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An analysis of the relationship between race and gender and national student placement in programs for the educable mentally retarded, learning-disabled, and seriously emotionally disturbed from 1976 through 1984

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AN ANALYSIS OF THE RELATIONSHIP BETWEEN RACE AND GENDER AND NATIONAL STUDENT PLACEMENT IN PROGRAMS FOR THE EDUCABLE MENTALLY RETARDED, LEARNING DISABLED, AND SERIOUSLY EMOTIONALLY DISTURBED FROM 1976 THROUGH 1984

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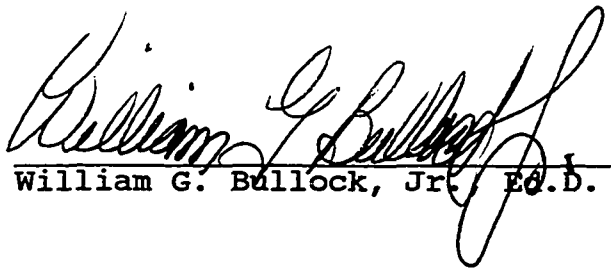

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CHAPTER I

INTRODUCTION

Justification for the Study

> In the past decade, events have brought into sharp focus the importance of due-process considerations in the classification of handicapped and delinquent children. Consequences follow classification ranging from placement in a "slow" reading group to lifetime confinement in an institution. Sometimes the consequences are desirable and in the best interest of the child and his family. But at other times the interests of society (as in the confinement of a youth labeled delinquent) or the interests of smooth institutional functioning (as in the exclusion of an unruly child from public education) may be judged to outweigh the best interests of the child. (Hobbs, 1975, p. 159)

The preceding statement from The Futures of Children summarized the status of special education at a crucial juncture in its evolution within the American institution of public education. To put Hobbs' statement into proper perspective, it should be noted that his book represented a synthesis of the collective efforts of ten federal agencies, 31 task forces, and 93 recognized leaders from the field of special education who, combined, comprised the Project on Classification of Exceptional Children. As of its publication date in 1975, no more comprehensive a study of classification issues in special education existed (Burbach, 1981). The conclusions drawn

from the work of the Project's participants found the majority of classification and placement procedures in use to be inadequate, biased, and frequently harmful.

The events of a decade alluded to by Hobbs were characterized by Burrello and Sage (1979) as three distinct socio-political forces for change in public policy on educating exceptional children, including the general political climate, critical judicial decisions and key legislative mandates. These phenomena, both individually and collectively, contributed significantly to the depth and scope of the radical change about to occur within the field of public education in 1975. The United States Congress was in the process of drafting and passing The Education for All Handicapped Children Act of 1975, more commonly known as PL 94-142. In no area did these three combined forces contribute more to the shape of the new law than in the "sharp focus" within PL 94-142 on issues related to the assessment, classification, and placement of exceptional children (Ballard, Ramirez & Weintraub, 1982).

The first major event leading up to the passage of PL 94-142 may have occurred two decades before 1975. The Supreme Court handed down the landmark decision Brown v.Board of Education in 1954 and established for the first time that "right to education" was a Federal concern and not solely the domain of the States. Within a few years, a number of additional events followed the Brown decision

which increased the impetus for major social and legislative reform.

The election of John F. Kennedy as President and the highly visible advocacy role of the Kennedy family on behalf of a retarded family member provided the needed impetus for public discussion of a variety of handicapping conditions. Advocacy groups such as the Association for Mental Health and the Association for Retarded Citizens gained momentum from this public discussion in their efforts to reduce prevailing myths and stereotypes about individual differences and their significance.

During this same period of time, the civil rights movement began to emerge as a dominant social force of the 1960's. Aside from the activism of the suffragettes during the early 1900's, few greater movements geared towards securing the constitutional rights of a minority group had occurred. Ultimately, the Civil Rights Act of 1965 evolved out of the turbulent national protest against blanket discrimination. The national self-examination provoked first by the civil rights movement, and shortly thereafter the Vietnam War, later served as a useful precedent for advocates, legislators, and the courts in the public debate over the rights of handicapped citizens.

The increased attention to the needs of the handicapped, and the mentally retarded in particular, sparked unparalled growth in the number of special

education classes. But while such rapid growth may have given the appearance of a movement to broaden the availability of educational options for exceptional learners, a number of advocates began to question the efficacy of the expansion of services. As Lloyd Dunn (1968) pointed out in his seminal article on special education and the mildly retarded, "This expensive proliferation of self contained special schools and classes raises serious educational and civil rights issues which must be squarely faced" (p. 6). The major concern on which Dunn focused was the disproportionate number of minority and disadvantaged children found in the classes for the educable mentally retarded. He also asked a question which, in effect, foretold the future; "What if the Supreme Court ruled against tracks, and all self contained special classes across the nation which serve primarily ethnically and/or economically disadvantaged children were forced to close down?" (p. 7).

The impact of Dunn's article cannot be quantitatively measured, but the legislative and litigative history which followed its publication is compelling. Several key court cases were decided,including Diana v. Board of Education (1970), PARC v. Commonwealth of Pennsylvania (1971), Mills v. Board of Education (1972), and Larry P. v. Riles (1974). Each of these cases found discriminatory either the assessment practices or classification procedures used

in placing students in special programs. The passage of The Rehabilitation Act of 1973, Section 504 (PL 93-112) reflected the degree to which the U.S. Congress had been influenced by the social and legal events of the 1960's. Section 504 soon became known as the "Civil Rights Act" for all handicapped individuals. The culminating event, however, was the passage of PL 94-142 in 1975, with its strong emphasis on procedural safeguards. These safeguards were established to ensure the equitable and appropriate assessment, classification, and placement of children referred for consideration for special education programs.

The primary focus of much of the research in special education, up to and including 1975, centered on existing programs for the educable mentally retarded (EMR). This focus reflected the fact that the overwhelming majority of children receiving special education services were classified under the EMR label. The learning disabled (LD) and emotionally disturbed (ED) catagories were also significant topics in the literature. Not only did the LD and ED catagories contain the second and third largest number of children within the nation's special education programs, but a significant degree of controversy surrounded the definition of the two catagories. The two volume report issued by the Project on the Classification of Exceptional Children (Hobbs, 1975) reviewed the literature on virtually every salient issue related to

classification and placement of exceptional students. Two of the most consistent concerns which were addressed time and again involved the overrepresentation of black males in both EMR and ED programs, and their corresponding underrepresentation in LD programs. In addition, the consistent overrepresentation of white males in LD programs was discussed in light of the absence of any research identifying causal factors to support such findings.

The work of the Project on the Classification of Exceptional Children, which became known as the "Hobbs Commission", ended just prior to the passage of PL 94-142. Since that time no comparable effort has been made to study the classification and placement process within the field of special education. Isolated studies have been conducted, but no logical progression is evident that suggests successive investigations grew out of preceding research. As of 1989, no study exists which systematically and empirically examined the factors of race and gender as they relate to student placement in EMR, LD, and ED programs nationally since 1975. In light of the procedural safeguards included in PL 94-142 to insure equitable classification and placement, and the availability of secondary data from the Office of Civil Rights' Elementary and Secondary School Survey, such a study appeared both feasible and defensible.

Statement of the Problem

A significant increase in the number of special education programs occurred during the decade prior to 1975. The report of the Project on the Classification of Exceptional Children (Hobbs, 1975) concluded that this rapid program development had resulted in classification and placement practices which were frequently detrimental to exceptional children. One major outcome of such practices was the significant overrepresentation of black students, many of them males, in EMR and ED programs. A comparable overrepresentation of white males was noted in reviewing national enrollment patterns in LD programs.

In the decade since 1975, however, no national study has been conducted to examine the demographic characteristics of students placed in EMR, LD, and ED programs in the intervening years. As a major question was raised in 1975 as to the efficacy of such practices, and a critical piece of legislation mandated the protection of students from improper placement, this study attempted to answer the following question:

Research Question:

To what degree are race and gender related to the actual versus expected prevalence of students, ages 5-21, placed in programs for the educable mentally retarded,

learning disabled, and emotionally disturbed nationally from 1976 through 1984?

Theoretical Rationale

The critical construct upon which this study was based was that of overrepresentation. For the purpose of this study, overrepresentation was considered that point at which the actual prevalence of a given group's representation in a specified program population significantly exceeded its representation in the total or "normal" population. As further defined by Price (1981), overrepresentation occurs whenever a specific sub-population comprises "...a larger segment of the special education population than would be predicted on theoretical grounds" (p. 1).

The importance of overrepresentation as a research issue in special education has been consistently recognized, most recently by Snow (1984). He suggests that "The problem of overrepresentation of minority students and males in special education programs...remains one of the most fundamental and most difficult educational research problems of the present century" (p. 12).

