THE UNIVERSITY OF OKLAHOMA

GRADUATE COLLEGE

DEMOGRAPHIC VARIABLES AND THEIR EFFECT ON CLASSIFICATION OF THE HANDICAPPED: A DESCRIPTIVE STUDY

A DISSERTATION

SUBMITTED TO THE GRADUATE FACULTY

in partial fulfillment of the requirements for the

degree of

DOCTOR OF EDUCATION

BY

GENE TAYLOR

Norman, Oklahoma

1979

DEMOGRAPHIC VARIABLES AND THEIR EFFECT ON CLASSIFICATION OF THE HANDICAPPED: A DESCRIPTIVE STUDY

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ACKNOWLEDGEMENTS

I would like to thank the members of my committee, Dr. Caryl Adams, Dr. Rich Gray, Dr. Don Hall, Dr. Gene Pingleton, and Dr. Gaye McNutt for their help and guidance throughout the study. I am especially grateful to my Chairperson, Dr. Gaye McNutt, for her dedication, competence, and confidence. I wish to also thank Dr. Merlin Taylor for his help in the collection of the data for this study. Also, thank you Caryl for listening to and encouraging me. In addition, thank you Juarez Jim for helping me get started and for your help with Chapter Four. Thank you Pat for typing the whole thing. And thank you Gayle Ann.

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CHAPTER I

THE PROBLEM

The United States Government has made provisions to aid American public education for more years than we have been governed by our present Constitution. The Northwest Ordinance, passed by the Continental Congress in 1785, provided the first national subsidy to education. This Act set aside large tracts of federal land in the Northwest Territory which could be used to build schools or sold to support public education.

Public schools continued to receive government assistance for educating "normal" students. However, federal support for the education of the handicapped did not receive immediate attention or support from the Continental Congress or its successor of 1789, the United States Congress. The first federal assistance to the handicapped was in 1864 when Congressional legislation resulted in the establishment of the National Deaf-Mute College. The National Deaf-

Mute College was later renamed Galludet College to honor Thomas Gallu-det for his pioneer work with the deaf in the United States.

Fifteen years later, in 1879, the Congress of the United States appropriated $10,000 to purchase educational books and materials for the blind of the nation. However, federal programs for the education of the handicapped remained essentially unchanged until the middle of the twentieth century (Gearheart, 1974). The first major assistance to special education came in the form of Public Law (P. L.) 83-531, The Cooperative Research Act. Even though P. L. 83-531 was passed and signed into law in 1954, funds were not appropriated until 1957. This Act provided $675,000 for research germane to the education of the mentally retarded.

Since 1954, Congress has enacted dozens of measures that have given partial support to education and related services for the handi-capped. As federal assistance to programs for handicapped students has increased, so have regulations and stipulations for the eligibility and for the continuance of federal dollars.

In 1970, P. L. 91-230, The Education of the Handicapped Act, was signed into law. This act served to consolidate existing legisla-tion related to the education of the handicapped. In addition, a number of existing programs were extended and/or enlarged. P. L. 93-380 amended The Education of the Handicapped Act in 1974. This Act pro-vided grants to states for improvement of existing programs in an attempt to furnish total educational opportunities to handicapped child-ren.

The Education for All Handicapped Children Act, P. L. 94-142, was signed into law by President Gerald Ford on November 29, 1975. This Act, a revision of P. L. 93-380, offered the most extensive educational opportunities for handicapped children drafted by Congress to date. Section Three (c) of the Act provides a statement of purpose.

> It is the purpose of this Act to assure that all handicapped children have available to them, a free appropriate public education which emphasizes special education and related services designed to meet their unique needs, to assure that the rights of the handicapped children and their parents or guardians are protected, to assist states and localities to provide for the education of all handicapped children, and to assess and assure the effectiveness of efforts to educate handicapped children (p. 3).

The rules and specifications, some 24 pages, that follow this statement of purpose have countless implications for states interested in obtaining federal monies to aid in the education of handicapped children. If a state does not comply with these regulations, federal funds appropriated for special education may not be granted.

The method by which states are allocated federal funds for special education services is based on the average number of students receiving special education and/or related services. States seeking federal funds are required by Section 612 (c) of P. L. 94-142 to assure

> ...that a practical method is developed and implemented to determine which children are currently receiving needed special education and related services and which children are not currently receiving needed special education and related services...(p. 9).

Upon completion and implementation of a practical method which determines the prevalence of served and unserved children within each handicapping category, states soliciting federal funds are required to provide summary statistics to the Commissioner of Education. Reports

to the Commissioner must be completed by October 1 and February 1 of each school year. The Commissioner then provides the appropriate Committee of each House of the Congress a report of the total number of children within each handicapped classification and on the progress being made toward the provision of free appropriate education to all handicapped children.

This information, gathered by the Commissioner, will also provide special educators with estimates of the number of children within each category of handicapped condition. When considering such large-scale estimates of prevalence, one must acknowledge several factors which may affect such efforts. For example, the majority of the learning disabled, mentally retarded, and emotionally disturbed school-age population is male (Hallahan & Kauffmann, 1978; MacMillan, 1977; Meyen, 1978). This could be due to a variety of factors ranging from society's influence on expected aggressiveness in males to potential neurological impairment at birth due to the males' generally larger head size. However, evidence to support these notions is scant or speculative at present. Nonetheless, males are identified and classified as having learning problems (i.e., specific learning disabilities (SLD), mental retardation (MR), and emotional disturbance (ED) substantially more often than females. This could be an indication that methods of identification and classification of children with learning and/or behavior problems are biased. However, if more males do in fact have neurological impairments at birth, then current estimates of prevalence may not be biased.

There is ample research to support the notion that age and ethnicity also influence frequency estimates for the handicapping

conditions of SLD, MR, and ED. Evidence to support this premise will be expanded in Chapter Two.

Statement of the Problem

The problem is this: to describe variations in prevalence among three handicapping conditions as related to age, gender, ethnicity, level of severity, and provision of services.

Since specific learning disabilities (SLD), mental retardation (MR), and emotional disturbance (ED) comprise the majority of handicapping conditions, they will be the focus of the study. Prevalence estimates will be examined according to (a) two levels of severity, (i.e., mild/moderate and severe/profound), (b) the nature of educational services provided (e.g., unserved, underserved, full service), (c) age, (d) gender, and (e) ethnicity.

Significance of the Study

As stated previously, Oklahoma, as well as all other states, is required by a provision of P. L. 94-142 to report summary statistics regarding the number of children identified within each handicapping condition. However, the influence of such potentially biasing factors as age, gender, and ethnicity has not received attention. This study will serve to highlight those variables which may directly affect prevalence figures. Such information may have implications for criteria instruments and techniques used to identify any particular group. Also, findings from this study may suggest a need for the continued examination of variables that relate to prevalence figures.

Definition of Terms

Age - for this study age refers to three classifications:

1. 5-9 years of age
2. 10-14 years of age
3. 15-19 years of age

Emotional Disturbance - For this study the definition provided by the Oklahoma Department of Education will be used to refer to emotional disturbance:

> The emotionally disturbed child is defined as one who, because of possible breakdown in the family constellation or because of economic, social or other conflicts, has failed to mature socially and emotionally within the limits imposed by society. Because of these unresolved social and/or emotional conflicts, the child is unable to adjust himself to the routine of a regular classroom and profit from the instructional program offered (Special Education Division, Oklahoma Department of Education, 1978, p. 87).

In addition, the term behavior disordered (BD) will be used synonymous with emotionally disturbed.

Ethnicity - For this study ethnicity refers to the five classifications used by the Oklahoma Department of Education:

1. Black
2. Caucasian
3. Indian
4. Oriental
5. Spanish American

Handicapped Children or Handicapping Condition - P. L. 94-142 defines handicapped children as:

> ...mentally retarded, hard of hearing, deaf, speech impaired, visually handicapped, seriously emotionally disturbed, orthopedically impaired or other health impaired, or children with specific learning

> disabilities who by reason thereof require special education and related services...(p. 42478).

Individual Education Program (IEP) - a written plan of instruction for each special education student. IEPs are a provision of P. L. 94-142.

Mental Retardation - For this study the definitions provided by the Oklahoma Department of Education will be used to refer to two classifications of mental retardation:

1. Educable Mentally Handicapped (EMH)

> The educable mentally handicapped are children who can be taught some academic work, but who are mentally retarded to the extent that their development is hindered in a regular classroom. These children need special educational facilities (Special Education Division, Oklahoma Department of Education, 1978, p. 41).

2. Trainable Mentally Handicapped (TMH)

> The trainable may be defined as a child whose mental development is so severely retarded that he is incapable of being educated in academic subject matter areas. He can be trained, however, in the areas of self-care, social skills and economic usefulness. With proper training many of these children can live in society with minimum supervision and engage in gainful employment under supervision in a sheltered environment (Special Education Division, Oklahoma Department of Education, 1978, p. 48).

Prevalence - The percent or proportion of a population that falls into a given category of exceptionality during a specific time period (Macmillan, 1977).

Provision of Services - For this study, provision of services refers to the five classifications used by the Oklahoma Department of Education.

1. Full service, IEP fulfilled
2. Underserved, on waiting list for existing program
3. Underserved, parental refusal

4. Underserved, no program available

5. Unserved (e.g., out of school)

Severity of Handicapped - For this study, severity of handicapped refers to two classifications. The Oklahoma Department of Education does not define them. To enhance clarity, definitions of these terms are provided:

1. Mild/moderate - Children served by the regular school with assignment for part of or all of the school day in a special class or resource room are classified as mildly to moderately handicapped.

2. Severe/profound - Children served through intensive and special class, special school, or institution are classified as severely to profoundly handicapped (Kelly, Bullock, & Dykes, 1974).

Specific Learning Disabilities - For this study the definition provided by the Oklahoma Department of Education will be used to refer to specific learning disabilities:

> Specific learning disability means a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, which may manifest itself in an imperfect ability to listen, think, speak, read, write, spell, or to do mathematical calculations. The term includes such conditions as perceptual handicaps, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia. The term does not include children who have learning problems which are primarily the result of visual, hearing, or motor handicaps, of mental retardation, of emotional disturbance, or of environmental, cultural, or economic disadvantage (Special Education Division, Oklahoma Department of Education, 1978, p. 78).

CHAPTER TWO

REVIEW OF THE LITERATURE

The purpose of this study is to describe variations in prevalence among three handicapping conditions as related to age, gender, and ethnicity. Since specific learning disabilities (SLD), mental retardation (MR), and emotional disturbance (ED) comprise the majority of children considered handicapped in Oklahoma (i.e., about 65 percent), they have been the focus of this study. In the past such potentially biasing factors as age, gender, and ethnicity have received little attention. However, such information could have implications for criteria and techniques used to identify these particular groups. In addition, such knowledge may suggest a need for further examination of variables that relate to prevalence.

One of the priorities of P. L. 94-142 is to assure that the severely handicapped are served appropriately. Therefore, prevalence reports will also be examined according to two levels of severity (i.e., mild/moderate and severe/profound) as well as the nature of educational services provided (e.g., served, underserved, and unserved).

The literature reviewed in this study focuses on the selected

demographic variables of age, gender, and ethnicity and their effect on the classification of the handicapping conditions of specific learning disabilities, mental retardation and emotional disturbance. In addition, the definition, prevalence, level of severity, and the nature of services provided for each handicap will be reviewed.

