's Degree.

3. Four semester hours of directed teaching in the field of special education in which the candidate plans to teach.

4. Fifteen additional semester hours of credit in course work in special education and related subjects to be distributed as follows:

	Minimum semester hours required
a. Education or Survey of Exceptional Children . . .	2
b. Mental Hygiene.	2
c. Specific course work. . . . . below for the type of special education in which the candidate plans to teach	as indicated
d. General and Related Course Work . . . . . balance of the 15 semester hours requirement	to make up the

C. Course Work Requirements for Teachers of Exceptional Children:

	Minimum semester hours required
1. Required courses	
a. Education or Survey of Exceptional Children . . .	2
b. Mental Hygiene.	2
c. Arts and Crafts[1].	4
2. Specific Courses[2]	
a. Teachers of Crippled Children	
Care and Education of Crippled Children, Therapeutic Care of Crippled Children, Pathology of the Crippled Child, or equivalents	6
b. Teachers of Deaf and Hard of Hearing Children	
Anatomy and Physiology of the Organs of Hearing, Pathology of Hearing, Methods of Teaching Lip Reading, Techniques of the Use of Hearing Aids, Rhythm Training, Tactile Development of Speech, Language Development and Training, or equivalents	12
c. Teachers of Blind Children	
Anatomy and Physiology of the Organis of Sight, Pathology of Vision, Educational Provisions for the Blind, Braille and Braille Methods, Typewriting for the Blind, or equivalents	8
d. Teachers of Partially Seeing Children	
Anatomy and Physiology of the Organs of Sight, Pathology of Vision, Problems and Methods in Sight Saving Classes, Typewriting for Sight Sav ing Classes, or equivalents	8

1 Not required of speech correctionists and special subject matter teachers.

2 The requirement concerning directed teaching in special classes may be waived by the training institution for experienced teachers when approved by the Department of Public Instruction.

Minimum semester hours required

e. Teachers of Epileptic Children

Medical Aspects of Epilepsy, Problems and Methods and Classroom Organization for Epileptic Children, or equivalents 4

f. Teachers of Children of Lowered Vitality

Medical Aspects of Weak and Delicate Children, Educational Problems of Special Health Classes, or equivalents 4

g. Teachers of Homebound Children

Teachers of homebound children should qualify in either the education of crippled children or those of lowered vitality

h. Teachers of Children with Speech Defects

(1) Anatomy and Physiology of Speech, Pathology of Speech, Methods and Techniques Used to Correct Various Speech Disorders, Phonetics and Palotography, or equivalents 12

(2) Qualified speech correctionists who serve the special needs of hard of hearing children who have reasonable language acquisition for their age and who can participate successfully in regular grade programs when provided with special services, may qualify for teaching such children upon the completion of the following courses:

Anatomy, Physiology and Pathology of the Organs of Hearing, Methods of Teaching Speech Reading, Hearing Aids and Acoustic Amplification, Directed Teaching in Speech Reading

i. Teachers of Socially Maladjusted Children

Problems of Instruction with Maladjusted Children, Psychology of Behavior Problems, Juvenile Delinquency, or equivalents 6

j. Teachers of Mentally Handicapped Children

Mental Deficiency, Problems of Instruction and Methods of Teaching the Mentally Handicapped Child, Problems of Organization and Curriculum in Teaching the Mentally Handicapped Child, Education and Social Control of Mentally Handicapped, or equivalents 8

3. General and Related Courses to be chosen from the following courses:[1]

Mental and Exceptional Testing
Guidance and Occupational Information
Speech Correction
Mental Deficiency
Delinquency
Abnormal Psychology
Anatomy
Social Psychology
Social Psychiatry
Child Welfare
or equivalents

1 Seven hours of correspondence courses is the maximum which may be approved in the general areas. No hours by correspondence may be approved in the specific area.