The response to research on overrepresentation provides some evidence of the issue's impact on and importance to the field of special education. As Ysseldyke

and Algozzine (1984) point out, "Major changes in public policy on the education of handicapped students occurred when it became apparent that disproportionate numbers of students from specific racial or ethnic groups or from different social statuses had been placed in classes for the handicapped" (p. 400). One of the widely noted reactions to minority overrepresentation in EMR programs occurred in 1973. As described by Burton Blatt (1981),

> The most recent, little appreciated but astonishing revision of the American Association on Mental Deficiency definition of mental retardation...literally revolutionized the incidence, prevalence, and concept of mental retardation, all with the simple stroke of Herbert Grossman's pen (1973). We cannot redefine measles, or cancer, or pregnancy with so easy and such external procedures. The Grossman Committee, sitting around a conference table, reduced enormously the incidence of mental retardation, never having to "see", or "dose", or deal with a client, only having to say that, hereinafter, mental retardation is such and such, rather than this or that. (p. 27)

That this decision was in direct response to disproportionate numbers if minority (predominantly black) students in EMR programs has been documented by numerous policy analysts (Sarason & Doris, 1979; Gliedman & Roth, 1980; Hallahan & Kauffman, 1982; Ysseldyke & Algozzine, 1982; Reynolds, 1984).

More recently, both minority overrepresentation and the mild mental retardation (EMR) construct, as well as their interrelationship, have been the subject of

considerable research and debate among policy analysts. Minority overrepresentation in special education has been a particular focus of discussion since a 1982 National Academy of Sciences study (Heller, Holtzman, and Messick, 1982) raised the issue in a national forum (Maheady, Towne, & Algozzine, 1983; Maheady, Algozzine, & Ysseldyke, 1984; Reschly, 1985; Prasse & Reschly, 1986; Lambert, 1988; Macmillan, Hendrick, & Watkins, 1988; Prasse, 1988; Reschly, 1988a, 1988c). The classification of students as mildly mentally retarded (EMR) has come under close scrutiny largely as a result of the disproportionate number of minorities identified as such (MacMillan, & Meyers, 1979; MacMillan, Meyers, & Morrison, 1980; Polloway & Smith, 1983; Polloway, 1985; Polloway & Epstein, 1985; Polloway & Smith, 1988; Reschly, 1988b).

There were two plausible rationales for studying overrepresentation, based on the existing body of literature on the topic. The most frequent concern involved the implication that overrepresentation is an indicator that racial and social biases are pervasive throughout the many steps which precede classification and placement decisions. One conclusion which is representative of this rationale was expressed by Gliedman and Roth (1980), in reviewing Mercer's (1973) research. They commented, "This disproportion is precisely what one would expect if white male children with ambiguous learning

problems were preferentially classified as learning disabled while minority male children displaying similar performance problems in school were preferentially classified as mentally retarded" (p. 467).

A second rationale focused on the impact of overrepresentation on students (e.g., stigmatization), as well as the policy implications for educators. The most recent studies on overrepresentation have focused in more detail on policy considerations, specifically the legal, instructional, and administrative implications.

The legal implications of overrepresentation are often difficult for all but lawyers to appreciate, as noted by Bateman and Herr (1981):

> The special educator reasonably asks, "What is wrong with identifying those six-year-olds who need special teaching...even if disproportionate numbers of those identified are of one sex or cultural group or sociocultural level?" The answer requires an examination of how courts view special education...In Larry P. v. Riles...the court agreed that...irreparable harm ensues from even one month of {wrongful} EMR placement. Special educators must realize that special education placement is legally stigmatizing and that a stigmatizing action legally abridges constitutionally protected liberty interests. (p. 359)

Messick (1984) defined the issue in less technical terms, and suggested that "equity" and "inequity" were the core considerations in placement decisions. He suggested that disproportionate representation leads to inequity when "a) children are unduly exposed to the likelihood of EMR

placement because they received poor quality regular instruction; b) if they are invalidly assessed for special education programs; or c) if the quality and academic relevance of the special education programs block the affected students' educational progress" (p. 4).

The instructional implications of overrepresentation, including those which are intertwined with the legal issues noted by Messick, are several. In a meta-analysis comparing the effects of special and regular class placement, Carlberg and Kavale (1980) found that "EMR's experience negative consequences because of special class placement" (p. 304). Gliedman and Roth (1980) noted the preponderance of research suggesting that children placed in EMR programs do as well or better when placed in regular classrooms. Finn and Resnick (1984) noted the sharply reduced curricular demands in EMR programs. Heller, Holtzman, & Messick (1982) and Finn and Resnick (1984) have noted the body of research confirming the similar instructional needs of LD, ED, and EMR students. These findings regarding instruction and LD, ED, and EMR programs, when looked at together, suggest the significant impact on both the integrity of the instructional programs and the students themselves when overrepresentation exists.

The administrative implications of overrepresentation arise largely from research on the purposes for employing catagorical placement practices. Hobbs (1980), found

significant evidence to suggest a total failure within special education to link the existing classification system to the most effective interventions. This led a number of researchers to suggest various alternate explanations for adherence to the catagorical model. Reynolds (1984) reviewed a number of articles which concluded that, even now, classification is primarily a means of preserving a social system preferred by the majority. Hunt (1975) posited that labels are perpetuated for institutional rather than instructional purposes. Ysseldyke and Algozzine (1982) identified the three major functions of the classification system in special education as administrative; a) funding, b) head counts, and c) staffing patterns. If, in fact, the primary value of the classification system in operation is an administrative one, the overrepresentation of any one group in any program population is hardly defensible.

The possibility that overrepresentation within certain programs has continued, unabated, since 1975 suggested that a number of students in America's schools may have suffered irreparable harm. By means of a discriminatory assessment and/or decision-making process, they may have been placed in a program with inappropriate curricula for purely administrative and social reasons. In addition, this entire process may have deprived a class of students of a constitutionally protected liberty interest. Though this

study might have generated an answer that was neither popular nor palatable, the need to examine the placement practices in EMR, LD, and ED programs over the ten-year period since 1975 could not be ignored.

Definition of Terms

The following terms are used consistently throughout this study and the definitions which accompany these terms are intended to help assure both the clarity and consistency of their use:

EMR:

> Educable mentally retarded; Significantly subaverage intellectual functioning existing concurrently with deficits in adaptive behavior and manifested during the developmental period, which adversely affects a child's educational performance (Code of Federal Regulations, 1981).

LD:

> Specific Learning Disability; 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,

write, read, 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, or of environmental, cultural, or economic disadvantage (Code of Federal Regulations, 1981).

ED:

Seriously Emotionally Disturbed; A condition exhibiting one or more of the following characteristics over a long period of time and to a marked extent, which adversely affects educational performance: an inability to learn which cannot be explained by intellectual, sensory, or health factors; an inability to build or maintain satisfactory relationships with peers and teachers; inappropriate types of behavior or feelings under normal circumstances; a general pervasive mood of unhappiness or depression; or a tendency to develop physical symptoms or fears associated with personal or school problems. The term includes children who are schizophrenic or autistic but does not include children who are socially

maladjusted (Code of Federal Regulations, 1981).

Overrepresentation:

That point at which a specified group's (e.g., males) representation in a specified program or population (e.g., EMR), exceeds the group's representation in the total or "normal" population. The term "disproportionate" will be considered interchangeable for the purposes of this study.

Expected Prevalence:

A specified group's expected or "normal" percentage representation in a specified program (e.g., EMR) at a specific point in time, based on the group's percentage representation in the non-handicapped population.

Actual Prevalence:

A specified group's actual or "observed" percentage representation in a specified program at the point in time during which the data for this study were collected.

Placement:

That special education program to which a student

has been formally assigned as a result of the proscribed procedures set forth by PL 94-142. The term "classification" will be considered interchangeable for the purposes of this study.

Race:

As defined in Webster's Third New International Dictionary (1965), "a division of mankind possessing traits that are transmissible by descent and sufficient to characterize it as a distinct human type" (p. 704). For the purposes of this study, race will refer only to white and black students.

Research Hypotheses

The following hypotheses address the overall research question which this study investigated:

1) Black students will be significantly overrepresented in programs for the educable mentally retarded.

2) Male students will be significantly overrepresented in programs for the educable mentally retarded.

3) White students will be significantly overrepresented in programs for the learning disabled.

4) Male students will be significantly overrepresented in programs for the learning disabled.

5) Black students will be significantly overrepresented in programs for the emotionally disturbed.

6) Male students will be significantly overrepresented in programs for the emotionally disturbed.

Sample Description and Data Gathering Procedures

Each year from 1968 until 1974, and every even-numbered year thereafter, the United States Office for Civil Rights, Department of Education has conducted the "Elementary and Secondary School Civil Rights Survey" under a Congressional mandate. Following the passage of PL 94-142 in 1975, that mandate was expanded to insure the inclusion of survey items relative to special education programs.

The sample for this study consisted of all students in the United States, ages 5 to 21, placed in EMR, LD, and ED programs in the school districts surveyed by the U.S. Office of Civil Rights between 1976 and 1984. In addition, total school enrollment figures from the sampled districts were included in order to compute expected prevalence rates for specified groups within the EMR, LD, and ED populations. The survey samples were constructed with the school district as the basic unit of study. The number of school districts sampled ranged from 20% (1982) to 100% (1976) of all the U.S. school districts, with those

districts selected for the smaller samples comprising a stratified, random sample.

These data collected by the Office of Civil Rights were aggregated by an authorized subcontractor based on expertise in survey research methodology. The final reports issued by the subcontractors contain not only the number of students, by category, in special education programs, but demographic data such as race or ethnicity, and gender. The total data collected between 1968 and 1984 have been compiled in a "times series" format for computer analysis, and it was this time series computer data tape which was obtained for use in this study. The use of this secondary data for research purposes included specific methodological considerations, which are addressed in depth in Chapter III.