Within each of the three handicapping conditions, the definition of each handicap will be examined first to provide the reader with a conceptual framework. While these definitions may adequately describe the handicapping condition, they, of course, do not furnish the reader with specific criteria for identifying children as SLD, MR, and ED. Therefore, the criteria which was utilized at the time of this study (i.e., criteria from the Oklahoma Department of Education) will be reviewed in addition to current Federal criteria. This review of criteria should more accurately specify the population to be served in addition to providing a basis for prevalence estimates in Oklahoma.

The review of the prevalence of each handicapping condition is presented next. Traditionally, prevalence has been viewed as crucial because it specifies the number of children within each handicapping condition. In addition, prevalence has served as the basis for funding as well as administrative planning for the provision of services. For this study the selected demographic variables mentioned previously will be investigated as potentially biasing factors in prevalence reports.

The prevalence of these handicapping conditions usually varies according to age. There is, for example, evidence to indicate that the prevalence of ED peaks in children aged 9-14. Thus, age and its relationship to prevalence will be reviewed.

Since the overall population of males to females is generally considered approximately 1:1, one would expect the gender of students in classes for SLD, MR, and ED to be nearly equally proportioned. However, males comprise a substantial majority of SLD, MR, and ED students. This indicates that gender may have a biasing effect on classification of children as handicapped. Studies regarding male/female ratios will be reviewed to inform the reader of variations within each handicap.

The ethnicity of the students within each handicapping condition will be considered in the next category because there is evidence to indicate that ethnicity may be a factor in the classification of a child's handicap. For example, Franks (1971) found a substantial overrepresentation of whites in the SLD classes in Missouri.

However, it may not be possible to single out ethnicity as a single reason for classification within a specific handicapped population. It is extremely difficult if not impossible to separate, for instance, the effects of socio-economic status (SES) and ethnicity. For example, Grubard (1973) found that children from lower SES homes emit more aggressive, acting out behaviors than do children from middle and upper SES homes. Reeve and Kauffman (1978) suggest that these children (i.e., those who act out or emit aggressive type behaviors) are more likely to be labeled as emotionally disturbed. Snapper (1975) provided evidence that may have further complicated the issue, when he reported that approximately 40 percent of the minority children under 18 years of age were living in poverty level or low SES homes as compared to about 11 percent of the white children in this country. These studies offer some indication of the difficulty involved in separating

the effect of ethnicity from SES since a greater proportion of children from minorities come from lower SES homes than do children from middle and upper SES homes.

The educational classifications used in this study were mild/moderate and severe/profound. This review of severity should provide the reader with information regarding prevalence within these two levels of severity. In addition, problems that may be encountered regarding attempts at classification will be discussed.

The last category to be reviewed will be that of services provided. Since the passage of P. L. 94-142, it has become increasingly important to identify and to appropriately serve those children identified as handicapped. Section 121a.128(c) mandates that "... a practical method be developed and implemented to determine which children are currently receiving needed special education and related services and which children are not currently receiving need special education and related services ..." (p. 42482). The review of services will provide the reader with the number of persons identified as handicapped and the services provided them (e.g., served, underserved, and unserved).

Specific Learning Disabilities

Definition

During the late 1950's and early 1960's, professionals from various disciplines began to focus on a population of school children who were not achieving in school despite normal learning potential and adequate emotional stability (Tarver & Hallahan, 1976). While the interest in this population has continued to increase, a review of the

literature reveals numerous unsuccessful attempts at formulating a definition of learning disabilities that would have universal acceptance among professionals in the field. Perhaps the most widely accepted definition is the one the National Advisory Committee on Handicapped Children (NACHC) proposed in 1968:

> Children with special learning disabilities exhibit a disorder in one or more of the basic psychological processes involved in understanding or in using spoken or written languages. These may be manifested in disorders of listening, thinking, talking, reading, writing, spelling, or arithmetic. They include conditions which have been referred to as perceptual handicaps, brain injury, minimal brain dysfunction, dyslexia, developmental aphasia, etc. They do not include learning problems which are due primarily to visual, hearing or motor handicaps, to mental retardation, emotional disturbance, or to environmental disadvantage. (USOE, 1968, p. 34).

This definition is considered by many authorities as the one most commonly used (Gillespie, Miller, & Fielder, 1975; Hallahan & Kauffman, 1978; Hammill, 1976, 1978; Lilly, 1977; Myers & Hammill, 1976; Vaughan & Hodges, 1973). Vaughan and Hodges (1973) reported that the NACHC definition or a slight variation of it was being used by 49 states and the Association for Children with Learning Disabilities. Mercer, Forgnone, and Wolking (1976) found similar results when they surveyed state departments of education regarding the definitions they used for LD. Additionally, when P. L. 94-142 was passed, it contained a definition of LD which was essentially the same definition as the NACHC definition. Even though this definition is used most frequently Hammill (1978) suggested that almost all definitions to date are similar in their basic points. He continued by listing the following three salient points contained in definitions of LD.

1. The principle of disparity (i.e., a significant difference between the abilities in which a student achieves and those in which he or she does poorly).

2. Basic psychological disturbances (i.e., implied neurological damage).

3. An exclusion clause (e.g., the difficulty cannot be caused directly by such conditions as mental retardation, blindness, or deprivation).

The widespread use of this definition should not lead the reader to believe that it is without problems. Several authors have discussed inadequacies of this definition (Hammill, 1972, 1976, 1978; Johnson & Morasky, 1977; Myers & Hammill, 1976; Wallace & McLoughlin, 1975). Myers and Hammill (1976) direct attention to the following words and phrases within this definition that they consider redundant and/or ambiguous.

1. ".... in one or more of the basic psychological processes." There is at present no generally accepted definition of "psychological processes."

2. ".... involved in understanding or using spoken or written language." This phrase is redundant, because "understanding" and "using" spoken language are synonyms for "listening" and "talking". In addition, "understanding" and "using" written language are synonyms for "reading", "writing", and "spelling".

3. "They include conditions which have been referred to as perceptual handicaps, brain injury, minimal brain dysfunction, dyslexia, developmental aphasia, etc." Professionals in the field have been unable

to date to agree upon definitions for these terms. Their presence in this definition creates confusion that need not be there.

4. "They do not include learning problems which are due primarily to visual, hearing, or motor handicaps, to mental retardation, emotional disturbance or to environmental deprivation." The phrase erroneously assumes that experts can ascertain whether a learning problem is primary or secondary to a particular condition.

When these phrases are deleted from the definition, the following definition remains: "Children with learning disabilities exhibit problems in listening, thinking, reading, writing, spelling and/or arithmetic." Because of these and other problems numerous authors have called for a more operational definition of learning disabilities (Baren, Liebl, & Smith, 1978; Goodman & Mann, 1976; Hammill, 1972, 1976; Myers & Hammill, 1976; Ross, 1976; Wiederholt, 1974). As a possible result of these problems Congress requested the Commissioner of Education to establish rules and regulations which would provide specific procedures for evaluating children with specific learning disabilities. Federal rules and regulations for identifying children with specific learning disabilities were approved December 19, 1977 and became effective February 2, 1978.

These regulations state that a team may determine that a child has a specific learning disability if:

> (1) The child does not achieve commensurate with his or her age and ability levels in one or more of the areas listed in paragraph (a)(2) of this section, when provided with learning experiences appropriate for the child's age and ability levels; and
> (2) The team finds that a child has a severe discrepancy between achievement and intellectual ability in one or more of the following areas:

(i) Oral expression;
(ii) Listening comprehension;
(iii) Written expression;
(iv) Basic reading skill;
(v) Reading comprehension;
(vi) Mathematics calculation; or
(vii) Mathematics reasoning.
(b) The team may not identify a child as having a specific learning disability if the severe discrepancy between ability and achievement is primarily the result of:
(1) A visual, hearing, or motor handicap:
(2) Mental retardation;
(3) Emotional disturbance; or
(4) Environmental, cultural or economic disadvantage. (Federal Register, 250, 1977, p. 65083).

Two of the three points which Hammill (1978) refers to as common to all definitions of learning disability were incorporated in this operational definition (i.e., the principle of disparity and the exclusion clause).

Since the data collection for this study was completed before the federal regulations were published, this study was based on the criteria which Oklahoma was using in October, 1977. The following is a summary of Oklahoma's criteria at the time of this study:

A child shall be eligible for placement only when on the basis of individual evaluation by a qualified psychological examiner or a medical doctor, he meets the following criteria:

1. Normal or potentially normal intelligence (IQ 90 or above). In view of the current concept of the structure of the intellect, care should be exercised in testing so as to sample as many of the factors as possible. If a child cannot score in the normal range on any of the tests used, but the examiner feels the potential is present he may make a special recommendation stating his reasons for suggesting such placement. Final determination of eligibility of special cases shall be at the discretion of the representation of the State Board of Education.
2. There must be some evidence of specific learning disabilities whose etiology can be inferred from psychological or neurological tests; this evidence should be available to support the inference of the presence of some neurological dysfunction.
3. Children whose major problem is emotional in nature are not eligible for placement in a class for children with learning disabilities.... (Special Education Division, Oklahoma

Department of Education, 1976, p. 101).

Prevalence

A review of the literature reveals a wide range of prevalence estimates. For example, in one research study, Rubin and Barlow (1971) reported 41 percent of the kindergarten and first grade children in their study were classified as LD. Kass and Myklebust (1969) suggested that from 3 to 5 percent of the school population were learning disabled. Meier (1971) and the National Advisory Committee on Dyslexia and Related Reading Disorders (1969) estimated prevalence at 15 percent. More recently, the U. S. Office of Education of the Department of Health, Education, and Welfare (1975) estimated that 3 percent of the children from 0 to 19 years of age are learning disabled. Wallace and McLoughlin (1975) attributed the disparity of estimates regarding prevalence to: (a) the hetrogeneity of groups of children studied; (b) the variety of definitions used for SLD; and, (c) contestable criteria and techniques utilized to classify children as learning disabled.

Currently, there seems to be a trend to classify more children as learning disabled. In an article in which he discussed myths and realities in the field of learning disabilities, Cruickshank (1977) cited an elementary principal of an inner-city school who estimated 83% of the children in that school functioned as learning disabled. Coleman and Davis (1976), Cruickshank (1977), Hammill (1976), and Ringelheim (1978) reported that estimates of between 10 and 30 percent are common. However, when the federal rules and regulations were initially proposed they contained a temporary clause which limited the number of students that could be

funded as SLD at 2 percent which may indicate that the Federal government agrees with the 2 percent prevalence estimate. This clause was deleted from the regulations final form.

Age

In the early 1960's, educators, psychologists, and linguists began a consolidated effort to identify, diagnose, and remediate children with SLD. Professionals who were initially involved in this experiment in special education were primarily interested in children aged 6-12 (Mann, 1978; Meyen, 1978; and Miller, 1976). The majority of diagnostic and remedial techniques developed during this time were designed primarily for elementary aged children. However, these techniques have been and continue to be used with learning disabled adolescents (Grossman, 1978; Wiederholt, 1978).

As mentioned in previous sections, the field of learning disabilities has experienced tremendous growth since 1963. Be that as it may, the learning disabled adolescent was practically ignored until 1973 (Hammill, 1978). During that year, the Bureau of Education for the Handicapped (BEH) began to generate a considerable amount of new funds for programs which focused on the learning disordered adolescent. The SLD adolescent received more federal support with the passage of P. L. 94-142 in 1975. This law mandates provision of services for all school age students identified as SLD.

The SLD adolescent received more federal support with the passage of P. L. 94-142 in 1975. As a result, programs and services as well

as the number of adolescents considered LD have increased significantly in the last five years and the learning disabled adolescent has become a major concern of the field. Nonetheless, programs, services, fiscal expenditures, and children considered learning disabled at the elementary level continue to outnumber those at the secondary level.