C O P Y

DEPARTMENT OF PUBLIC INSTRUCTION
Lansing, Michigan

Facts about the Michigan School Diagnostician
for the
Mentally Handicapped Program

The Services of the School Diagnostician

This psychological service provides a means by which children may be selected for eligibility in the educational program for the mentally handicapped. The approved school Diagnostician is a member of the special service staff of the local school system. He serves only that portion of the school membership who are referred as possible mentally handicapped pupils. He must serve the mentally handicapped program full time.

Function of the School Diagnostician Service

The school Diagnostician has major responsibility for the study of children referred as candidates for mentally handicapped programs. He also serves in a consultant capacity to the school staff. He assists teachers and other school personnel to understand the problems and behavior characteristics of mentally handicapped children so that they can identify and understand children of this kind and work more effectively with them. He may be of assistance to the teacher in planning for an individual instructional program through describing the learning potential and ways in which the child may achieve.

He will re-evaluate all children in the program periodically; at least every three years is recommended. He may make supplementary evaluation studies when a child is not achieving or adjusting as expected. He may work with parents who find it difficult to accept their child's limitations and assist them in achieving realistic social, educational and vocational goals.

As a member of the school staff he serves on committees, attends staff meetings and is a resource person to parent and community groups. In providing an effective service, he participates in many activities which have as their purpose the planning and evaluation of programs for mentally handicapped children.

Types of Children Studied

The identification and assessment of mentally handicapped pupils is the chief task of the School Diagnostician. Although the assessment of mental retardation may be complicated by many factors, the one common characteristic is limited intellectual ability. The referrals to this program are only those pupils whose primary problem is believed to be limited intellectual ability. In many instances other problems may be identified along with mental retardation. It is hoped that full psychological services for all children may be made available for all school children in the near future. At this time only mentally handicapped may be served by this program.

Establishment of the Program

The board of education of a school district, the county board of education or groups of cooperating boards of education may establish a program if the combined school membership of the district or districts to be served is at least 5,000 if the diagnostician is employed full time as school diagnostician for the mentally handicapped program, and if there is an approved program for the education of mentally handicapped in operation.

Approval of Programs

Approval of Programs for state aid is made by the Department of Public Instruction by December 15th of each year.

1. A school district may receive state aid of 75% of actual costs up to $5,125 for a school membership of 5,000 pupils. Only fulltime programs may be eligible for state aid.

2. School districts may operate jointly-sponsored programs. State aid shall be paid to the district designated as the sponsoring district.

3. A county school district may sponsor a program if the program serves school districts operating approved programs for the education of mentally handicapped whose membership totals 5000 pupils.

4. School districts with approved programs for the education of mentally handicapped must employ an approved school diagnostician. If the person is employed on a part time basis, or if the school membership is not 5000, no specific state aid is available. The cost of the program is listed on the application blank for the mentally handicapped program in the appropriate place as part of the total cost of the program.

Application for a State Program

Application forms for the program are sent in the spring to all school districts operating programs, and are to be returned to the Division of curriculum Services by September 15th.

Application for new programs are sent on request.

Form E - Membership and Personnel Count

Form E is sent in the fall to districts having approved programs, for reporting the personnel for the school diagnostician program. All approved persons employed on December 15, for an approved program for the education of mentally handicapped, may be listed for state aid payment to the school district. Any person employed after this date is not eligible for that school year.

The state aid paid is 75% of the actual cost of the program up to $5,125. The actual cost of the program includes the salary, travel, clerical help, materials and other appropriate costs.

Publishing and Distribution

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Cost Sheet for Final Claim for State Aid

The cost Sheet is sent to all approved programs at the end of the fiscal year. This is a report of the actual cost of the program. If the actual cost is more or less than the estimated cost on the application form, the appropriate adjustment will be made in the state aid payment the next year.

Qualification of Personnel

Special approval for school diagnostician personnel is required before the person is employed. This approval is secured by the prospective candidate from one of the universities approved for the training of school diagnosticians for the mentally handicapped. The unversity then recommends the approval to the Department of Public Instruction.