For the purposes of this study, the data collected by OCR were assumed to be numerically and demographically accurate. Federal law stipulates severe penalties for misrepresentation of the information required of state and local education agencies. Given the substantial size of the sample proposed for study, any variance which may exist was not assumed to be large enough to skew the data significantly.

In order to conduct the planned statistical analysis, a data subset was extracted from the total aggregate data. The data were then analyzed by means of log linear

statistics, as described in greater detail in Chapter III.

Limitations of the Study

There were several identifiable limitations of this study which ultimately restricted any generalizations which could be made based on the investigation. These limitations arose largely from the potential scope of a study on this subject; numerous questions could not be answered within this study without expanding the scope of the research to unmanageable proportions.

Prior to the final classification and placement of a student in a special education program, a number of specific steps occur which are defined by PL 94-142. These steps include referral, screening, testing and assessment, and eligibility determination. None of these stages were addressed in this study, as each of these processes has been the subject of substantial research apart from the placement decision. Placement, for the purposes of this study, was viewed as the final product or "outcome" which could be most effectively measured and evaluated.

The concept of overrepresentation was restricted to a figure derived from comparison to the nonhandicapped population and its normal pattern of distribution. While the concept of overrepresentation (also expressed as disproportionate representation) has been studied

extensively, not one study has been found which defines this concept differently. The need to advance the concept of overrepresentation, e.g., "overrepresented by comparison to what criteria?", will be left to other researchers.

Finally, though it can be argued that data on socioeconomic status (SES) as a factor in placement decisions might have been included in this study, this option was ruled out. The OCR database, as it exists, does not include SES as a demographic variable. While census data available from the National Institute of Health database do include SES, no methodologically sound strategy for merging the two databases has been devised.

Ethical Considerations

As this study used secondary data which were already a matter of public record, no specific concerns were found related to issues such as confidentiality or impact on human subjects. This study was fully approved as required under School of Education and College policies established by the Committee on Research on Human Subjects.

The subject which this study addressed is not, however, totally free of potential ethical risks. The conclusions reached in this study, suggesting a continued pattern of overrepresentation of minorities in EMR and ED programs, could easily be misrepresented. Every effort

will be made to avoid the use of the data and conclusions out of context, though such a restriction cannot be completely guaranteed. However, the Chairman of the committee directing this research has conducted similar research on a statewide basis which received substantial press coverage. His advice and counsel will be requested in an effort to both anticipate and avoid any such problems.

The data collected by the Office of Civil Rights, and compiled by the various government subcontractors, are totally in the public domain. No formal obligations to any federal or private agency arose from the use of their data for this study, beyond the expression of thanks to cooperating staff as noted in the acknowledgements.

CHAPTER II

REVIEW OF THE LITERATURE

Summary of Rationale and Relationship to the Problem

During the decade prior to the passage of the Education for All Handicapped Children Act of 1975, PL 94-142, a combination of political, social, and legal events substantially altered public policy regarding handicapped individuals. The primary indicant of the impact on public schools was the proliferation and expansion of special education programs, especially those for the educable mentally retarded. This rapid development of services for handicapped children did not evolve free of negative consequences, however.

By 1973, in a massive national effort to evaluate the classification and placement practices in special education, a federal task force was appointed. This study group, the Project on the Classification of Exceptional Children, issued its final report in 1975. The summary findings addressed a number of inadequacies, including the significant overrepresentation of minority males in both EMR and ED programs. A second area of overrepresentation involved the extensive number of white males in LD programs. Based on the available research, the Project report found the problem of overrepresentation both extensive and educationally indefensible.

Overrepresentation has a number of implications for the field of special education, if not the entire field of public education. These can include such outcomes as the stigma associated with the labels of "mental retardation" and "emotional disturbance", as well as the diminished curricular expectations when placement in an EMR or ED program is made. In addition, significant legal implications exist where overrepresentation suggests the abridgement of an individual's or a group's constitutionally protected liberty interests. Finally, when overrepresentation occurs as a result of a classification scheme which serves primarily administrative rather than instructional needs, substantial professional and ethical questions are raised.

Despite the fact that the report of the Project called for major revisions in the classification and placement practices in special education, no comprehensive attempt has been made to examine the status of placement practices since 1975. If factors such as race and gender have continued to play a major role in the way students are placed in EMR, ED, and LD programs since 1975, as measured by a specified group's overrepresentation in a given program, problems may well still exist. In order to establish the basis for this investigation, a comprehensive review of the research on relevant constructs and comparable populations follows.

Summary of Relevant Research

The critical relationship which is explored in this review is explicitly stated in both the title and the driving "question" which underlies the study; since 1975, does a relationship appear to exist between a student's race or gender and his or her placement in an EMR, LD, or ED program in the United States? Several significant constructs which pervade the study are examined at the outset. The review then focuses on studies pertinent to the key relationship to clearly establish the existence of such a relationship prior to 1975, and then examines the research which has been conducted since 1975 to determine whether there is evidence of a continuing relationship.

Placement in Special Education

One key concept in this study is "placement", especially in light of its implicit restrictiveness. While placement decisions are considered interchangable with the concept of "classification" in special education, the term "placement" in this review is not viewed as synonymous with all that precedes placement of a student in an identified special education program. For example, the referral, screening, assessment, testing, and eligibility processes are all the subject of research and discussion, with some

80,000 documents related to the issue of racial bias in testing. All of these related concepts are secondary to the ultimate goal or purpose for which they are conducted; to determine which, if any, classification or placement is appropriate for the student under examination (Gliedman & Roth, 1980; Hobbs, 1980; Burbach, 1981; Blatt, 1981; Bickel, 1983; Collins & Camblin, 1983; Hocutt, Cox, & Peloski, 1984). Once a placement is agreed upon, the personal, social and educational life of the student is significantly altered. All that preceded the decision becomes largely irrelevant, because as Reynolds (1984) notes in quoting Robbins, "the choice of catagories in a classification system 'implies that the catagory chosen is good for something'" (p. 63).

In describing placement as a construct, it is important to include what the literature says about "misplacement". This can be defined operationally as the placement of a child in a program when the assessment data either fail to support or totally contradict the final placement decision (Hobbs, 1975). As Kaufmann, Cullinan, and Epstein (1987) noted recently, "...concern regarding the possibility of bias and misplacement is not without justification" (p. 176). Though the research in this area is limited, two studies found a substantial number of students in EMR programs with I.Q. scores above the ceiling or "cutoff" score of 75 (Rubin, Krus, & Balow,

1972; Prillaman, 1975). Cartwright, Cartwright, & Ward (1984) cite the increasingly credible evidence that no more than 3% of any school population is seriously learning disabled. This research has been used by some to suggest that LD program enrollment in excess of 3% constitutes misplacement (Hobbs, 1980; Ysseldyke & Algozzine, 1982).

Expected Prevalence of Mental Retardation, Learning Disabilities and Emotional Disturbance

As was noted in Chapter I, expected prevalence rates within EMR, LD and ED programs were derived from current prevalence and incidence rates noted in the research. These rates are consistently found to be based on a specified group's percentage representation in the nonhandicapped population as a whole. In other words, if blacks constitute 15% of the nonhandicapped enrollment in America, their expected prevalence rate within all EMR programs nationally would also be 15%. This operational definition of expected prevalence is generally supported by existing data, though extensive research in this area still remains to be done.

A portion of the literature relative to observed and expected prevalence addresses incidence rates rather than prevalence rates. Both terms describe the frequency with which certain events occur, e.g., handicapping conditions as in this study. As Hardman, Drew, and Egan (1984) point

out, "Several authors have suggested that the literature in special education has ignored the distinction between these two terms (Marozas, May, & Lehman, 1980; Gelfand, Jensen, & Drew, 1982)" (p. 99). Generally, incidence refers to new occurences of an event during a specified time period, while prevalence refers to the total number of existing cases at a specific point in time. Prevalence rates were examined in this study as the database reflects the total number of occurences of a handicapping condition in a given year. In establishing a basis for determining expected prevalence rates, however, studies are included which examine incidence rates of certain handicaps. Given that prevalence rates are simply an aggregate of all new occurences prior to the point in time studied, incidence rates are statistically sound predictors of expected prevalence rates.

Within special education, there is little if any concensus as to which EMR, LD, or ED prevalence rates are empirically derived, apart from factors such as race and gender. The majority of the research confirms a significant variability in prevalence rates (Algozzine & Korinek, 1985), although Hallahan, Keller, and Ball (1986) contend that much of the variability is related to imprecise statistical design. Prevalence rates in the United States are consistently found to vary significantly in comparison to other countries (Juul, 1984; Gallagher,

1985; Juul, 1986; Rantakallio & von-Wendt, 1986).