Gender

The ratio of males to females in programs and classes for children with SLD has traditionally shown a male predominance. Critchley (1970) reviewed gender incidence ratios regarding what he terms developmental dyslexia as determined by 18 authors from 1927-1968. Dyslexia is used as a synonym of learning disabilities in P. L. 94-142. Consequently, it would seem that developmental dyslexia could be used synonomously with learning disabilities. Although some slight variance in these reported ratios exists, the general consensus was a ratio of approximately 4:1 in the direction of males. Bannatyne (1971) concurs with the 4:1 figure, but notes in his studies of more severe cases the ratio had reached 10:1. After a five year study of children with varied learning disabilities, Koppitz (1971) reported the proportion of males to females in her study to be 6:1. More recently, Meyen (1978) and Naiden (1976) cited wide acceptance of prevalance estimates approaching 4:1 in the direction of males.

Although the ratio of 4:1 may be generally accepted by professionals in the field, a current review of the literature reveals a lack of research based data regarding gender ratios. In addition,

learning disability specialists have been slow to investigate possible causes for the apparent disproportionate number of males.

Ethnicity

A review of current literature regarding the ethnic distribution of students in SLD programs discloses a lack of information and study. Of the few studies that have been conducted, the earlier ones indicated a predominance of white children in SLD classes. For example, Franks (1971) concluded that approximately 97 percent of the children in SLD classes in Missouri were white. Burke (1975) found similar results in a study limited to a suburb of a large northern city.

However, these conclusions may be limited in that the proportions of black and white children in the total school populations of these studies were not reported. It is possible, for example, that 95 percent of the children in Frank's study were white. If so, the 97 percent figure of white SLD children would not be surprising.

More recently, the Special Education Division of Florida (1978) investigated the ethnicity of their entire special education population, including students in SLD programs. This study did not indicate a significant predominance of any ethnic group in SLD programs. For example, white children comprise about 70 percent of the total school enrollment and approximately 66 percent of the SLD population. Concurrently, black children represent close to 23 percent of the population and about 28 percent of the SLD population. More research will be required regarding the ethnic distribution of SLD children before it can be ascertained if there is an overrepresentation of any ethnic group.

Severity

Numerous authorities have cited the broadening of the SLD concept as a major contributor to the increase in prevalence of learning disabled children (Hallahan & Kauffman, 1976; Hammill, 1978; Lilly, 1977). This increase in prevalence has occurred almost exclusively among those students considered mildly handicapped. However, it is possible that many of these students are not learning disabled (Hallahan & Kauffman, 1976; Hammill, 1978; Lilly, 1977).

Hammill (1978) lists four major categories of nonachieving students in schools: (a) the retarded; (b) the learning disabled; (c) the disturbed, and (d) a large mass of non-handicapped students who for a variety of reasons are not meeting the academic or behavior expectations of the school. This last contingent of the school population shares many of the behavioral manifestations of the SLD population (Coleman & Davis, 1976). In less severe or mild cases, it is difficult to separate children into one of the four classifications above. As a result of this, students with mild learning handicaps from all four categories have been placed into classes for SLD. This has resulted in a phenomenal increase in the number of children considered learning disabled (Hammill, 1978).

Services

The Bureau of Education for the Handicapped (BEH) receives annual reports from states on the number of students receiving special education and related services. For the 1977-1978 school year BEH reported that approximately 974,000 students ages 3-21 identified as SLD

received services. However, BEH does not currently compile information regarding the number of handicapped children who are identified but not provided services (Cordova, 1978).

Mental Retardation

Definition

Although there are currently many definitions of mental retardation, the American Association on Mental Deficiencies (AAMD) definition which was developed by Heber (1961) and revised by Grossman (1973) has gained widespread acceptance and use by professionals in the field (Cleland, 1978; Ingalls, 1978; MacMillan, 1977; Neisworth & Smith, 1978; Payne & Mercer, 1975; Robinson & Robinson, 1976). The AAMD definition is as follows:

> Mental retardation refers to significantly subaverage general intellectual functioning existing concurrently with deficits in adaptive behavior and manifested during the developmental period. (Grossman, 1973, p. 5)

The AAMD definition is insistent upon the determination of deficit in adaptive or social competence as requisite for diagnosis of mental retardation (Filler, Robinson, Smith, Vincent-Smith, Bricker, & Bricker. 1976). It also contains the traditional concern for subaverage intellectual functioning. In an effort to provide clarity each key term in the AAMD definition is defined as follows:

> Mental retardation...denotes a level of behavioral performance without reference to etiology. Thus, it does not distinguish between retardation associated with psychosocial or polygenic influences and retardation associated with biological deficit. Mental retardation is descriptive of current behavior and does not imply prognosis. Prognosis is related more to such factors as associated conditions, motivation, treatment and training opportunities than to mental retardation itself.

> Intellectual functioning may be assessed by one or more of the standardized tests developed for that purpose; significantly subaverage refers to performance which is two or more standard deviations from the mean or average of the tests. On the two most frequently used tests of intelligence, Stanford-Binet and Wechsler, this represents IQ's of 68 and 70, respectively. It is emphasized that despite current practice, a finding of low IQ is never by itself sufficient to make the diagnosis of mental retardation.
>
> The upper age limit of the developmental period is placed at 18 years and serves to distinguish mental retardation from other disorders of human behavior.
>
> Adaptive behavior is defined as the effectiveness or degree with which the individual meets the standards of personal independence and social responsibility expected of his age and cultural group. Since these expectations vary for different age groups, deficits in adaptive behavior will vary at different ages. (Grossman, 1973, p. 11)

Neisworth and Smith (1978) listed two reasons for this definition's broad acceptance in the field. First, it was formulated and is endorsed by the AAMD and the National Association for Retarded Citizens (NARC), the two major groups which speak on behalf of the retarded. Second, in a review of the leading textbooks on retardation, they concluded that the AAMD definition was given the most emphasis in more recent books.

Despite the field's general acceptance of the AAMD definition, there has been criticism. Numerous authors have discussed the unavailability of appropriate measures for determining deficits in adaptive behavior as well as the ambiguity of current definitions of adaptive behavior (Baumeister & Muma, 1975; Clausen, 1972; MacMillan, 1977, Mercer, 1973; Neisworth & Smith, 1978). However, even with current controversy, the AAMD definition is considered by many as the most practical definition to date for educators.

Recently, this definition was included in the regulations for P. L. 94-142 as the definition for MR. At the time of this study the

Oklahoma Department of Education provided the following definitions for two classifications of MR.

> 1. The educable mentally handicapped are children who can be taught some academic work, but who are mentally retarded to the extent that their development is hindered in a regular classroom. These children need special educational facilities.
> 2. The "trainable" may be defined as a child whose mental development is so severely retarded that he is incapable of being educated in a academic subject matter area. He can be trained however, in the areas of self-care, social skills and economic usefulness. With proper training many of these can live in society with minimum supervision and engage in gainful employment under supervision in a sheltered environment. (Special Education Division, Oklahoma Department of Education, 1976, pp. 55 & 66).

Currently, there is no federal criteria for placement of children into classes for the mentally retarded. However, at the time the data for this study were collected, the Oklahoma Department of Education utilized the following criteria for the educable mentally handicapped and the trainable mentally handicapped.

> ...A child who obtains an IQ score between 50 and 75 on an individually administered intelligence test or who is recommended for placement by a qualified psychological examiner is considered eligible for placement in a special class for educable mentally handicapped children. If a special recommendation is made, the examiner in his psychological summary must give the reasons for his recommendation. Special recommendation placement should not exceed 15% (percent).
> ...Children with IQ's ranging from approximately 50 to 60 may be placed in either a class for educable mentally handicapped or trainable mentally retarded upon a recommendation of the examining psychologist.
> They are children of legal school age, who are ambulatory and well enough to engage in class activities. They must be able to take care of their toilet needs, communicate want, and understand simple directions. In addition they must be able to adjust well enough socially so that they do not constitute a danger to themselves or others, and must be emotionally stable enough to engage in activities of the classroom. (Special Education Division, Oklahoma Department of Education, 1976, pp. 56 & 57)

Prevalence

"...the prevalence of 'mental retardation' depends upon one's definition of mental retardation and the way in which the definition is operationalized..." (Silverstein, p. 380). This quote by Silverstein may suggest to the reader that prevalence estimates for mental retardation are varied. This, in fact, is the case. For example, in a review of 60 studies conducted between 1895 and 1958, Wallan (1958) found estimates ranging from .05 percent to 13 percent. Heber (1970) investigated 28 prevalence surveys and reported estimates as low as .16 percent to as high as 23 percent of the general population.

In spite of this wide range of estimates, the most commonly accepted prevalence rate is 3 percent (Cleland, 1978; MacMillan, 1977; Neisworth & Smith, 1978; Payne, Polloway, Smith, & Payne, 1977; Robinson & Robinson, 1976). This 3 percent estimate is the result of several studies including the Group for the Advancement of Psychiatry (1959), the President's Panel on Mental Retardation (1962), the President's Committee on Mental Retardation (1967, 1969), and the President's Task Force on the Mentally Handicapped (1970).

There is evidence to support the notion that 3 percent of the newborns in this country will be diagnosed as mentally retarded at some time during their lives (Macmillan, 1977). Other authors, for example, Mercer (1973) as well as Tarjan, Wright, Eyman, and Keerman (1973), have provided statistical evidence to suggest that incidence (the number that are retarded at some time in life) and prevalence (the number of retarded at any given time) are equal only when the following assumptions are met:

1. The diagnosis is based completely on an IQ score of below 70.

2. Mental retardation is diagnosed in infancy.

3. The diagnosis remains intact or does not change.

4. The mortality rate of the mentally retarded is similar to that of the general population.

Tarjan et al. (1973) argue that currently these assumptions are incorrect. To illustrate their position they offer the following evidence regarding these four assumptions. First, the assumption that diagnosis is based on an IQ of less than 70 is inaccurate. The definition of mental retardation according to P. L. 94-142 is essentially the same as the AAMD definition which requires deficits in adaptive behavior as well as an IQ score of less than 70. The second assumption that mental retardation is diagnosed in infancy is a fallacy. According to Mercer, (1973) most diagnoses of mental retardation occur during the school years. The third premise (i.e., the diagnosis remains intact) is contrary to the AAMD definitions which clearly allows for alterations in status. In addition, persons considered as mildly retarded during their school years frequently cease to be classified as such when they leave school. Therefore, the status of those diagnosed as mentally retarded is not static. After retardates leave school, many of them are not considered retarded because they require no further special assistance from government agencies (Cleland, 1978; MacMillan, 1977; Robinson & Robinson, 1976). The last assumption (i.e., the mortality rate of the retarded is similar to the general population) is also invalid. Research has shown that the more severe the level of retardation, the shorter the life span (MacMillan, 1977).

In light of these arguments (Cleland, 1978; Ingalls, 1978; MacMillan, 1977; Neisworth, 1978), many authors suggest that prevalence estimates may be as low as 1 percent. Mercer's (1973) classic study of the prevalence of mental retardation in a community of 100,000 supports this figure.

Age

A review of the literature shows that the prevalence of mental retardation varies with age. Studies indicate most persons considered mentally retarded are ages 6-19 (Dingman, 1959; Lemkau & Impe, 1969; Mercer, 1973). After age 12, very few persons are diagnosed as mentally retarded. In addition, Tarjan et al. (1973) reported that approximately 69 percent of the MR population was in the age range of 6 to 19. At the same time, persons ages 20 to 24 represented only about 5 percent. Individuals from zero to four years comprised nearly 7 percent and close to 19 percent of the MR community was 25 and older. Mercer's (1973) figures generally concur with the Tarjan study.