If the person is employed on temporary approval, he must agree to complete six semester hours per year until fully qualified.

Approved Training Institutions

University of Michigan

Michigan State University

Western Michigan University

Wayne State University

A SEQUENTIAL CURRICULUM FOR THE MENTALLY HANDICAPPED

Kindergarten -- High School

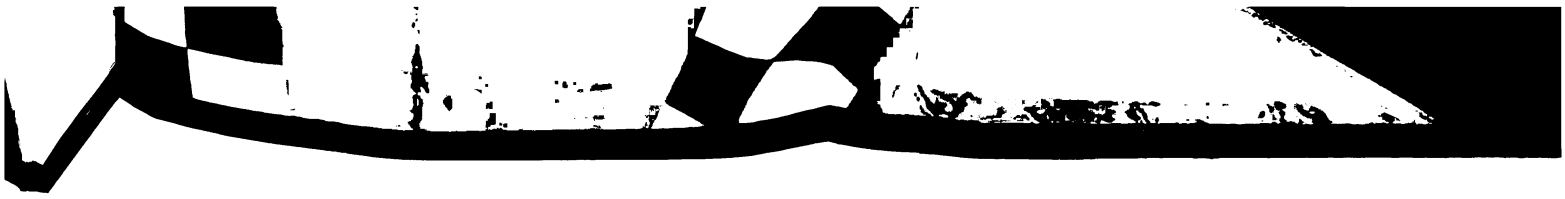
1961

Lansing Public Schools

Lansing, Michigan

Mr. Wayne Maes
Director of Psychological Services

Mr. Marvin Beekman
Director of Special Education



PREFACE

What should comprise education for the mentally handicapped in a public school setting?

The answer to this perplexing question is contingent upon finding the answers to numerous other questions of which one of the most cogent is: Education for what? or: What place in society do we expect the mentally handicapped adult to fill? Such questions bring into focus ultimate goals (6,8). The ultimate goals for the mentally handicapped are not unlike those which we accept for all children. They can be paraphrased as adjustment to:

1. Home
2. Community
3. World of work

Numerous follow-up studies (1,2,4,7) suggest that many mentally handicapped (more than is the case with normal adults) do not make adequate adjustments. It is the task of public schools to design educational experiences for the mentally handicapped which facilitate the achievement of ultimate goals. The following curriculum outline is designed with this thought in mind and is based on a consideration of:

1. Ultimate goals for the mentally handicapped.
2. The basic needs of the mentally handicapped.
3. Experiences appropriate to the progressive maturity and understanding.
4. The involvement of total behavior - the whole person.
5. Experiences feasible of accomplishment.
6. Experiences thought to be socially valuable.

In order that similar experiences might appear together and to demonstrate the consistent continuing sequence of such experiences leading to ultimate goals, the following material is grouped according to areas. This is not meant to imply that learning experiences should be so organized in practice. We feel that most of the learning experiences essential to the mentally handicapped can be found on the following pages but how they are organized will depend upon the nature of the local school system. We favor use of the unit approach.

in a world [illegible]

[illegible] to be applied [illegible] more [illegible] and
[illegible] and [illegible] of [illegible] and [illegible]
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Some learning experiences can be most successfully gained by the mentally handicapped in homogeneous groups (only mentally handicapped in the group) other experiences can be best obtained in heterogeneous groups (a cross section of the school enrollment). Homogeneous grouping is more often successful in the academic skills areas, however grouping procedures will need to be flexible to suit the local school and individual pupils.

The following outline is a composite of experimentation in the Lansing Public Schools and the best thinking of authorities in the field of curriculum.

Some learning objects can be most successfully served
by the Semantic Background in Components (SBiC) Model
because of the ways) those may be best stored
in Dorsogangenda (a class a object of the second creation).
Homogeneous courses is more often associated in a monolithic
way's sense. By use learning objects as it may be to
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The following sentence is a example of creation
in the Semantic Public Sector's and the Periodic of a portfolio
in a kind of centuries.