The expected prevalence of educable mental retardation and learning disabilities among different racial groups has been found to be constant. Holzer (National Coalition of Advocates for Children, 1985) reviewed the data on EMR incidence rates, and found the rate to be a constant 1.25% in all racial groups. Tucker (1980), in a similar study involving LD populations, found a constant rate of 3-5% among all racial groups. Price (1981) summarized the knowledge base on ED incidence rates, and found no theoretical basis for disproportionate representation of blacks in public school ED programs. Achenbach and Edelbrock (1981) found no significant differences, by race, in the incidence of behavior disorders among comparable populations of referred and unreferred children. The most extensive review of research regarding race and handicaps, as referenced by Gliedman & Roth (1980), found "the incidence of handicaps...{to be} the same among all ethnic groups" (p. 178-179).

Incidence rates in EMR, LD, and ED programs along gender lines have been found to be equivalent. Leinhardt, Seewald, & Zigmond (1981) found no consistent sex or race differences in the research on abilities and problem-solving skills. Reschly and Jipson (1976), in an empirical study of 950 randomly selected students in Arizona, found no significant sex differences associated

with mild mental retardation. In a review of research on sex differences in mild mental retardation, Richardson, Katz, and Koller (1986) noted that when children were classified using only psychometric data, no male disproportion was found. Smith (1983) reviewed the literature on sex ratios in LD programs and noted "no sex differences in learning problems of unreferred children" (p. 77). More recently, additional research summaries have substantiated Smith's findings (Heward & Orlansky, 1984; ERIC Clearinghouse, 1986; Keller & Hallahan, 1987). Achenbach and Edelbrock (1981) found the higher male referral rate for ED programs a result of "...conflicts between their behavior and official norms" (p. 51), as no quantitative differences in problems were noted among comparable populations of referred and unreferred children.

In summary, the evidence to support the operational concept of expected prevalence as proposed here is limited. The fact that its application in this study is entirely consistent with other research on EMR, LD, and ED populations cannot be dismissed, however. Until more extensive data are available, any research which is conducted on this topic can only apply the construct of expected prevalence as defined in this study.

Related Research: 1965-1975

The summary conclusions of the Project on the

Classification of Exceptional Children were drawn largely from the research of the staff and membership who participated in the Project's investigation. It is worth noting, however, that a substantial effort was made to review and reference the existing body of literature up through 1974. In order to establish a baseline against which to compare the research of the last ten years, a summary of the key studies on demographic factors related to special education placement follows. While several of these studies were referenced in the Project report, a number of them were not, as the research was either in progress or in press at the time that the Project study was conducted.

In all of the research that was conducted up through 1975 related to characteristics of children placed in EMR, LD, and ED programs, one common finding emerged. The disproportionate representation of ethnic (predominantly black) minorities in public school EMR and ED programs and their equivalent underrepresentation in LD programs was a constant, varying from study to study only by degree. Burke (1975) studied the combined EMR and LD populations (N= 530), and completed a chi-square analysis of the expected versus observed number of black EMR students and white LD students. She found "more black children than expected were observed in EMR rooms, while more white children than expected were observed in LD rooms" (p.

439). Mercer (1973), in a frequently cited review of the EMR population in California's public schools, found non-whites to be significantly overrepresented. While Hispanics and blacks, combined, represented 17% of California's total school enrollment, they represented 50% of the total EMR population. Similar findings in statewide studies were noted by Prillaman (1975) and Lanier (1975), as well as in the evidence presented in Larry P. v Riles (1974). Overrepresentation of males in EMR programs throughout a state population was also a consistent finding (Farber, 1968; Mumpower, 1970; Mercer, 1975; Prillaman, 1975).

The relationship between race and ED placement was also studied, but to a lesser degree. Craig, Kaskowitz, and Malgoire (1978) conducted an extensive longitudinal study of 7,000 pupils in Minnesota. Their investigation involved secondary analysis of data collected between 1963 and 1970 by the National Center for Health Statistics. They found that teachers tended to identify a significantly higher number of black than white students as emotionally disturbed. In concluding, the authors said that "...there is no question that children from nonwhite ethnic backgrounds have been erroneously assigned to classes for the mentally retarded and emotionally disturbed" (p. 5). Similar patterns were found by Johnson (1969), Rubovits and Maehr (1973), and Brophy and Good (1974). The Craig,

Kaskowitz, and Malgoire (1978) study also noted the disproportionate number of males found nationally in ED programs.

A similar summary of the literature related to the demographic characteristics of LD programs prior to 1976 reflects a student profile in stark contrast to the EMR and ED data. The LD programs were, as with most EMR and ED programs, disproportionately male (Critchley, 1970; Bannatyne, 1971; Koppitz, 1971; Gordon, 1976). More importantly, the overrepresentation of white students was consistently reflected in the research (Franks, 1971; Mercer, 1973; Burke, 1975). The findings of the Hobbs Commission, based on the consistent evidence provided by the body of literature, clearly suggested that placement practices in special education as of 1975 were far from color-blind.

Related Research: 1975-1985

The demographic studies of EMR, LD and ED programs conducted since 1975 can be best described as splintered. An ideal progression in research would reflect a series of discrete investigations of a given topic, with each study building on previous findings. In addition, each successive study would both expand the scope of its "parent" study, and control for identified limitations or confounding variables. Such a logical sequence is

non-existent in the published literature since 1975. As a result, the primary organizing principle in this critique will be the scope of the various studies, e.g. division/district or state-level samples as opposed to regional or national samples.

Small-scale studies at the local division level are clearly the most prevalent, which probably reflects the greater availability of the data to prospective researchers. The findings of these studies are not necessarily any less telling, however. Wartel (1980) looked at a sample of 209 children referred for possible placement in an EMR program in one school division. In computing a discriminant analysis of the referral data, he found gender to be the most significant predictor of EMR placement when controlling for I.Q. and socioeconomic status. The results of this investigation were somewhat weakened by the author's failure to measure the strength of the discriminant function by calculating a Wilks-Lambda coefficient.

Leinhardt, Sewald, and Zigmond (1981) looked at gender and racial characteristics of 105 LD students, the total population of the primary LD program in the participating school division. In conducting a three-way contingency analysis of the sample, a significant positive race and sex relationship to placement was found. White males were found to be significantly overrepresented in contrast to

white females as well as non-white males and females. These findings supported the authors' hypothesis that children are frequently placed in LD programs "using differential standards for disability depending on the personal characteristics of race and sex" (p. 10). Hassett and Gurian (1984) reviewed data on 420 elementary students, and though more girls (56%) than boys (39%) were below grade level, 53% of the boys received LD services compared to 33% of the girls. Results from both of these studies directly contradict research by Shepard, Smith, And Vojir (1983) and Clarizio and Phillips (1986) suggesting no empirical evidence exists to support the overrepresentation of males in LD programs.

Two similar studies were conducted at the school division level in which frequency tables were produced as opposed to statistical analyses of the data. Gajar (1977) studied the characteristics of the total LD and EMR populations in a Virginia school division, with a combined sample size of 378 students, and he found a disproportionate number of black males in both programs. These results were consistent with both earlier and later investigations as far as EMR program population characteristics, but contrasted sharply with the typical profile of LD programs comprised largely of white males. A larger study conducted by Designs for Change (1983) looked at the total EMR population in the Chicago school system.

The major findings noted that, a) Chicago's black students were assigned to EMR classes at twice the rate of white students and b) Chicago's EMR program contained a black population three times larger than any other school system in the country. Both studies concluded that no data on prevalence rates for mild mental retardation (EMR) could be found which justified such racial overrepresentation.

A number of smaller but well designed studies examined both race and gender and their association with EMR placement. Smith (1983) designed a study to measure the impact of court-ordered desegregation on minority placement in special education in Cleveland, Columbus, Dayton, Toledo, and Cincinnati, and found a disproportionate number of blacks in EMR classes across all five school divisions. Tomlinson, Acker, Canter, and Lindborg (1977) looked at a student sample of 355 students in an urban school division and found a 2:1 ratio of males to females, and 48% black enrollment (though blacks only accounted for 34% of the nonhandicapped population. Argulewicz (1983) found a disproportionate number of black and Hispanic students enrolled in EMR programs in a sample of 9,950 students in the Southwest. Mahon, First, and Coulter (1981) conducted a survey of the EMR population in Champaign, Illinois and though the total black enrollment for the school district was 25%, blacks accounted for 73% of the EMR population. Polloway, Epstein, Patton, Cullinan, & Luebke (1986)

reviewed data on 104 elementary and 130 secondary EMR students, and found significant overrepresentation of blacks and males.

Price (1981) identified a pattern of disproportionate ED placement among black students in large, urban school districts. In Los Angeles, he found that black students comprised only 25% of the total school population but more than 40% of the ED program population. Black enrollment in New York City totaled 39% of the total district population, but 55% of the ED program enrollment. Price also found a similar pattern in rural areas, citing a Kentucky school district in which blacks accounted for only 19% of the total student body, but 41% of the ED student population. He concluded by noting that "The obvious commonality among these illustrations is the fact that black student enrollment for the behaviorally disordered is far in excess of the enrollment we would predict, based on theoretical projections" (p. 2). Additional research confirming a high rate of black disproportion in ED programs was cited by Rhodes and Paul (1978), Lindholm, Touliatas, and Rich (1978), and Kauffman (1985). Male disproportion in ED programs has been reviewed by Rubin and Balow (1978), Schlosser and Algozzine (1979), and Smith, Wood, and Grimes (1988).