Gender

There are greater numbers of males than females in practically every program serving children with learning problems (MacMillan, 1977; Mumpower, 1970). Programs for the mentally retarded are no exception.

In a review of prevalence studies from 1929-1958, Farber (1968) noted a male predominance of approximately 3:2. Kirk and Wiener (1959) reported similar proportions when they surveyed the MR population in Hawaii. More recent investigations place the ratio of males to females at about 3:1 (Mumpower, 1970; Singer, Westphal, & Niswander, 1968).

Mercer (1973), in her classic study of Riverside, California, found no difference in male-female proportions when she surveyed private organizations for the MR, private welfare, and religious organizations that serve the mentally retarded. However, when she investigated male-female prevalence among public agencies (e.g., schools and public institutions) she noted a ratio of males to females at approximately 3:1. Numerous experts agree with this 3:1 ratio in the direction of males (MacMillan, 1977; Neisworth & Smith, 1978; Robinson & Robinson, 1976).

Ethnicity

When considering the ethnic distribution of mentally retarded persons, one must address a complex, confusing, sometimes emotional, issue that the field has as yet been unable to resolve. Frequency studies consistently show a higher prevalence of mentally retarded among ethnic minorities. For instance, Mercer (1973) discovered that even though 10 percent of the population in her study were Mexican-American and 7 percent were black, they represented 32 percent and 12 percent of the MR population respectively. The Special Education Division of Florida's Department of Education (1978) found that blacks occupied 66 percent of their MR population while they comprised only 23 percent of the school population. Blacks exceeded whites in some districts, excluding those where blacks were the majority, by a ratio of over 4:1.

Results such as these are common, but researchers have difficulty interpreting them. Variables which were suspected of affecting the ethnic distribution of mental retardation are difficult, if not impossible,

to isolate for investigation. At present, researchers can only speculate as to why this phenomenon occurs.

Severity

Because the mentally retarded are a heterogeneous group, professionals have attempted to classify them into sub-groups so that persons with common characteristics might benefit from similar kinds of services (Neisworth & Smith, 1978). Currently, the most widely acknowledged classification system is provided by the AAMD (1973). It is as follows:

Levels	IQ
Mild	69-55
Moderate	54-40
Severe	39-25
Profound	24-below

The severe and profound categories are frequently grouped into the Profoundly Mentally Retarded (PMR) classification because they comprise such a slight percentage of the MR population (Robinson & Robinson, 1976). Even though this system is adhered to by practioners and professionals alike, numerous school districts utilize the additional categorizations below:

Level	IQ
EMR	70-55
TMR	54-25
PMR	25 and below

The EMR or mildly handicapped population constitutes about 77 percent of the MR population. The TMR represents about 20 percent and the PMR represents approximately 3 percent (Robinson & Robinson, 1976).

Services

BEH receives annual reports from states on the number of students receiving special education and related services. For the 1977-1978 school year,BEH reported that approximately 822,000 students ages 3-21 identified as MR received services. However, BEH does not currently compile information regarding the number of handicapped children who are identified but not provided services (Cordova, 1978).

Emotionally Disturbed

Definition

The term "emotionally disturbed" first appeared in the literature about 45 years ago, and even though it has recently been widely used to describe a specific handicapping condition, professionals in the field have to date been unable to formulate a definition that would have universal acceptance (Reeve & Kauffman, 1978; Kauffman, 1977; Paul & Rhodes, 1978). For example, when Epstein, Cullinan, and Sabatino (1977) surveyed all of the State Departments of Education in the nation, they discovered a wide variation of definitions in addition to ambiguous, inconsistent, and contradictory phrasing. A study by Schultz, Hirshoren, Manton, and Henderson (1971) revealed similar results.

Several authors have speculated as to the difficulty of formulating a concise, commonly accepted definition of emotional disturbance. Kauffman (1977) and Reeve and Kauffman (1978) listed the following: (a) difficulties in precise measurement of psychological constructs (e.g., personality adjustment, anxiety); (b) differing conceptual models (e.g., psycho-dynamic, behavior modification); (c) variability of normal

behavior (e.g., a wide range of behaviors is considered normal); (d) transience of behavior problems (i.e., young children's behavior problems are frequently temporary).

Even though there is little consensus in the field regarding a definition for emotional disturbance, one has been included in Section 121a.5 (8) of the regulations of P. L. 94-142. It is as follows:

> "Seriously emotionally disturbed" is defined as follows:
> (i) The term means a condition exhibiting one or more of the following characteristics over a long period of time and to a marked degree, which adversely affects educational performance;
> (A) An inability to learn which cannot be explained by intellectual, sensory, or health factors;
> (B) An inability to build or maintain satisfactory interpersonal relationships with peers and teachers;
> (C) Inappropriate types of behavior or feelings under normal circumstances;
> (D) A general pervasive mood of unhappiness or depression; or
> (E) A tendency to develop physical symptoms or fears associated with personal or school problems.
> (ii) The term includes children who are schizophrenic or autistic. The term does not include children who are socially maladjusted, unless it is determined that they are seriously emotionally disturbed (p. 42478).

The Special Education Division of the State department of Education has formulated a definition of emotional disturbance. It is included in the definition section of Chapter One.

While there were currently no federal criteria for identifying emotionally disturbed children, at the time the data for this study were completed, Oklahoma utilized the following criteria regarding emotional disturbance:

> Such symptoms as excessive aggressiveness, hostility, negativism, bullying and lack of conformity are usual signs. While not all children manifesting these symptoms would be eligible for a special program, all such children may be considered candidates for placement and referral is left to the discretion of the classroom teacher or other appropriate individuals...

> ...These are children who manifest behavioral symptoms or excessive shyness, withdrawal, inability to relate to others, nail biting, thumb sucking, etc. Any child who engages in this type behavior excessively should also be considered as a possible candidate for a special program...(Special Education Division, Oklahoma Department of Education, 1978, p. 49)

In addition, the Special Education Division of the State Department of Education (1976) provided the following criteria for eligibility of placement:

1. The student must be of legal school age.

2. The student must be of average intelligence or above as determined by a qualified psychological examiner.

3. The child may be placed only by the local school superintendent or his designated representative.

4. The parents of the student being placed must be available to work with the teacher, school administration psychologist, psychiatrist and any resource person designated by the local school authority.

Prevalence

The prevalence of emotional disturbance varies from study to study. For example, in possibly the most comprehensive examination of prevalence studies to date, Glidewell and Swallow (1968) found estimates ranging from 2 to 69 percent of the populations under consideration. Schultz et al. also found a wide range of results (i.e., .05 to 15 percent) when they surveyed state special education departments across the nation. In addition, Morse (1975) discovered varying rates of incidence of between .1 to 30 percent in the various studies he examined. Recently, Kelly, Bullock and Dykes (1977) found that teachers in Florida perceived almost 20 percent of the students in their sample, grades K-12,

as emotionally disturbed. The U.S. Office of Education (1975) suggested approximately 2 percent of the nation's school children could benefit from classes and programs.

Wood and Zabel (1978), among other authors, have termed this estimate as traditional yet conservative. In addition, Wood and Zabel stated that "this estimate does not involve measurement in the conventional sense, but reflects expert opinion or consensus of experts" (p. 47). About half the states surveyed by Schultz et al. (1971) reported that they used the United States Office of Education as the source of their incidence estimate.

Numerous authors attribute these variations to two factors: (a) lack of a universally accepted definition of emotional disturbance and (b) the absence of a standard instrument or instruments to identify emotionally disturbed children (Kauffman, 1977; Long, Morse, & Newman, 1975; Morse, 1975; Reeve & Kauffman, 1978; Rhodes & Paul, 1978). Prevalence reports will probably continue to vary until these two issues are resolved.

Age

A review of the literature indicates that the prevalence of emotional disturbance varies according to age. For example, Bower (1960) reported the highest incidence among school children during the upper elementary and junior high grades. Similarly, in an investigation of ED programs across the nation, Morse, Cutler, and Fink (1964) found that 75 percent of the children in these programs were in grades four through nine. Clarizio and McCoy (1976) reported referral rates for clinics

highest during preadolescent and adolescent years. Recently, Kelly et al. (1977) sampled an extensive number of regular classroom teachers in Florida in order to determine their perceptions of students' behavior status. These results indicate that teachers perceive the highest proportion of disorders in grades five through nine.

Thus, upper elementary and junior high age children appear to comprise a substantial percentage of the ED population. However, this subject may warrant further study due to the age of these reports (e.g., Bower, 1960; Morse et al., 1964) and the limited populations surveyed (e.g., a sample of teachers' perceptions in only one state).

Gender

An investigation of the literature regarding the gender of ED students reveals, as it did in the study of SLD and MR students, that there is a male predominance. Reports vary from 9 or 10 males for every female (Reinert, 1976) to a ratio of 2 to 1 (Morse, et al., 1964). Numerous authors report the male/female proportion to be approximately 3:1 (Bullock & Brown, 1972; Clarizio & McCoy, 1976; Morse, 1975; Mumpower, 1970).

Ethnicity

The study of the ethnicity of emotionally disturbed school children has been, at best, limited. The few investigations that have been completed reveal a variety of estimates. For example, Rosen, Bahn, and Kramer (1964) reported a higher incidence of whites with mental health problems than non-whites age 3-11. However, the reverse was true for ages 12-19. Miller, Hampe, Barrett, and Noble (1971) found no

significant differences regarding ethnicity among the children in their survey. Kelly, et al. (1977) investigated the prevalence of emotional disturbance in Florida by asking teachers who they perceived as ED. In that study, black elementary students outnumbered whites approximately 2:1; however, differences for grades 8 through 12 were minimal. The Special Education Division (1978) of Flordia's Department of Education found that while whites made up about 70 percent of the school population, they accounted for about 63 percent of the ED population. Black students comprised almost 22 percent of the student population and nearly 33 percent of the students in classes for the ED.

These studies cannot be viewed as conclusive in view of the few studies that have been reported. In addition, until definition and criteria for emotional disturbance are formulated which have universal acceptance, it will be difficult to determine who is emotionally disturbed.

Severity

Although there is currently no standard procedure for determining the severity of an emotional handicap, numerous authors agree that the vast majority of emotionally disturbed students could be considered mild to moderately handicapped (Hallahan & Kauffman, 1978; Kauffman, 1977; Reeve & Kauffman, 1978; Reinert, 1976; Shea, 1978). For example, in one of the earliest studies of ED prevalence, Wickman (1928) found 42 percent of the children in his study exhibited mild adjustment problems and about 7 percent were seriously disturbed. Rogers (1942a, 1942b) determined that nearly 33 percent of the 1500 school children he surveyed

were experiencing mild behavior disorders while 12 percent were severely emotionally handicapped. Glidewell and Swallow (1968) examined ED prevalence studies completed between 1925 and 1967. From their investigation, they estimated that approximately 30 percent of the students in these studies experienced some type of adjustment problems and nearly 10 percent could benefit from intensive professional assistance. More recently, Kelly et al. (1977) asked teachers in Florida's public schools to categorize their students in terms of no behavior disorders, mild, moderate, and severe behavior disorders. The teachers were provided the following definitions for each category:

> ...Mild behavior disorder - Children or youths with behavior disorders who you believe can be helped adequately by their regular class teacher and/or other school resource personnel through periodic counseling and/or short term individual attention and instruction...
> ...Moderate behavior disorder - Children or youths with behavior disorders who you believe can remain at their assigned school but require rather intensive help from one or more specialists (i.e., counselors, special educators, etc.) and/or specialists from community agencies (mental health clinics, diagnostic centers, etc)...
> ...Severe behavior disorder - Children or youths who you believe have a behavior disorder requiring assignment to a special class or special school... (pp. 45, 46, 47).