EARLY ELEMENTARY
(Age 6-10)

Mental Health

Success — Wholesome Attitudes — Security — Adequacy — Self-Respect

Social Skills

Cooperation — Consideration — Sharing

Development of Problem Solving Techniques

Evaluation
1. Intellectual
2. Achievement
3. Social-Emotional
   a. Teacher Rating
   b. Anecdotes

Health and Safety
1. Safety - Crossing streets, etc.
2. Personal Hygiene and Grooming
3. Care and Wearing of Suitable Clothing

Pre-Academic
1. Language Development
2. Visual Abilities
3. Auditory Abilities
4. Reading Readiness
5. Number Concepts

Social Studies
1. The Neighborhood
2. The School

Motor Abilities and Physical Education
1. Rhythm
2. Writing
3. Cutting
4. Organized Gemes for Exercise
5. Free Play

Music and Art
1. Listening Skills
2. Finger Painting

Parent Education

Nature Checklist

Music and Art
1. Making Shells
2. Paper Painting

Motor Ability and Physical Education
1. Skate
2. Skate
3. Ball
4. Obstacle Course for Exercise
5. Home Play

Social Studies
1. The Playground
2. The School

Science
1. Magnet Properties
2. Weed Pulling
3. And Carry Supplies
4. Feeding Animals
5. Do Not Pet Pets

Arithmetic
1. Counting Pennies
2. Measuring and Cooking
3. Care and Keeping of Supplies
(Jewelry)

Safety and Spirit
1. Safety - Crossing streets, etc.
2. Personal Hygiene and Grooming
3. Care and Keeping of Supplies
(Jewelry)

Language
1. Spelling
2. Vocabulary
3. Social Emotional
a. Value Basis
b. Awareness

Reading
1. Preliteracy
2. Vocabulary
3. Social-Emotional
a. Value Basis
b. Awareness

LATER ELEMENTARY
(Age 11-13)

Mental Health
Success | Wholesome Attitudes | Security | Adequacy | Self-Respect

Social Skills
Cooperation | Consideration | Sharing

Development of Problem Solving Techniques

Evaluation
1. Intellectual
2. Achievement
3. Social-Emotional
   a. Sociometric
   b. Teacher rating
   c. Anecdotes

Health and Safety
1. Safety - Bicycle, etc.
2. Personal Hygiene and Grooming

Academic
1. Reading
2. Arithmetic
3. Spelling
4. Writing

Periods set aside for development of these skills. Taught in conjunction with units of experience.

Social Studies
1. Adjustment to community and home
2. State
3. Nation

Motor Abilities
1. Rhythm
2. Writing
3. Cutting
4. Organized Games for Exercise
5. Free Play

Music and Art
1. Listening Skills
2. Painting
3. Crafts

Parent Education

Be and Do

1. Children skills
2. Parenting
3. Dos
4. Don'ts
5. Be a role model
6. Be aware of
7. Be open minded
8. Be flexible
9. Be patient
10. Be loving

Have

1. Children skills
2. Parenting
3. Dos
4. Don'ts
5. Be a role model
6. Be aware of
7. Be open minded
8. Be flexible
9. Be patient
10. Be loving

Do

1. Children skills
2. Parenting
3. Dos
4. Don'ts
5. Be a role model
6. Be aware of
7. Be open minded
8. Be flexible
9. Be patient
10. Be loving

JUNIOR HIGH SCHOOL
(Age 14-16)

Mental Health
- Success
- Wholesome Attitudes
- Security
- Adequacy
- Self-Respect

Social Skills
- Cooperation
- Consideration
- Sharing

Development of Problem Solving Techniques

Evaluation
1. Intellectual
2. Achievement
3. Social-Emotional
   a. Sociometric
   b. Teacher Rating
   c. Interview
   d. Parent Appraisal
4. Vocational
   a. Interest
   b. Aptitude