Research conducted on statewide samples from either LD or EMR programs was limited to three studies. Taylor

(1979) looked at the relationship between age, gender, and ethnicity and variations in prevalence among ED, EMR, and LD populations in Oklahoma's public schools. Data analysis of the 29,212 student sample yielded two significant findings; males were found to outnumber females by a 3:1 ratio, and non-white students (especially blacks) were substantially overrepresented within both the EMR and ED populations.

Similar results were noted by Brady, Manni, & Winikur (1983) in their analysis of the EMR population in the New Jersey public schools. While black students accounted for only 17.8% of the total school population, they were found to represent 43% of the EMR population, or approximately three times the predicted prevalence. In addition, while Hispanics comprised 7.4% of the total school enrollment, they represented 13.3% of the EMR population, or double the expected number. By contrast, while white students accounted for 75% of the total enrollment, they were found to represent only 43% of the EMR population. Wright and Santa-Cruz (1983) examined all of the school districts in California and found that, despite stringent safeguards enacted by the state government, blacks were significantly overrepresented in 25% of the EMR programs.

Only one regional demographic study of EMR or LD populations has been published since 1975, but that study has clearly had a major impact on the field of special

education. The majority of texts which were reviewed for citations related to ethnic composition of special education programs cited Tucker's (1980) study in detail, frequently including several of his original graphs. Tucker's research was based on a racially representative sample of 50 school districts in the Southwestern United States, which he studied for an eight year period. The precise methodology employed in this research, in combination with both the scope and length of the project, yielded findings which are often viewed as characteristic of special education programs nationally. While both the data and the results are too voluminous to review in detail, the four findings most relevant to this review were as follows;

a) Blacks were found to be highly overrepresented in EMR programs in contrast to both Hispanic and white populations, and the disproportionate ratios were constant over eight years,
b) While remaining disproportionately high, the actual number of black students in EMR programs began to decline at the midpoint of the study,
c) As the number of black students enrolled in EMR programs began to decline, an almost identical increase in the number of black students placed in LD programs occurred, and

d) Special education populations in all catagories except LD and EMR programs remained ethnically proportionate for the duration of the study.

While a predictably high number of conclusions were drawn from Tucker's findings, that which most succinctly addresses the focus of this review is relatively brief. As Tucker rather pointedly concluded, "It does not take much imagination to infer that there is at least the possibility that when it was no longer socially desirable to place black students in EMR classes, it became convenient to place them in the newly provided LD catagory" (p. 103-104).

That research conducted on a national level, either through study of a representative national sample or by reviewing the results of a number of smaller studies, is limited in every case. Smith (1983) reviewed the limited research on overrepresentation of males in LD programs, and compiled a mean male:female ratio across all population samples of four-to-one. The conclusions which accompanied these results simply recognized the overrepresentation as an apparent "status quo", despite having noted the evidence "that there are no sex differences in learning problems of unreferred children" (p. 77). Lerner (1985), in looking at national school census data for LD programs, merely outlined the typical gender ratios indicating a disproportionate number of males but with little comment as

to the significance of the figures or any related conclusions.

Thurlow and Ysseldyke (1980) conducted a methodologically strong, four-part study of 536 educational decisions makers from across the United States to assess those factors most influential in the placement decisions they had rendered. A repeated measures ANOVA analysis of the data indicated that achievement scores had the greatest effect on the placement decisions. It was noted, however, that when academic scores and SES were held constant, gender had the most significant effect on a student's final placement. The limitations in attempting to generalize from this study arise from the fact that the data were gathered by means of a "self-report" survey. Both the validity and reliability of such data are somewhat suspect, regardless of the methodological strength of the study's over-all design.

The remaining studies, conducted on a national scale since 1975, are quite disparate in design and format. All, however, offer further evidence of a continuing overrepresentation of minority males in both EMR and ED programs and their equivalent underrepresentation in LD programs. In 1983, the National Coalition of Advocates for Students (NCAS) commissioned a report on the status of services to "at risk" children in America. The outgrowth of that report was a document entitled, Barriers to

Excellence: Our Children at Risk (National Coalition of Advocates for Students, 1985). While the data gathered for the report were not collected in an empirical fashion, those conclusions which were drawn are based on documented data most frequently available in extant databanks. Most commonly cited sources were U.S. Office of Civil Rights' reports and the National Center for Educational Statistics. Conclusions drawn from this report of significance to this review included;

a) Excessive numbers of poor and minority students are misplaced in EMR classes. In 1981, while only 1.06% of all white students were placed in such classes, 3.35% of all black students were so placed,
b) White children are overrepresented in LD programs while black children are underrepresented,
c) On a national level, black students (predominantly male) are placed in EMR classes at a rate which is three times that of their white peers and,
d) Research evidence suggests that when non-discriminatory testing occurs, no more than 1.25% of any racial group are found eligible for EMR programs

While these conclusions are both powerful and persuasive, they must be viewed in light of one severe limitation; the intended audience for this report was predominantly a

non-scientific one, and much of its purpose was political. The same data gathered by the task force, were they organized and analyzed with more empirical rigor, might well prove irrevocable evidence of discriminatory placement practices in special education.

In 1981, the U.S. General Accounting Office (GAO) compiled a report on the status of special education in America's public schools. They combined data from 15 evaluation studies and two databases in an effort to develop supportable generalizations about the efficacy of special education placment practices. The conclusions presented in this report included the following;

a) A disproportionate share (41%) of black students in special education were in classes for the educable mentally retarded.
b) A disproportionate share of male children appear to participate in some special education programs; males are three times as likely to be found in ED programs and two and one half times as likely to be found in LD programs.
c) Black students are the top proportion of participants in ED programs, but by contrast have the lowest proportional representation in LD programs of any racial or ethnic group.

The study closed by calling for an urgent examination of state and local school division compliance with the

assurances and procedural safeguards delineated in PL 94-142.

The only longitudinal study of minority representation in special education was conducted by Chinn and Hughes (1987), and they used the OCR Elementary and Secondary Survey database used in this study. The authors found a consistent pattern of black overrepresentation in EMR and ED programs between 1978 and 1984. Because the researchers relied exclusively on frequency counts in analyzing the data sampled, however, no statistical inferences or generalizations can be drawn from this study.

In what may have initially appeared to be a duplication of the NCAS and GAO studies, the National Research Council (NRC) commissioned a panel report on national placement practices in special education but the final report document was vastly different in both design and content. Edited by Heller, Holtzman, & Messick (1982), this 652 page study included an alogarithmic analysis of the national placement data from the U.S. Office of Civil Rights for the year 1978. It included both a 200 page empirical investigation of the secondary data, as well six scholarly reviews of research on topics related to discriminatory placement practices in special education. Much like the NCAS report, the major finding was that of a disproportionate number of black children in EMR programs nationwide, with blacks placed at a rate three times that

of whites. A related finding of black underrepresentation in LD programs was noted as well. Two problems develop in attempting to extrapolate practical conclusions from this massive document, however. The first concern is related to the narrow, one-year scope of the study and the corresponding limitations. Unlike the research by Tucker, noted earlier, this one-year in-depth study provides a "vertical" examination of the year 1978. In the absence of any comparable national studies, however, the findings offer little insight into changes, trends, or patterns over time in the characteristics of EMR populations. A second concern is related to the significance of the year 1978 in relationship to PL 94-142. This law, passed in 1975, was "phased in" over a three year period ending in 1978. Certain features of the law addressed the very same discriminatory issues raised by the NRC report. If by 1979 or 1980, the effects of the new law were gradually begnning to change the EMR and LD populations, the NRC study may have been significantly outdated prior to its 1982 publication date. Given the availability of comparable data prior to this investigation, and continuing reports from the Office of Civil Rights since 1978, the findings of the NRC panel pointed up the need for a broader, "horizontal" study.

To summarize, the limited research which been conducted since 1975 related to demographic characteristics

of EMR, LD, and ED programs suggests a continuation of placement practices similar to those documented by the Project on the Classification of Exceptional Children. But the conclusions which can be drawn from this review are necessarily limited. There appears to be no cohesive strand which connects any two of the preceding studies; they each develop a singular methodology and suffer from dissimilar weaknesses. More importantly, though they generally deal with the same general question, there is no evidence of any attempt to follow the aforementioned "logical research progression". While this particular topic is not necessarily unique in terms of its fragmented (and limited) knowledge base, the implications arising from a more organized research effort could prove to be disturbing. But the risk that what is found out may raise a number of larger questions, or create a degree of discomfort for some, does not outweigh the fundamental merit of the original question. What do the extant data indicate about the relationship between race and gender and national student placement in EMR, LD, and ED programs since 1975?

Summary of Previous Research and Relationship to the Problem

There appear to be three conclusions which can be

drawn from the combined results of the studies which have been reviewed. A crucial caveat which must accompany these conclusions speaks to the care which must be taken in combining these results. This review has not attempted to carry out a meta-analysis of the research, nor is it likely that such a few disjointed studies can be examined in this way. In short, while the following conclusions are supportable, they are not derived from an empirically flawless knowledge base.