The categories of moderate and severe were combined by the authors when they reported their results. About 12 percent of the children in this study were perceived by their teachers as exhibiting moderate to severe behavior problems while approximately 8 percent were perceived as mildly behavior disordered.

Services

BEH receives annual reports from states on the number of students receiving special education and related services. For the 1977-1978

school year, BEH reported that approximately 254,000 students ages 3-21 identified as ED received services. However, BEH does not currently compile information regarding the number of handicapped children who are identified but not provided services (Cordova, 1978).

Summary

Three handicapping conditions (i.e., specific learning disabilities, mental retardation, and emotional disturbance) were reviewed in this chapter according to the following categories:

1. Definition - State and federal definitions (i.e., those provided by the Oklahoma Department of Education and those included within the regulations of P. L. 94-142 respectively) were examined in this section. Even though federal definitions of SLD and MR have gained widespread acceptance by professionals in each field, they are frequently criticized as containing ambiguous phrasing. In addition, authorities in the ED field have to date been unable to formulate a definition that has universal acceptance. Therefore, to provide a more specific description of these particular populations the criteria utilized by the Oklahoma Department of Education for identifying students as handicapped were reviewed.

2. Prevalence - Estimates of prevalence vary for all three handicapping conditions. For example, the U.S. Office of Education of the Department of Health, Education and Welfare (1975) estimated that about 3 percent of the children age 0-19 years of age were SLD. However, estimates of between 10 and 30 percent are common (Hammill, 1976; Ringleheim, 1978).

The prevalence of MR is commonly accepted at approximately 3 percent of the total population. However, estimates of 1 percent have been proposed by various authors (e.g., Mercer, 1973).

Estimates of ED prevalence have ranged in the past from 2 to 68 percent of the populations studied. Recently, the U.S. Office of Education suggested that about 2 percent of the nation's school children could benefit from classes and programs for the emotionally disturbed.

With the enactment of P. L. 94-142, all children identified as handicapped must be served and federal funds for the handicapped will be appropriated for 12 percent of the population. This limitation of funds may restrict the number of children identified as handicapped, thus establishing the prevalence of these handicapping conditions.

3. Age - The prevalence of SLD, MR, and ED tends to vary according to age. The literature reported has indicated that the majority of SLD children are age 6-12. Very few children before age five and after age 12 are identified as MR, while upper elementary and junior-high age children appear to comprise a substantial percentage of the ED population.

4. Gender - Males have traditionally dominated prevalence reports for SLD, MR, and ED. Ratio statistics vary for SLD; however, the general consensus is reported to be about three males for every female. Gender ratios for the MR population are about 2:1 in the direction of males. Even though gender ratios for ED children differ, a ratio of 3:1 is frequently reported.

5. Ethnicity - Early studies regarding the ethnicity of SLD and MR students (e.g., Franks, 1971) indicated that there may be an overrepresentation of whites in SLD classes while blacks tended to be over

represented in MR classes. Recent studies (e.g., Special Education Division of Florida, 1978) continue to show a higher prevalence of MR among minorities. However, current investigations regarding the ethnicity of SLD students have not revealed similar results. Reports of the ethnic composition of students identified as ED do not indicate a clear predominance of any ethnic group. In view of these recent studies, more investigation regarding the ethnic makeup of these handicapping conditions will be necessary before it is clear whether or not any one ethnic group is over-represented.

6. Severity - Levels of severity for SLD, MR, and ED are frequently divided into four categories (i.e., mild, moderate, severe, and profound). However, there is currently no standard procedure for determining degree of severity for SLD, MR, and ED. Nonetheless, the majority of SLD and ED students are generally assumed to be experiencing mild learning and/or mild behavior problems.

7. Services - The Bureau of Education for the Handicapped reported that during the 1977-1978 school year approximately 974,000 SLD students, 822,000 MR students, and 254,000 ED students ages 3-21 received services. BEH does not currently compile information on the number of handicapped children who are identified but not provided services (Cordova, 1978).

CHAPTER THREE

RESEARCH DESIGN

The research design for this study is presented in this chapter. The sections included in this chapter are: (a) the statement of the problem, (b) the hypotheses and research questions, (c) a description of the sample, (d) a description of the instrument, (e) the data collection procedures, (f) the statistical analyses, and (g) the limitations of the study.

Statement of the Problem

The problem is this: to describe variations in prevalence among three handicapping conditions as related to age, gender, ethnicity, level of severity, and provision of services.

Since specific learning disabilities (SLD), mental retardation (MR), and emotional disturbance (ED) comprise the majority of handicapping conditions, they were the focus of the study. Prevalence estimates were examined according to (a) age, (b) gender, (c) ethnicity, (e) two levels of severity, (i.e., mild/moderate and severe/profound) and (b) the nature of educational services provided (e.g., unserved, underserved, full service). Three hypotheses were advanced in addition to four

research questions.

Hypotheses

Hypothesis 1: For each handicapping condition, there will be substantially more (i.e., 75 percent) students in the category of mild/moderate than the severe/profound category.

Hypothesis 2: For each handicapping condition, the percentage of identified students according to age can be rank ordered from most to least as follows: For SLD ages 10-14, 5-9, and 15-19; for MR and ED ages 10-14, 5-9, and 15-19.

Hypothesis 3: For each handicapping condition, males will significantly outnumber females as follows: for SLD, males will outnumber females approximately three to one; for MR, males will outnumber females approximately two to one; for ED, males will outnumber females approximately three to one.

Research Questions

1. What percent of Oklahoma's total school population (603,378) was identified as SLD, MR, and ED.

2. For each handicapping condition, what percent of the students identified as handicapped: (a) receive full service, IEP fulfilled; (b) are underserved, on a waiting list for existing programs; (c) are underserved, parental refusal; (d) are underserved, no program available; or (e) are unserved (e.g., out of school)?

3. For each handicapping condition, what percent of the students identified as mild/moderate receive full service and what percent of

the students identified as severe/profound receive full service?

4. For each handicapping condition, what percent of the students are classified as belonging to the following ethnic groups: Black, Caucasian, Indian, Oriental, and Spanish American?

5. For each handicapping condition, what percent of the students identified as mild/moderate are: (a) Black, (b) Caucasian, (c) Indian, (d) Oriental, and (e) Spanish American; and what percent of the students identified as severe/profound are: (a) Black, (b) Caucasian, (c) Indian, (d) Oriental and, (e) Spanish American?

6. For each ethnic group, what percent of the students were classified as SLD, MR, and ED?

Description of the Population

From the population of identified handicapped students in Oklahoma (45,420), the sub-population of SLD, MR, and ED students (29,212) was drawn. These students represent approximately 4.8 percent of the 603,378 students grades kindergarten through the twelfth grade in Oklahoma during the 1977-1978 school year. Students were identified as eligible for special education services through a survey conducted by Oklahoma's twenty Regional Education Service Centers (RESCs). (Further explanation of this survey is presented below in the description of the instrument.)

Description of the Instrument

The instrument used in this study, the Handicapped Children Register (HCR), was designed by Oklahoma's State Department of Special Education in order to determine the total number of children identified

as handicapped in the State of Oklahoma (see Appendix A for HCR). The information in this study is based on the results of these questionnaires completed by professional public school representatives in school districts across the State of Oklahoma. Items from the HCR selected for use in this study included: student's age, gender, ethnicity, severity of handicap, and the status of services provided. There was no information provided regarding the accuracy with which the instrument was completed.

Data Collection

On September 12, 1977, the Oklahoma State Department of Special Education requested that Oklahoma's twenty RESCs conduct training sessions for designated representatives in each school district. The designated representatives were responsible for collecting and submitting data from the HCRs to the State Department of Special Education by October 1, 1977. The State Department of Special Education then placed the data in their computerized retrieval system. Dr. Merlin Taylor of the State Department of Special Education assisted in retrieving data critical to this study from the Data Systems Department of the Oklahoma State Department of Education.

Statistical Analysis

Frequency data for hypotheses one and two was reported as well as specific categorization of frequency data as dictated by each hypothesis and question. Frequency data in the form of percentages was reported for research questions one through four. In addition, chi square analysis was utilized to determine if a discrepancy existed between

expected frequencies and frequencies obtained as related to hypothesis three. The statistical analyses were performed with the aid of a hand calculator.

CHAPTER FOUR

RESULTS

Background of the Problem

In this chapter, the data were organized to test the three hypotheses and examine the six research questions presented in Chapter Three. For each of the hypotheses and research questions, descriptive data were analyzed and summarized in separate tables. Generally, the purpose of using descriptive statistics was to compare characteristics of Oklahoma's handicapped school-age population to published national information and figures presented in Chapter Two.

For all of the following tables, the total population is 29,212 handicapped students, with 16,818 classified as being specific learning disabled (SLD), 11,972 as mentally retarded (MR), and 422 as emotionally disturbed (ED). Actual numbers are presented, but the percentages are rounded to one decimal place for the convenience of the reader. Therefore, in a few instances, percentage figures may not combine to equal 100 percent.

Evaluation of the Hypotheses

Hypothesis 1: For each handicapping condition, there will be substantially more (i.e., 75 percent) students in the category of

mild/moderate than the severe/profound category.

The numbers and percentages of handicapped in the category of mild/moderate and severe/profound are presented in Table 1 (p.47). For each handicapping condition, the percentage of mild/moderate exceeded 85 percent of the total students in that particular category. Whereas, the percentage of mild/moderate students in the MR and ED categories was in excess of 88 percent, the SLD category was comprised of almost 99 percent mild/moderate. Hypothesis One was, therefore, confirmed.

> Hypothesis 2: For each handicapping condition, the percentage of identified students according to age can be rank ordered from most to least as follows: for SLD ages 10-14, 5-9, and 15-19; for MR and ED ages 10-14, 5-9, and 15-19.

The numbers and percentages of handicapped students in three age groupings (5-9, 10-14, 15-19) are presented in Table 2 (p.47). The rank order of the age groups for SLD and ED respectively appeared as follows: 10-14, 5-9, 15-19. Thus, findings for the SLD and ED categories clearly support Hypothesis Two. Similar to the SLD and ED categories, the MR group had its largest proportion (46 percent) in the 10-14 age range, as expected. However, the percentage of 15-19 year olds (28 percent) slightly exceeded that of 5-9 year olds (26 percent) which is inconsistent with the hypothesized age rankings.

> Hypothesis 3: For each handicapping condition, males will significantly outnumber females as follows: for SLD, males will outnumber females approximately three to one; for MR, males will outnumber females approximately two to one; for ED, males will outnumber females approximately three to one.

The numbers and percentages of male/female handicapped students are presented in Table 3 (p.48). For both the SLD and ED groups, the number of males exceeded females by approximately 3:1 (i.e., 71.4 percent

Table 1

Percentage of Children in Each Handicapping Condition According to Severity of Handicap

CONDITION	LEVEL OF SEVERITY		
	N	Mild/Moderate	Severe/Profound
SLD	16,818	98.9 (16,630)	1.1 (188)
MR	11,972	88.9 (10,644)	11.1 (1,328)
ED	422	88.4 (372)	11.6 (50)

Note. Actual figures are given in parentheses.

Table 2

Percentage of Children in Each Handicapping Condition According to Age in Years

CONDITION	AGE GROUP		
	5-9	10-14	15-19
SLD	37 (6,234)	51 (8,526)	12 (2,058)
MR	26 (3,128)	46 (5,523)	28 (3,321)
ED	32 (134)	44 (186)	24 (102)

Note. Actual figures are given in parentheses.