Health and Safety
1. Safety - Auto Safety, etc.
2. Personal Hygiene and Grooming

Home and Family
1. Sex Education
2. Foods
3. Clothing
4. Child Care
5. Home Building

Academic
1. Reading
2. Arithmetic
3. Spelling

Social Studies
1. Community
2. State
3. Nation
4. World

Motor Abilities
1. Physical Education
2. Writing
3. Manual Arts
4. Sewing

Vocational
1. Exploring World of Work
2. Exploratory Work Experience
3. Community Opportunities
4. Work Habits
5. Self-Evaluation

Leisure Time
1. Art Appreciation
2. Music Appreciation
3. Clubs
4. Hobbies
5. School Athletics

Parent Education

SENIOR HIGH SCHOOL
(Age 16 and over)

Evaluation
1. Intellectual
2. Achievement
3. Social-Emotional
   a. Sociometric
   b. Teacher Rating
   c. Interview
   d. Parent Appraisal
4. Vocational
   a. Interest
   b. Aptitude

Health and Safety
1. Safety
2. Personal Hygiene and Grooming
3. Driver Education

Home and Family
1. Sex Education
2. Foods
3. Clothing
4. Child Care
5. Home Building

Academic
1. Functional Reading - signs, etc.
2. Applied Arithmetic - making change, etc.

Social Studies
1. State and Government
2. World

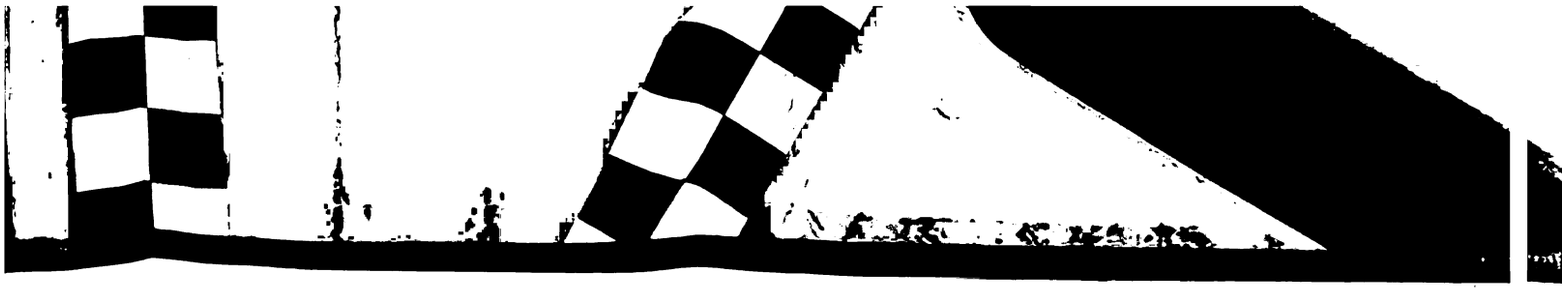
Motor Abilities
1. Physical Education
2. Writing
3. Manual Arts
4. Sewing

Vocational
1. Self-Evaluation
2. Work Habits
3. Exploring World of Work
4. Work Experience
5. Full Employment

Leisure Time
1. Art Appreciation
2. Music Appreciation
3. Clubs
4. Hobbies
5. School Athletics

Parent Education

Mental Health
Success | Wholesome Attitudes | Security | Adequacy | Self-Respect
Social Skills
Cooperation | Consideration | Sharing
Development of Problem Solving Techniques



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The following Lansing Special Education Department booklets are available upon request:

1. Junior High School Handbook for Parents
2. Junior High School Program
3. Senior High School Handbook for Parents
4. Senior High School Program
5. The Lansing Schools -- Excalibur Story
6. Reading Expectancies for Mentally Handicapped Children