1) There is consistent but fragmentary evidence that placement practices in special education, especially in regard to minorities, have remained unchanged since 1975.
2) Scattered data from the local to the national level suggest that black males continue to to be overrepresented in EMR and ED programs.
3) White males continue to be overrepresented in many LD programs, although two studies (Gajar, 1979; Tucker, 1980) suggest that an increasing of black males are being placed in LD programs.

A final, more expansive observation which grows out of the combined thinking of several policy analysts in special education involves the larger issue of classification practices. As Reschly (1984) observed, "We now have many classification systems, varying significantly from state to

state...The variations in terminology and classifications are quite large, so much so that the same...student's classification may change from LD to EMR simply by crossing state lines" (p. 17). Perhaps in examining the placement practices related to EMR, LD, and ED programs since 1975, conclusions and recommendations arising from this study will serve as a modest first step in providing alternatives.

CHAPTER III

METHODOLOGY

Population and the Sample

The population for this study consisted of all students 5 to 21 years of age enrolled in EMR, LD, and ED programs in the United States between 1975 and 1985. The sample used for this study included all students in the United States, ages 5 to 21, placed in EMR, LD, and ED programs in those school districts sampled by OCR from 1976 through 1984. The specific years sampled were 1976, 1978, 1980, 1982, and 1984. The 1984 sample data are the most current data in aggregate form, having been made available for the first time in September of 1986.

An additional sample was also required in order to compute expected prevalence rates for specific groups (e.g., males) within EMR, ED, and LD populations. This sample consisted of all students enrolled in those U.S. public schools sampled from 1976 through 1984.

These data were drawn from the "Elementary and Secondary School Survey" Time Series (1968-1984) database. The initial survey data were collected by the U.S. Office for Civil Rights, Department of Education. The design and sampling methodologies for the surveys were devised by the DBS Corporation and the National Center for Educational Statistics (NCES), subcontractors employed by OCR based on

their expertise in the field of survey research.

The documentation which accompanied the Time Series database described the methodology used in conducting the surveys in detail. The same two basic instruments were used consistently to collect the data; "The School District Summary Form" (CR 101), and the "Individual School Campus Report" (CR 102). Selection methodology was based on school district size, as the school district was the basic unit of study. All districts with a total enrollment in excess of 3,000 students were sampled. Those districts with enrollments totaling 1,200 to 2,999 students were sampled with a .75 probability, and those with total enrollments of between 600 and 1,199 with a .5 probability. Districts with student enrollments ranging from 300 to 599 were sampled with a .25 probability, and those enrolling less than 300 were not sampled. Each of the samples selected for the five even-year surveys conducted from 1976 through 1984 were "randomly chosen in a manner that permitted proper statistical projection" (U.S. Office for Civil Rights, 1986).

Of additional importance in understanding the survey methodology is the fact that, once a school district was selected for a given year's sample, every elementary and secondary school within that district was surveyed. For this reason, a complete picture of each selected district was obtained. Conversely, as the same districts were not

necessarily sampled in consecutive surveys, the data do not allow for longitudinal studies of more than a few specific school districts (e.g., New York city.)

Research Design

The design which was employed in this investigation was a descriptive research design, as the study set out to establish the existence of a relationship between the factors of race and gender and placement in an EMR, LD, or ED program. The more important feature of this study was the selection of secondary data for analysis, rather than primary data generated by the study itself. As secondary analysis in social research has a potential impact on the design of the study itself, several factors were anticipated and controlled for in order to avoid any such unintended effects.

Hakim (1982) defines secondary analysis as "any further analysis of an existing dataset which presents interpretations, conclusions, or knowledge additional to, or different from, those presented in the first report..." (p.1). The OCR School Survey data examined in this study clearly meet these criteria, especially as the Time Series database includes only the raw data free of any interpretive comment.

Hakim also identifies the four concerns for

researchers involved with secondary analysis as sample size, sampling design, response rate, and the factor of time (p. 9). As the data gathered by OCR were the products of an empirically designed sampling methodology, the first three factors were controlled for in this study. The issue of whether time entered into the design as an additional variable is also moot, though to a lesser degree. As Hakim suggests, "Research that is theoretical, concerned with elucidating causal relationships and explanations of social phenomena, is not time-specific in the same way as research geared to descriptive accounts of how society is functioning today" (p. 10). The use of secondary data, and the impact of time on the secondary analysis of that data, was more obvious in the NRC study (Heller, et.al, 1982) as the report was not published until four years after the one year examined.

One major advantage which Hakim identifies in selecting a design based on secondary analysis is "that it forces the researcher to think more closely about the theoretical aims and substantive issues of the study" (p.16). As she goes on to point out, given the alternative of struggling with the practical and methodological problems involved in collecting primary data, secondary analysis often generates more useful and powerful results. It is suggested here that this study attempted to draw on this design strength, largely through a continued emphasis

on the "substantive issues" which this investigation sought to address. As Kiecolt and Nathan (1985) suggest, "...analysts of change must rely on existing data to probe shifts in attitudes and behavior" (p. 9).

Specific Null Hypotheses

The null hypotheses which were tested by means of the log-linear statistic are as follows:

1) Black students will not be significantly overrepresented in programs for the educable mentally retarded

2) Male students will not be significantly overrepresented in programs for the educable mentally retarded

3) White students will not be significantly overrepresented in programs for the learning disabled

4) Male students will not be significantly overrepresented in programs for the learning disabled

5) Black students will not be significantly overrepresented in programs for the emotionally disturbed

6) Male students will not be significantly overrepresented in programs for the emotionally disturbed

Procedures

Data were drawn from the OCR Time Series 1968-1984 database, with the required data from the even-year surveys from 1976 through 1984 assigned by demographic or placement variable to the appropriate cell. Summary data for each year included the:

-Total number of black male and female students in EMR, LD, and ED programs,

-Total number of black male and female students enrolled in public schools,

-Total number of white male and female students in EMR, LD, and ED programs,

-Total number of white male and female students enrolled in public schools,

Statistical Analysis

The statistic originally selected for data analysis in this study was crossbreak analysis ("crosstabs"), largely because of its traditional application in a study where all

the data are nominal. As noted by Norusis (1985), "The usual response of researchers faced with crosstabulated data is to compute a chi-square test of independence for each subtable. This strategy is fraught with problems and usually does not result in a systematic evaluation of the relationship of the variables. The classical chi-square approach also does not provide estimates of the effects of the variables on each other, and its application to tables with more than two variables is complicated" (p. 298). Given these drawbacks, the data collected for this study were analyzed instead by means of a log-linear model. This statistic, developed only recently, is a much more useful and powerful statistic which allowed for greater generalizability of significant results. As Norusis describes the log-linear statistic, "These models are useful for uncovering potentially complex relationships among the variables in a multiway crosstabulation. Log-linear models are similar to multiple regression models, and all variables that are used for classification are independent variables, and the dependent variable is the number of cases in a cell in a crosstabulation" (p. 298).

The critical feature of log linear models is the cross-product or "odds ratio", as described by Haberman (1978) and Reynolds (1977), and it underlies several measures of association. Reynolds further characterizes

the ratio datum as a "very helpful heuristic device for understanding log-linear analysis" (p. 20). The "odds ratio" is that ratio between the frequency with which an item appears in a category (in this case, a cell) and the frequency with which it fails to appear in a category (cell). The odds ratio is a linear contrast of the logarithms of the two odds; for the purposes of this study, the odds ratio was positive whenever the odds of a black or male student being assigned to an EMR or ED program was higher than for a white or female student. If the odds for either student being placed was approximately the same, the odds ratio moved closer to zero, while a higher probability of the white or female student being placed yielded a negative value. The statistical paradigm for LD placement was modified based on the null hypotheses, with positive ratios generated by increased odds for white or male student placement. An even probability of racial or gender distribution yielded a ratio nearing zero, and a negative log-odds ratio resulted from disproportion in black or female LD placement patterns (knoke and Burke, 1980).

The specific log-linear model used in this study was the "logit" model, which allowed one variable (e.g., EMR placement) to be chosen as the dependent variable. The dependent variable's expected odds (or expected prevalence) was then analyzed as a function of a designated independent

variable (e.g., gender or race). This comparison is expressed statistically as

$$P = \log_e \frac{\text{B:handicapped/B:nonhandicapped}}{\text{W:handicapped/W:nonhandicapped}}$$

In order to facilitate interpretation of the derived statistics, they were then transformed to a measure of association by means of the Yule's Q statistic, which is limited to values between +1 and -1 (as with correlations.) This relationship is expressed statistically as

$$Q = \frac{(a - 1)}{(a + 1)} \qquad \text{where } a = e^{x}$$

and x = the Log-Odds ratio

Both statistical formulas are drawn from Finn's (1982) analysis of placement patterns in special education using data from the 1978 OCR Elementary and Secondary School Survey.

Statistical analysis of the data yielded a breakdown of the strength of the relationship between the independent variables (race and gender) and the dependent variables (placement in an EMR, LD, or ED program) at the national and state level. State data were grouped by region, as established by Finn (1982) in the National Academy of

Science research on the same database. Data were then analyzed on a comparative basis for a given survey year, and then reviewed over the eight-year period studied to examine national and regional trends in placement practices.