Table 3

Percentage of Children in Each Handicapping Condition According to Gender

CONDITION	GENDER	
	Male	Female
SLD	71.4 (12,013)	28.6 (4,805
MR	59.3 (7,079)	40.7 (4,675)
ED	73.0 (308)	27.0 (114)

Note. Actual figures are given in parentheses.

versus 28.6 percent and 73.0 percent versus 27.0 percent, respectively). For the MR population, males exceeded females by approximately 3:2 (i.e., 59 percent versus 41 percent). A chi square analysis was conducted on the associated frequencies to determine if the results of this support the hypothesis for each (i.e., χ^2 = 114.5 for SLD, and χ^2 = 243.3 for MR, df = 1, $p < .05$). The results of these analyses were significant for the SLD and MR populations, which indicate that for these two populations the hypothesis should be rejected. Results of the analysis of the ED population (i.e., χ^2 = 0.91), however, showed no significance. Therefore, giving partial support to the hypothesis. The results of these analyses are discussed in Chapter Five.

Results of Research Questions

Research Question 1: What percent of Oklahoma's total school population (603,378) was identified as SLD, MR, and ED?

The percentages and numbers of those handicapped students within Oklahoma's total school population are reported in Table 4 (p.51). Of the three handicapping conditions, more students are reported as SLD (i.e., 2.8 percent) than the other two groups. The MR group was second with 2.0 percent of the population being identified as such. The ED group contained the smallest percentage of students from the total public school population with only 0.1 percent being reported in this category.

Research Question 2: For each handicapping condition, what percent of the students identified as handicapped: (a) receive full service, IEP fulfilled; (b) are underserved, on a waiting list for existing programs (c) are underserved, parental refusal; (d) are underserved, no program available; or (e) are unserved (e.g., out of school)?

The numbers and percentages of extent of services (five types defined in research question two) are presented in Table 5 (p. 51). In all three categories, at least three-fourths of the handicapped students are reported as receiving full service with the IEP fulfilled (i.e., SLD 86.5 percent, MR 93.0 percent, ED 74.4). The largest classification of underserved children involved those who were placed on a waiting list. For SLD, MR, and ED categories these figures were approximately 7 percent, 3 percent, and 17 percent respectively. The group of children reported as underserved due to parental refusal was less than 2 percent for each handicapping condition. There was no program available for approximately 5 percent of both the identified SLD and ED students and for about 2 percent of the identified MR students. Thus, the total percent of children reported as being underserved (i.e., waiting list, parental refusal, no program) was approximately 13 percent for SLD, 6 percent for MR, and 23 percent for ED. Finally, less than one-half of 1 percent of the SLD and MR populations were reported as unserved, whereas more than 2 percent of the ED group were listed in the unserved category. If argued that underserved can be equated with unserved then from approximately 5 to 25 percent of the students in any given category may be considered as receiving insufficient if not complete lack of services.

> Research Question 3: For each handicapping condition, what percent of the students identified as mild-moderate receive full service and what percent of the students identified as severe/profound receive full service?

The numbers and percentages of those mild/moderate as compared to severe/profound handicapped students receiving full service are presented in Table 6 (p. 52). Of the three handicapping conditions, propor-

Table 4

Percentage of Children in Each Handicapping Condition

CONDITION	HANDICAPPED CHILDREN
SLD	2.8 (16,818)
MR	2.0 (11, 972)
ED	0.1 (422)

Note. Actual figures given in parentheses. Percentages based on total school-age population of 603,378 students.

Table 5

Percentage of Children in Each Handicapping Condition According to Extent of Services

CONDITION	Full Service	Underserved Waiting List	Underserved Parental Refusal	Underserved No Program	Unserved
SLD	86.5 (14541)	6.9 (1,160)	1.7 (288)	4.5 (753)	.5 (76)
MR	93.0 (11,137)	3.2 (379)	1.7 (198)	1.7 (198)	.5 (60)
ED	74.4 (314)	17.1 (72)	1.2 (5)	5.2 (22)	2.1 (9)

Note. Actual figures are given in parentheses.

Table 6

Percentage of Children Receiving Full Services According to Severity of Handicap

CONDITION	LEVEL OF SEVERITY	
	Mild/Moderate	Severe/Profound
SLD	86.5 (14,377)	87.2 (164)
MR	92.8 (9,875)	95.0 (1,262)
ED	75.1 (280)	69.4 (34)

Note. Actual figures are given in parentheses.

tionally more MR students are reported as receiving full service than are the other two groups (mild/moderate 92.8 percent and severe/profound 95.0 percent). The SLD group ranked second with 86.5 percent of the mild/moderate population and 87.2 percent of the severe/profound population receiving full services. The proportion of ED students receiving full services was lowest with 75.1 percent of the mild/moderate group and 69.4 percent of the severe/profound group being served. It should be noted that the severe/profound category is substantially smaller than the mild/moderate category for each handicapping condition. Of the total SLD population, only about 1 percent has been identified as severe/profound. For both the MR and ED groups, the percentage of severe/profound is approximately 11 percent.

> Research Question 4: For each handicapping condition, what percent of the students are classified as belonging to the following ethnic groups: Black, Caucasian, Indian, Oriental and Spanish?

The numbers and percentages of handicapped students within five ethnic categories are presented in Table 7 (p. 54). For example, most children (i.e., 78.4 percent) in Oklahoma's public schools are Caucasians and the majority of children in each of the three handicapping conditions were of Caucasian ethnicity (i.e., SLD, 79.3 percent; MR, 65.3 percent; and ED, 87.7 percent). Spanish children are equally represented across handicapping conditions comprising only a small (i.e., about 1 percent) proportion of each. These figures did not appear to differ markedly from the 1.4 percent of Spanish students found in Oklahoma's public schools. An even smaller percentage of handicapped children are Oriental. For these students, there was a larger proportion of ED (i.e., .7 percent) and a smaller proportion of SLD (i.e., .2 percent) and MR (i.e., .1 percent)

Table 7

Percentage of Children in Each Handicapping Condition According to Ethnicity

CONDITION	ETHNICITY				
	Black (8.8)[a]	Caucasian (78.4)[a]	Indian (10.7)[a]	Oriental (0.5)[a]	Spanish (1.4)[a]
SLD	10.1 (1,697)	79.3 (13,337)	9.4 (1,581)	.17 (28)	1.1 (175)
MR	23.9 (2,863)	65.3 (7,821)	9.4 (1,124)	.13 (15)	1.2 (149)
ED	7.8 (33)	87.7 (370)	2.8 (12)	.71 (3)	.95 (4)

Note. Actual figures are given in parentheses.

a Value in parentheses refers to percent of total population by ethnicity.

than would be expected since Oriental children comprise .5 percent of the overall school population. Although 3 percent of the ED population was Indian, 9 percent of both the SLD and MR categories contained Indian students. The 3 percent ED figure is substantially different from the total percent (10.7) of Indians in this state's public schools. The percentage of Black students varied greatly from category to category. While only 7.8 percent of the ED students were Black, 10 percent of the SLD group and 24 percent of the MR group were listed in the Black category. This later figure exceeds the 8.8 percent figure given for the number of Blacks in the total school population.

> Research Question 5: For each handicapping condition, what percent of the students identified as mild/moderate are: (a) Black, (b) Caucasian, (c) Indian, (d) Oriental, and (e) Spanish American; and what percent of the students identified as severe/profound are: (a) Black, (b) Caucasian, (c) Indian, (d) Oriental and, (e) Spanish American?

The numbers and percentages of those mild/moderate and severe/profound handicapped students within five ethnic categories are reported in Table 8 (p. 56). For the SLD group, 1.2 percent or less of the total population may be found in the severe/profound category, regardless of ethnicity. For MR students, 7 percent of the Blacks; 9 percent of both the Indian and Spanish groups; 13 percent of the Caucasian; and 20 percent of the Oriental group were severe/profound. Results for the ED population were extremely varied with the percentage of severe/profound ranging from 3 to 50 percent of each ethnic group as follows: Blacks, 3 percent; Indian, 8 percent; Caucasian, 12 percent; Oriental, 33 percent; and Spanish, 50 percent. When noting these figures, the reader is cautioned to take into account the size of each ethnic group to avoid being misled by the percentages presented.

Table 8

Percentage of Children in Each Handicapping Condition According to Ethnicity and Severity of Handicap

CONDITION	Black		Caucasian		Indian		Oriental		Spanish	
	Mild/ Moderate	Severe/ Profound	Mild/ Moderate	Severe/ Profound	Mild/ Moderate	Severe/ Profound	Mild/ Moderate	Severe/ Profound	Mild/ Moderate	Severe/ Profound
SLD	99.0(1,680)	1.0(17)	98.8(13,180	1.2(157)	99.2(.569)	0.8(12)	100(28)	0.0(0)	98.9(173)	1.1(2)
MR	92.9(2,660)	7.1(203)	87.2(6,819)	12.8(1,002)	90.5(1,017)	9.5(107)	80(12)	20(3)	91.3(136)	8.7(13)
ED	97.0(32)	3(1)	88.1(326)	11.9(44)	91.7(11)	8.3(1)	67.0(2)	33.0(1)	50.0(2)	50.0(2)

Note. Actual figures are given in parentheses.

Research Question 6: For each ethnic group, what percent of the students were classified as SLD, MR, and ED?

On the basis of ethnicity, the numbers and percentages in each handicapping condition (i.e., SLD, MR, and ED) are presented in Table 9 (p. 58). For example, the total public school Indian population for Oklahoma was 64,811. Of that population, approximately 2.4 percent were reported as SLD; 1.7 percent as MR; and 0.2 percent as ED. In all cases, the ED category accounted for the smallest percentage of handicaps regardless of ethnicity. With the exception of the Black population, the percentage of SLD students exceeded that of MR students. For Blacks, the percentage of SLD students was 3.2 percent as contrasted with 5.4 MR students. For all other ethnic groups, the percentage of SLD students ranged from approximately 1 to 3 percent compared to a range of .5 to 1.7 percent for MR students.

Table 9

Percentage of Children in Each Ethnic Group According to Handicapping Condition

ETHNICITY	CONDITION			
	N	SLD	MR	ED
Black	53,284	3.2 (1,697)	5.4 (2,863)	0.1 (33)
Caucasian	473,419	2.8 (13,337)	1.7 (7,821)	0.1 (370)
Indian	64,811	2.4 (1,581)	1.7 (1,124)	0.2 (12)
Oriental	3,232	0.9 (28)	0.5 (15)	0.1 (3)
Spanish	8,632	2.0 (175)	1.7 (149)	0.5 (4)

Note. Actual figures are given in parentheses.

CHAPTER V

INTERPRETATIONS OF FINDINGS, RECOMMENDATIONS, IMPLICATIONS

A discussion of selected demographic variables and their effect on classification of three handicapping conditions (i.e., specific learning disabilities [SLD], mental retardation [MR], and emotional disturbance [ED] is presented in this chapter). First, a discussion of the findings of this study is presented. Second, recommendations which might improve the quality of services provided children within these three handicapping conditions are included. The next section contains implications for future research. Finally, a conclusion is provided.

Interpretation of Findings

Each hypothesis and research question will be restated then a brief discussion of the findings will follow.

> Hypothesis 1: For each handicapping condition, there will be substantially more (i.e., 75 percent) students in the category of mild/moderate than the severe/profound category.

From the review of literature presented in Chapter Two, it is not surprising to find that approximately 89 percent of the MR and about 88 percent of the ED population in this study are listed as mild/moderate

(see Table 1, p. 47). It was not expected, however, that nearly 99 percent of the SLD population would be classified as mild/moderate.