Summary of Methodology

The study described here attempted to determine what, if any, relationship exists between the factors of race and gender, and student placement in EMR, LD, and ED programs nationally from 1976 through 1984. The research design employed was that of a descriptive study involving secondary analysis of the sample data. The sample for this study consisted of all students, ages 5 to 21, placed in public school EMR, LD, and ED programs in districts surveyed by the U.S. Office of Civil Rights in 1976, 1978, 1980, 1982, and 1984.

The data were drawn from OCR's Time Series computerized database, as gathered and aggregated by OCR and expert subcontractors. Data were then converted to cross-product ratios, and analyzed with log-linear statistics to determine the extent to which race and gender are related to placement in EMR, LD, and ED programs.

CHAPTER IV

FINDINGS AND RESULTS

This chapter presents the results of the statistical analysis and interpretation of a secondary dataset drawn from the U.S. Office for Civil Rights Elementary and Secondary Schools Surveys conducted in even numbered years from 1976 through 1984. Student placements in programs for the educable mentally retarded, learning disabled and emotionally disturbed were studied to identify patterns of overrepresentation based on race or gender. Data were converted to cross-product ratios by means of log-linear statistics, and a measure of association was computed for each ratio datum to determine the strength of the relationship between the independent and dependent variables.

This chapter is organized into six sections according to the six hypotheses identified in Chapter III. The results of the statistical analysis of the data related to each hypothesis are presented. The statistical data are summarized in tables reflecting both national and state results, and their significance described by a narrative interpretation of the findings depicted in the tables. Each section concludes with a determination as to whether the specific null hypothesis was accepted or rejected.

Hypothesis 1: Black Students will not be significantly overrepresented in programs for the educable mentally retarded.

The national data reveal a number of findings relative to the first hypothesis which suggest a continuing pattern of black student overrepresentation in EMR programs. During the first four survey years, the log-odds ratios remained relatively constant in ranging from 1.19 to 1.26, with a mean Q value of .54 (see Table 1). Never during the period surveyed did black students comprise less than 50% of the total EMR population, despite constituting no more than 29% of the nonhandicapped population. The numerical drop in the log-odds ratio to 1.08 in 1984, which suggests a decline in the degree of disproportion, is more a relative change than a significant shift. As of 1984, blacks still constituted approximately 56% of the national EMR placements, with the strength of the relationship between race and EMR placement seen in the Q value of .49.

The data on placement patterns by state, which are organized according to region in Tables A-1 through A-5 in Appendix A, are generally consistent with the national profile. In all regions except the Northeast, a modest drop in the disproportion indexes is evident, though the mean of log-odds ratios continue to range from .90 to 1.29 (see Table 2).

Table 1

National Summary of EMR Placements by Race and Gender

		Race						Gender					
		Nonhandicapped Percentage		EMR Percentage				Nonhandicapped Percentage		EMR Percentage			
Year	n	Black	White	Black	White	Log-Odds	Q	Male	Female	Male	Female	Log-Odds	Q
1976	22,473,456	26.86	73.14	56.42	43.58	1.26	.56	49.46	50.54	62.00	38.00	.51	.26
1978	25,504,845	23.62	76.38	51.19	48.81	1.22	.54	50.48	49.52	61.08	38.92	.43	.22
1980	23,301,539	23.18	76.82	49.81	50.19	1.19	.53	50.33	49.67	60.17	39.83	.40	.20
1982	16,962,049	29.01	70.99	57.38	42.62	1.19	.53	50.17	49.83	59.70	40.30	.39	.19
1984	14,847,689	29.92	70.08	55.79	44.21	1.08	.49	50.16	49.84	60.45	39.55	.42	.21

Table 2

Summary of Regional Mean Log-Odds Ratios for Categories by Race and Gender: 1976 v. 1984

	EMR		LD		ED	
	1976	1984	1976	1984	1976	1984
Region	M	M	M	M	M	M
Border						
Race	1.27	.93	-.42	-.45	.50	.57
Gender	.50	.39	.97	.90	1.29	1.48
Midwest						
Race	1.06	.93	-.03	-.04	.51	.54
Gender	.49	.28	1.10	.93	1.27	1.25
Northeast						
Race	.89	.90	.24	.16	.69	.71
Gender	.43	.40	.92	.84	.59	.57
South						
Race	1.42	1.29	.22	.03	.08	.12
Gender	.55	.41	1.04	1.01	1.22	1.33
West						
Race	1.31	1.06	-.54	-.56	.56	.52
Gender	.37	.21	.89	.79	1.12	1.28

The Southern states continue to reflect the highest level of disproportion of black to white students in EMR programs. While the mean log-odds ration dropped from 1.42 to 1.29 between 1976 and 1984 in the South, the mean values of Q fell only slightly from .60 to .56. In five of the eleven Southern states, black students accounted for 70% or more of the EMR population (80% in Mississippi and 78% in South Carolina), and the log-odds ratio for all but one state was 1.15 or higher (Table A-4).

The Western states registered the second steepest decline in the degree of disproportion, as is evident in Table A-5. The number of Western states with log-odds ratios above 1.0 has dropped by almost 50%, with 1984 ratios ranging from a low of .68 (Q= .33) in Oregon to a high of 1.47 (Q=.62) in Arizona. Despite the overall drop, however, the West ranks second only to the South in disproportion with a 1984 mean log-odds ratio of 1.06 (Q= .48) as shown in Table 2. It is also interesting to note that, despite stringent state-mandated safeguards designed to reduce minority overrepresentation in EMR programs, 46% of the students in California's EMR programs were black as of 1984.

The largest overall decline in disproportion occurred in the Border states (see Table A-1), though three of the six states had log-odds ratios ranging from 1.01 (Q=.46) in Missouri to 1.55 (Q=.65) in Delaware. In Delaware, blacks

make up 61% of all EMR students sampled in 1984, with a comparable figure of 62% in Missouri.

The mean of log-odds ratios for the Midwest dropped below 1.00 as of 1984 (see Table 2), but a closer look at Table A-2 reveals that all but two states (Michigan and Kansas) have log-odds ratios of .80 or higher. In two states, Minnesota and Kansas, the level of disproportion has actually increased since 1976, with Minnesota registering a log-odds ratio of 1.35 (Q=58) in 1984.

The Northeast, unlike the other regions, showed a slight increase in the level of disproportion (see Table A-3). It must be noted that four states in the Northeast were not included in the 1984 data columns because of limited black student enrollment, so regional patterns generated from data in the remaining states cannot not be generalized to Maine, New Hampshire, or Vermont. Massachusetts was also removed from the data table, but the limited number of blacks enrolled in EMR programs relative to their representation in the nonhandicapped population cannot be accounted for in this study. New York showed the single largest increase in black overrepresentation, as 73% of the sample EMR population was black in 1984, a log-odds ratio of .95 (Q=.44). For the same year, Connecticut had the highest log-odds index (1.29) of any Northeastern state, with a Q value of .56 indicative of a significant and strong association between race and EMR placement.

Black students continue to be signficantly overrepresented at both the national and regional levels, despite a gradual but limited decline in the rate of disproportion. Therefore, Hypothesis 1 is rejected.

Hypothesis 2: Male students will not be significantly overrepresented in programs for the educable mentally retarded.

Results of the statistical analysis of national data, compiled in Table 1, suggest only a modest degree of disproportion of males in EMR programs. As of 1984, the ratio of males to females was 3:2, yielding a log-odds ratio of .42 (Q=.21). This placement rate remained relatively stable in the survey years beginning in 1978, with the highest level of disproportion evident in 1976 when the log-odds ratio was .51 (Q=.26). The total percentage of male students never exceeded 62% in the national samples, and only in 1982 did males constitute slightly less than 60% of the national EMR sample population.

Appendix B contains Tables B-1 through B-5 which summarize the regional profiles of placements patterns by gender across states. These tables reflect systematic variation in EMR placements for males and females. As of 1976, three regions (the Southern, Border, and Northeastern

states) had mean log-odds ratios ranging from .49 to .55, with an average male/female ratio approaching 2:1. States in the West and Midwest dropped well below these placement ratios, with the West the lowest with a mean log-odds ratio of .37 and a corresponding Q value of .18 (see Table 3).

Regional variation was more pronounced between 1976 and the last survey year of 1984. The states in the Midwest demonstrated the most pronounced drop in rates of disproportion (Table B-2), with log-odds indexes falling from a mean of .49 (Q=.23) in 1976 to a mean of .28 (Q=.14) in 1984. The majority of Midwestern states in 1976 had from 61% to 64% male predominance in EMR programs, but by 1984 the regional mean percentage for male/female placements was 56% male to 44% female. Michigan was the only state in the Midwest which continued to place males in EMR programs disproportionately, with a 3:2 ratio of males to females and a log-odds ratio of .47 (Q=.23) closer to 1986 norms.

The Western region (see Table B-5) registered the lowest overall levels of disproportion by 1984, but these states were also more likely to place male and female students proportionately in 1976. By 1984, five of the states registered log-odds indexes below .20 and Colorado had statistically proportionate 1:1 placement ratios with a log-odds index of 0.00.