There are several possible explanations for this result. For example, in areas of exceptionality which are difficult to define such as SLD, MR, and ED it is frequently difficult to determine into which handicapping category a severe/profound child should be placed (Hallahan & Kauffman, 1978). In addition, severe/profound children may score so low on measures which are currently utilized for labeling handicapped children that the results provide little indication of the child's primary difficulty. The child may also lack verbal communication skills that would allow him/her to give more information to those responsible for classification. Severe/profound SLD children in this study, therefore, may have been misclassified as another exceptionality (e.g., MR, ED, aphasic, or autistic).

Finally, professionals in this study who were required to decide whether a handicapped child was either mild/moderate or severe/profound were not provided with any standard guidelines or definitions with which to accomplish their tasks. It is possible, therefore, that a proportion of severe/profound SLD students in this study were misclassified as mild/moderate.

> Hypothesis 2: For each handicapping condition, the percentage of identified students according to age can be rank ordered from most to least as follows: for SLD ages 10-14, 5-9, and 15-19; for MR and ED ages 10-14, 5-9, and 15-19.

All three handicapping conditions had their largest proportion of students in the 10-14 age range as expected (see Table 2, p. 47).

However, the percentage of MR pupils age 15-19 slightly exceeded that of children age 5-9 (i.e., 28 percent versus 26 percent) which is inconsistent with hypothesized age rankings. A possible explanation for this finding is that when these adolescents were children they may have been referred for special services and labeled MR because very few SLD or ED programs were in existence at that time. In addition, until recently, when a child was placed in a class for the MR there was little consideration given to returning the child to the regular class (Meyen, 1978). Thus, some of these children may have been misclassified and remained so throughout their school years.

> Hypothesis 3: For each handicapping condition, males will significantly outnumber females as follows: for SLD, males will outnumber females approximately three to one; for MR, males will outnumber females approximately two to one; for ED, males will outnumber females approximately three to one.

A review of the literature indicated that generally males outnumber females by a ratio of approximately 3:1 for SLD, 2:1 for MR, and 3:1 for ED. Thus, it was hypothesized that males would outnumber females according to these ratios. The obtained proportions for the SLD population in this study are 71.4 percent to 28.6 percent in the direction of males (see Table 3, p. 48). A chi square analysis for these proportions revealed a significant difference from the hypothesized ratios at the .05 level (i.e., $\chi^2 = 114.4$) indicating that this portion of the hypothesis should be rejected. However, when such large frequencies are considered (e.g., 16,818) it is possible to obtain values which are considered significant even though the proportion was approximately 3:1 (Minium, 1970).

For MR the obtained proportion is 59.3 percent to 40.7 percent which is approximately a 3:2 ratio. A chi square analysis revealed significance at the .05 level (i.e., $\chi^2 = 242.4$) which caused the author to also reject this portion of the hypothesis. This 3:2 ratio is incongruent with recent investigations of male/female ratios within the MR population. It could be possible that these findings reflect the recent and continuing evolution of some learned gender related roles. However, these learned roles may have contributed to the male predominance of special education classes in the past. Several authors, Dwyer (1973), for example, have concluded that males may be less able to benefit from traditional school settings because they are taught to be more autonomous than females. In addition, Caplan (1977) found evidence to suggest that there is generally greater concern for males who are failing than for females.

As mentioned previously, these roles may be changing. For instance, recently there has been an escalation in the number of single females who head a household (Snapper, 1975). These changing female roles regarding autonomy may be detrimental to females' performance in school. Also, wording of recent legislation (i.e., 94-142) guarantees and emphasizes a free and appropriate education to "all" handicapped children. Finally, professionals in each of these three fields are currently attempting to analyze aspects of the field (e.g., definitions, identifying criteria) which may be preventing some groups of handicapped children from being identified and served. Apparent changes in learned gender roles, recent legislation, and in criteria utilized to identify

handicapped children may have contributed to the incongruency of hypothesized gender ratio within the MR population.

Research Question 1: What percent of Oklahoma's total school population (603,378) was identified as SLD, MR, and ED?

Approximately 3 percent of the total school population is reported as SLD and about 2 percent is listed as MR (see Table 4, p. 51). These findings are generally consistent with nationally published figures included in Chapter Two. In addition, these nationally published figures indicate approximately 2 percent of the children enrolled in school could benefit from classes and/or programs for the emotionally disturbed. At the time of this study, however, only about 0.1 percent of Oklahoma's public school children had been identified as ED. This small percentage may be a true population; however, there are several variables or combinations thereof which could possibly account for this unusually low proportion. For example, the concept of educating ED children did not begin to gain impetus until about 1968 (Rhodes & Paul, 1978). This idea may, therefore, be novel enough to have prevented substantial proliferation of classes, teachers, and children identified as ED. In addition, the SLD discipline began a period of phenomenal growth and domination in the field of special education during the late 1960's. The time, energy, and money spent by parents, legislators, and school systems to establish classes and programs for the SLD may have impeded the sophistication and expansion of emotional disturbance as a discipline. Also, the criteria used to identify emotionally disturbed children is at best controversial and varied, which may have allowed

some ED children to be misclassified. For example, SLD children frequently emit behaviors common to ED children, which can make it difficult to distinguish ED children from SLD children (Hallahan & Kauffman, 1978). Finally, this difficulty of correct identification may have been compounded by the intense emphasis and availability of classes for the SLD mentioned previously.

> Research Question 2: For each handicapping condition, what percent of the students identified as handicapped: (a) receive full service, IEP fulfilled; (b) are underserved, on a waiting list for existing programs, (c) are underserved, parental refusal; (d) are underserved, no program available; or (e) are unserved (e.g., out of school).

A large majority of the students identified as SLD, MR, and ED receive full service (i.e., 86.5 percent, 93.0 percent, and 74.4 percent respectively)(see Table 5, p. 51). The total percent of children reported as underserved (i.e., on waiting list, parental refusal, and no program available) is approximately 13 percent for SLD, 6 percent for MR, and 23 percent for ED. Less than one-half of one percent of the SLD and MR population is reported as unserved, whereas more than 25 percent of the ED group is listed in the unserved category.

It is difficult to determine if these findings are consistent with the rest of the country because national figures regarding service have not been published. In addition, only those students identified as handicapped can be reported as served, underserved, or unserved. Therefore, if a handicapped student has not been identified, he/she cannot be reported as unserved even though he/she is.

However, it appears as though there may be a relationship between the length of time a program has been established and the percentage of children who receive full service. For example, proportionally more MR students received full service (i.e., 93 percent) than the other two groups and classes for the MR have been in existence the longest length of time (i.e., circa, 1947). Classes for the SLD in Oklahoma were initiated during the 1965-1966 school year and the SLD ranked second in proportion of children receiving full service (i.e., 86.5 percent). ED ranked third, serving only 74.4 percent of the children identified. Classes for the ED are the most recently developed of the three.

> Research Question 3: For each handicapping condition, what percent of the students identified as mild-moderate receive full service and what percent of the students identified as severe/profound receive full service?

With the exception of the ED category, proportionally more severe/profound children receive full service than those classified as mild/moderate (see Table 6, p. 52). This result is somewhat surprising because each severe/profound child not receiving full services would have a more noticeable effect on the proportion of students receiving full services because the severe/profound population is substantially smaller than the mild/moderate population. For example, only 188 children out of the entire SLD population (i.e., 16,818) are reported as severe/profound. If only 10 children from each category (i.e., mild/moderate and severe/profound did not receive full service then about 99.9 percent of the mild/moderate group would receive full service, whereas only 94.6 of the severe/profound population would receive full service. The severe/profound child may be more readily served because they are

generally unable to function in the regular classroom.

As mentioned previously, proportionally fewer severe/profound ED children receive full service than mild/moderate. It is possible that few public school ED classes can tolerate the excessive, intensive, aberrant behavior emitted by severe/profound ED students. However, the entire ED population is so small that it is probably not a true population.

> Research Question 4: For each handicapping condition, what percent of the students are classified as belonging to the following ethnic groups: Black, Caucasian, Indian, Oriental and Spanish?

Findings relating to the ethnic composition of these handicapping conditions reveal several instances in which there is a percentage of a particular ethnic group which is substantially different from that group's ethnic percentage in the total school population (see Table 7, p. 54). For example, Caucasian children represent about 78 percent of the state's total school population while they represent only about 65 percent of the MR population. In addition, Black children comprise about 9 percent of the state's school population yet almost 24 percent of the MR population is Black. Finally, approximately 11 percent of the total school population is Indian, however, only about 3 percent of the ED population is Indian. Conclusions from Chapter Two indicate a higher prevalence of mentally retarded among ethnic minorities. In this study, however, it appears as though Blacks are the only ethnic group which is substantially over-represented. There are several possible explanations as to why the Caucasian population appears to be under-represented and the Black population appears to be over-represented. For example, the

language used in standard I.Q. measures may be culturally biased in favor of Caucasians, allowing them to score high enough so as not to be judged MR (Williams, 1974). Also, since a large percentage of the MR population tends to come from low socio-economic status (SES) homes in urban areas, it may be that proportionally more of the Black population in Oklahoma reside in urban areas and/or low SES homes. In addition, textbooks written in standard English may be more suited to Caucasian learners. If the Black child has difficulty understanding textbooks, he/she may be more likely to be referred for special services. Finally, with the initiation of bussing practices for achieving racial integration of public schools, more Caucasian teachers may teach more Black children. Currently, Caucasian teachers may not be able to communicate as efficiently with Black children as they do with children from ethnic groups with which they are more familiar. Therefore, Caucasian teachers may refer more Black children for special services (Eaves, 1975).

As mentioned previously, Indian children appear to be underrepresented within the ED population. This may be because the ED group is so small in Oklahoma that it is probably not a true population. In addition, Indian children may appear more withdrawn because of their cultural heritage, and, therefore, go unnoticed and unreferred for special services (Pepper, 1976).

> Research Question 5: For each handicapping condition, what percent of the students identified as mild/moderate are: (a) Black, (b) Caucasian, (c) Indian, (d) Oriental, and (e) Spanish American; and what percent of the students identified as severe/profound are: (a) Black, (b) Caucasian, (c) Indian (d) Oriental and, (e) Spanish American?

A substantial proportion of the Oriental and Spanish children within the ED population are considered severe/profound (see Table 8, p. 58). Almost 37 percent of the Oriental and 50 percent of the Spanish ED populations are reported as severe/profound, while only about 12 percent of the total ED population is listed as such. Even though these proportions are large they appear to be the result of the very small number of children they represent, for example, only three Oriental children in the entire state are listed as ED and one of these is considered severe/profound. In addition, there are four Spanish children in the state who have been identified as ED, two which are reported as severe/profound.

Research Question 6: For each ethnic group, what percent of the students were classified as SLD, MR, and ED?

The proportions of mild/moderate and severe/profound children in each handicapping condition were presented in Table 1, p. 47. These proportions were further examined according to ethnicity and results were reported in Table 8, p. 58. The Oriental and Spanish ED populations of mild/moderate and severe/profound appear to differ significantly from the total populations of SLD, MR, and ED. However, the total number of children classified ED for these two ethnic groups is so small (i.e., 7) that it does not appear to represent a true population.

Although 2.8 percent of the state's school population is listed as SLD and 2.0 percent as MR, only .9 percent of the Oriental children in the state are considered SLD and .5 percent as MR. In addition, 5.4 percent of the Black population in this state are labeled mentally retarded.

It is difficult to speculate why such small proportions of the Oriental population are represented in these two handicapping categories because currently very little is known about this population in relationship to school achievement and school performance. In addition, little is known about the average income, expectations, language proficiency, or length of time parents have been living in this country. These factors may affect performance in school, thus referral for special services. Finally, the number of Orientals is smaller in comparison to other ethnic groups and it is possible that this is not a true population.

Black children, on the other hand, have in recent years been the subject of much concern and investigation as to why they are consistently labeled mentally retarded more often than other ethnic groups. Several theories as to why this occurs have been proposed; however, to date none have gained widespread acceptance. For example, proportionally more children from low socio-economic status (SES) homes are labeled retarded (Mercer, 1973). Also, Black children are more likely to be from low SES homes (Snapper, 1975). Because of this, it is difficult, if not impossible, to separate for investigation the variables of ethnicity, low SES, and other environmental factors that often accompany these two variables. In addition, Black children tend to score lower on standard I.Q. and achievement tests which are frequently the basis for placement in classes for the MR. It is possible that children's performance on these tests are more a reflection of the child's ability to understand standard English and evidence of his/her knowledge of white middle class values than an indication of their intelligence (Williams, 1974).

Recommendations

The preceding interpretations suggest the following recommendations which might significantly improve the service provided children within the three handicapping conditions investigated in this study:

1. Specific guidelines should be developed for determining a handicapped child's level of severity. Currently, professional representatives in each school district are designated to classify handicapped children as either mild, moderate, severe, or profound. The State Department of Special Education does not define these four classifications but relies upon the judgment of the representatives in each school district to determine each child's level of severity. As a result, children may be classified according to a wide variety of criteria which could result in numerous misclassifications.

2. At the time of this study, about 13 percent of the SLD, 7 percent of the MR, and 26 percent of ED population were not receiving full service. Provisions should be made to adequately serve these children. According to P. L. 94-142, in order for a state to receive federal funds, they must provide a free and appropriate education to every child age 3 through 18.

3. Item number 7 (i.e., Student Status) of the Handicapped Children Register is intended to define the type service a handicapped child is receiving. There are five categories into which a handicapped child may be placed (see Appendix A, p. 78 and 79). Three categories describe children as underserved. These should be eliminated because children in these categories receive no service other than being identified

as handicapped. Therefore, they should be listed as unserved.

4. At the time of this study, there were 28 classrooms for the ED in the entire state. Only 422 children or 0.1 percent of the public school population had been identified as ED. It is possible that only 0.1 percent of Oklahoma's public school population is ED; however, the Special Education Division, Oklahoma Department of Education (1978), in addition to nationally published estimates included in Chapter Two, indicate that approximately 2 percent or about 12,600 children could benefit from programs designed to serve ED children. Programs and services should be established to serve this large group of unidentified and unserved children. Funds for the establishment of classes for the ED should be appropriated by state and federal legislators.

Implications for Future Research

There is a need to study the effects of age, gender, and ethnicity on the classification of handicapped children as well as the level of severity and the nature of services provided these children more thoroughly both at the state and national levels. The following areas are suggested:

1. Since there is currently a substantial predominance of males in all three handicapped conditions, studies should be conducted to determine if these are, in fact, true populations or if criteria for referral, identification, and classification are biased. These studies should investigate not only these criteria but attitudes of those who refer and examine children who are potentially handicapped in addition to societal expectations of males versus females.

2. Studies should be initiated to determine why such a large proportion of the MR population is Black. This is not a simple task because variables that seem to relate to a child's being identified as MR are not easily isolated. For example, a child's socioeconomic status (SES), amount of aggressive behavior emitted, and use of standard English seem to be related. However, attempts should be made to determine the effects that these relationships may have on each other in addition to their isolated effects on identification of children as MR.

3. A large percentage of the Black population has been identified as MR. It is possible that a large percentage of the Black children in the state of Oklahoma are MR; however, it is possible that Black children are being misclassified as MR when they may actually belong to another handicapping condition (e.g., educationally disadvantaged, ED, or SLD). Investigations of this type also present difficulties regarding isolation of contributing variables. For example, a child's score on a standard I.Q. measure may actually be an indication of his/her ability to understand and use standard English. In addition, tests of social maturity and adaptive behavior skills may be a reflection of society's expectations regardless of a child's ethnic background.

Finally, a child's grades in classes are usually used to measure his/her success in school. Black children may have more difficulty, than children from other ethnicities, in understanding text books written in standard English. This greater difficulty could result in lower grades and/or failure of classes using such texts. Low grades and failure of courses may result in referral for special services and placement in classes for the MR.

These phenomena appear to be a complex network of interwoven, interacting variables which perpetuate and complicate the question of why such a large proportion of the Black population is considered MR. Attempts should be made to study the isolated effects of these variables in addition to the investigation of the entire occurrence.

4. Currently, a very small proportion of the children in this state are considered ED. In light of current estimates regarding the number of children who could benefit from programs designed to educate the ED by the State Department of Education, investigations should be initiated to determine why this small percentage exists. Criteria currently being utilized for identifying ED children should be studied to determine their validity and reliability. In addition, current practices of the State Department of Education should be examined to determine if ED children in this state are being provided an adequate opportunity to be identified and served.

5. There is some evidence to indicate that not all handicapped children age 3 through 21 have been located and identified. For example, almost 8,000 children who were not attending school in Pennyslvania were located and evaluated to determine if they could benefit from classes and programs for the handicapped. Researchers determined that approximately 52 percent of those children qualified for special services (Lippman & Goldberg, 1973). Therefore, attempts should be undertaken to locate and evaluate children not attending school who possibly could benefit from classes and programs for the handicapped. In addition, efforts should be made to locate and evaluate handicapped children in

public school who have for a variety of reasons not been identified. Small pilot studies should be initiated to determine if a large scale investigation is warranted.

Conclusions

This study has focused on the investigation of the demographic variables of age, gender, and ethnicity and their effect on the classification of children in Oklahoma's public schools as specific learning disabled, mentally retarded, and emotionally disturbed. Additional research will be required before specific conclusions can be reached. However, from this research it appears as though certain predictions can be made regarding the age, gender, and ethnicity of each of the handicapping conditions investigated. First, substantially more children within these handicapping conditions are classified as mild/moderate than severe/profound. Second, males outnumber females by a ratio of approximately 3:1 for the categories of SLD and ED. Third, substantially more children age 10-14 are classified as SLD, MR, and ED than children aged 5-9 or 15-19. Finally, Black children appear to be substantially over-represented within the MR population.

HANDICAPPED CHILDREN REGISTER

APPENDIX A

APPENDIX A: HANDICAPPED CHILDREN REGISTER

CODE SHEET FOR COMPLETION OF "MARK SENSE" FORM
CHILD COUNT

1. Teacher Identifier

   Classroom; e.g., Special Education teacher use Social Security Number (SSN). Any other individual completing this form use your SSN. If you object to use of your SSN, print your name at the top of the page. If the SSN is not used, write the name of the person completing the form in the upper LEFT hand corner and complete the teacher identifier social security columns by marking all of the zeros, e.g., 000-00-0000.

   NOTE: The top left side must be used because any marks on the right side that touched the chart black marks would impair the timing set by the computer.

2. Student's Code

   a. First letter, last name

   b. Third letter, last name

   c. Fourth letter, last name (x if no 4th letter)

   d. Number of letters in last name--if 4 or less than 4, fill in 0. If the total number of letters in the last name is over 9 letters, mark 9, then write the correct number at the top of the column.

   e. Month of birth; e.g., first digit would be 0 except for 10, 11, or 12.

f. Day of birth; e.g., 3rd day would be 03, 12th day would be 12.

g. Year of birth - Last two digits; e.g., 1945 would be 45.

h. Unique identifier - would always be 9 except when you have two students with identical codes, this number would then be 8. If three identical codes, 7 and so on.

i. First initial or first name.

j. Middle initial (x if no middle name)

3. Student Information

a. Student's age in whole years

(again use 0 for first digit until age 10)

b. Sex M - Male F - Female

c. Race B - Black I - Indian O - Oriental

S - Spanish American C - Caucasian and other

4. Disability Code

Educable Mentally Handicapped	01
Trainable Mentally Retarded	02
Learning Disabilities	03
Speech Pathology	04
Physically Handicapped	05
Blind and Partially Sighted	06
Deaf and Hard-of-Hearing	07
Emotionally Disturbed	08
Multiple-Handicapped	09
Deaf-Blind	10

Visiting Counselor Services with IEP's 11

Homebound (does not include pregnant girls) 12

5. Developmental Disability Classifications

None of the following 0

Cerebral Palsy 1

Epilepsy 2

Autistic 3

Mentally Retarded (Include both EMH & TMH) 4

6. Program Location

C - County Supt. D - Dependent I - Independent

Use 0's when district number is less than 3 units, e.g., I-1 is I001, D-22 is D022.

A coop program, under county superintendents should be recorded county number plus, C-000. Institutions should be recorded county number plus, I-999. Other cooperative programs would be recorded under the local education agency who serves as fiscal agent. The coop teacher will fill out the forms for students in the respective districts. Home districts will need "copies" of the registration of their students who are served in other districts.

7. Student's Status

Unserved; e.g., out of school 0

Underserved on waiting list for existing program 1

Full Service - IEP fulfilled 2

Handicapped, but underserved because of parental refusal 3

Handicapped, but underserved because no program available 4

8. Program Design (Code unserved under itinerant service)

   a. Self-contained unit (child all day with special teacher) 0

   b. Lab or resource room 1

   c. Itinerant service - unserved 2

   d. Institutional 3

   e. Homebound 4

   f. Regular class with modification by IEP or support from prescriptive teacher 5

9. Time Unit of Special Services Provided

   a. 0-30 min. 0

      30 min.-1 hr. 1

      1 - 2 hrs. 2

      2 - 3 hrs. 3

      3 - 4 hrs. 4

      4 - 5 hrs. 5

      5 - 6 hrs. 6

      6 hrs. 7

   b. Day per week time units received

      1 day 1

      2 days 2

3 days	3
4 days	4
5 days	5

10. Legal Residence of the Student (Code children from out-of-state all zero's)

C - County Supt. D - Dependent I - Independent

Use 0's when district number is less than 3 units, e.g., I-1 is I001 D-22 is D022

11. Regional Service Center Number

Ada	01	Hugo	11
Altus	02	Kingfisher	12
Alva	03	Lawton	13
Anadarko	04	McAlester	14
Ardmore	05	Moore	15
Bartlesville	06	Muskogee	16
Cushing	07	Oklahoma County	17
Elk City	08	Sallisaw	18
Grove	09	Stillwater	19
Guymon	10	Tulsa County	20

12. Due Process Procedures

a. Placement Team yes or no

b. Parent's signature yes or no

c. IEP on file yes or no

d. Receiving physical education yes or no

Transportation	0	Room and board	4
Psychological Eval.	1	Large print books	5
Physical Therapy	2	Reader Service	6
Occupational Therapy	3		

In Item 12e, mark the primary source only on the red ink sheet. (However, since we will need related service information later, please record all of the related services provided on the district copy. We will not really be able to use the computer information on this item since we need to know all related services. We suggest that all mark psychological evaluation even though Speech has different evaluation.

13. Funding Sources (mark only the major source)

Flat grant	0	94-142	3	89-313	6
Local funds	1	VI-C	4	Title I	7
Transfer fee	2	VI-G	5		

Mark only the one major source of funding on the red ink sheet, but, in the district, record all sources of funding for your future use. The administration of the school will probably want to do this because some funds can be recorded for all students in a program, e.g., flat grants, local funds, and Title I. While other information on transfer fees and 89-313 funds will only apply to some students within a program.

14. Severity of Handicapped

Apply criterion suitable to disability category.

Profound	0
Severe	1
Moderate	2
Mild	3

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