In Table B-4, the data on the states in the South

Table 3

Summary of Regional Mean Q Values for Categories by Race and Gender: 1976 v. 1984

	EMR		LD		ED	
	1976	1984	1976	1984	1976	1984
Region	M -	M -	M -	M -	M -	M -
Border						
Race	.55	.42	-.20	-.22	.23	.27
Gender	.24	.19	.45	.42	.56	.62
Midwest						
Race	.48	.42	-.02	-.02	.24	.25
Gender	.23	.14	.49	.43	.55	.55
Northeast						
Race	.50	.41	.10	.05	.31	.32
Gender	.21	.19	.43	.40	.59	.57
South						
Race	.60	.56	.11	.02	.04	.06
Gender	.27	.20	.47	.46	.53	.57
West						
Race	.57	.48	-.25	-.27	.27	.25
Gender	.18	.10	.41	.38	.49	.56

again suggest the most consistent probability of disproportionate placement by gender, as was the case with race. Though some states such as Texas, Virginia, Florida and North Carolina showed a marked decline between 1976 and 1984, others did not. While no Southern state registered an increase in disproportion, Alabama and Louisiana continued to place males more often than females, as seen in their respective log-odds indexes of .53 (Q=.26) and .55 (Q=.27).

States in the Northeast (Table B-3) remained relatively stable, and in the 1984 survey rated just behind the Southern region in terms of disproportion with a mean log-odds index of .40 (Q=.19) as seen in Table 2. Two states in the Northeast did reflect an increase in male overrepresentation in EMR programs, however. By 1984, 65% of the EMR student population sampled in Massachusetts was male (a log-odds ratio of .61, Q=.30). In the same year, however, 70% of the students in New York's EMR programs were male, generating a log-odds ratio of .87 (Q=.41) and the second largest level of disproportion in the country.

Table B-1 indicates a significant level of intraregional variability, which is not fully appreciated by examining the mean log-odds ratio for the Border states. In 1984, Delaware was one of only two states nationally to generate a log-odds ratio of 0.00., indicative of an even probability of males and females being placed in an EMR

program. In marked contrast, the District of Columbia exhibited the highest rate of disproportion in the United States, with a log-odds ratio of .89 and an equally significant Q value of .42. Only New York approached the 7:3 male/female ratio achieved in EMR placements in the District's school division.

Results from the analysis of the national and state data, while variable among and within specific regions, yielded no consistently significant levels of of male overrepresentation in EMR programs. In addition, overall levels of disproportion in all five regions dropped consistently between 1976 and 1984. Therefore, Hypothesis 2 is accepted.

Hypothesis 3: White students will not be significantly overrepresented in programs for the learning disabled.

In reviewing the data relative to race and LD placement in Table 4 and in Appendix C, Tables C-1 through C-5, it is important to review the significance of negative log-odds ratios and corresponding Q values (also negative). This hypothesis, when tested as stated, would be rejected only if the values for both the log-odds ratios and Q were positive and significant thereby indicating a disproportionate number of white students in LD programs. With a few exceptions as noted, however, between 1976 and

Table 4

National Summary of LD Placements by Race and Gender

		Race						Gender					
		Nonhandicapped Percentage		LD Percentage				Nonhandicapped Percentage		LD Percentage			
Year	n	Black	White	Black	White	Log-Odds	Q	Male	Female	Male	Female	Log-Odds	Q
1976	22,511,268	26.86	73.14	25.00	75.00	.10	.05	49.46	50.54	72.62	27.38	1.00	.46
1978	25,676,715	23.62	76.38	22.88	77.12	.04	.02	50.48	49.52	72.71	27.29	.96	.45
1980	23,705,289	23.18	76.82	22.96	77.04	.01	.005	50.33	49.67	72.22	17.78	.94	.44
1982	17,355,747	29.01	70.99	30.87	69.13	-.08	-.04	50.17	49.83	72.18	27.82	.95	.44
1984	15,275,980	29.92	70.08	31.03	69.13	-.05	-.02	50.16	49.84	71.10	28.90	.89	.42

1984 the data suggest an increasing probability of an even distribution of students by race, or a modest degree of disproportion in the direction of black students.

In looking at the national profile in Table 2, the log-odds ratios beginning in 1976 move from a positive .10 (Q=.05) to a negative value in 1984 of -.05 (Q=-.02). Because all of the ratios are statistically insignificant as to the greater probability of either black or white students being placed in LD programs, what remains is the clear and consistent trend line over eight years. As of 1984, the national data suggest that the probability of a black or white student being placed in an LD program as a function of race is an even one.

The state data (Appendix C) are more indicative of interregional variability, which is more pronounced in looking at race as a factor in LD placement. In comparing regional means of log-odds ratios for 1976 (Table 2), the continuum reflected significant disproportion favoring black students in the West (a mean log-odds ratio of -.54, Q=-.25) while the Northeastern states tended towards a modest overrepresentation of white students (a mean log-odds ratio of .24, Q=.10). This spread had narrowed considerably by 1984, in that three of the five regions yielded negative mean log-odds ratios, and the remaining two regions declined to .16, Q=.05 (the Northeast) and log-odds=.03, Q=.02 (the South).

Variations within the regions are most prominent in the Northeast (see Table C-3). With log-odds ratios as late as 1984 ranging from a highly significant level of white disproportion in Massachusetts (log-odds ratio=1.93, Q=.74) to an overrepresentation of blacks in Pennsylvania (log-odds=-.27. Q=-.13), such disparities limit the meaningfulness of regional statistical means. It should be noted that in 1976 four of the six Northeastern states reflected positive log-odds ratios, but by 1984 four of the six states generated negative log-odds ratios.

Table C-4 confirms the most substantial change in placement patterns as a factor of race in the Southern region. Between 1976 and 1984, the mean log-odds ratio fell from .22 (Q=.11) to a near even probability ratio of .03 (Q=.02). This shift away from a modest level of white disproportion was generally pervasive, with six of the eleven states showing negative values in 1984, and two more with positive log-odds ratios of only .11 (Q=.05) and .03 (Q=.01). Alabama, with 70% of the total LD enrollment comprised of white students, was alone in the South in maintaining a moderate degree of white disproportion with a log-odds ration of .51 (Q=.25).

The Border and Western states, profiled in Tables C-1 and C-5, show a marked consistency in that 14 of the 15 states included in the 1984 data sample reflect negative log-odds ratios. The range among these ratios is

considerable, with a log-odds of -.15 (Q=.07) for both West Virginia and Hawaii and much more significant ratios for Nevada (log-odds=-1.10, Q=-.49) and Kentucky (log-odds=-.89, Q=-.42). In both regions it can be said that black students are consistently more likely to be overrepresented in LD programs in 1984 than they were in 1976, although the strength of this association is variable depending on the state.

LD Placement patterns related to race are more polarized in the Midwest region (Table C-2), and this polarization was consistent across the five survey years. In 1984, six of the states clustered around a mean log-odds ratio of -.28, while three states yielded a mean log-odds ratio of .50. Statistically, however, the only contrasting ratios of any significance are those for Michigan (log-odds=.47, Q=.23) and Minnesota (log-odds=-.47, Q=-.23).

The data related to race as a factor in LD student placement are consistent in suggesting that, over the eight years surveyed, the probability of black overrepresentation has gradually increased. The rate of black disproportion had approached moderate levels of significance in the Western and Border regions by 1984. Therefore, Hypothesis 3 is accepted.

Hypothesis 4: Male students will not be significantly overrepresented in programs for the learning disabled.

In examining the data on LD placements as a factor of gender, both the national profile (see Table 4) and the regional profile of states found in Appendix D, Tables D-1 through D-5 show striking consistencies. All five regions mirror the national pattern from 1976 through 1984; males were significantly overrepresented in LD programs nationally in 1976 (log-odds=1.00, Q=.46), and despite a gradual decline to a log-odds ratio of .89 (Q=.42), the degree of disproportion remains significant. The best evidence of the continuing disproportion is in understanding that the 1976 male/female ratio was 3:1, and despite a measurable decline, in 1984 that ratio was still 7:3 in the national data sample.

In marked contrast to the regional variability found in looking at the first three hypotheses, significant similarities among virtually all states are found when examining LD placement as a function of gender. In computing mean log-indexes for each region, compiled in Table 2, by 1984 all five regions generate significant ratios and corresponding Q values. The Western states have a mean log-index of .79 (mean Q=.38), and though this is the lowest of the five, it remains significant. The log-odds ratio of 1.01 (Q=.46) for the Southern states is

the highest regional mean, and is highly significant in respect to the rate of male disproportion in LD programs.

Regional and intraregional comparisons, whether for one year or over the eight years surveyed, only serve to confirm the strong parallels in the strength and direction of LD placement patterns by gender. In looking at 1984 data, for example, in 35 of the 51 states males accounted for 70% or more of the LD population. In the remaining states, males comprised no less than 66% of the LD population, so in no area of the country does the male/female ratio fall below a 2:1 ratio and in a significant number of states it remains at a 3:1 ratio.

The results of the data analysis relative to gender as a factor in student placement in LD programs are consistent and significant. Both on a national level, and in all five regions, males are much more likely than females to be classified as learning disabled. Therefore, Hypothesis 4 is rejected.

Hypothesis 5: Black students will not be significantly overrepresented in programs for the emotionally disturbed.

National and regional data relative to ED placement as a factor of race are a study in contrasting results. If conclusions relative to Hypothesis 5 were to be drawn

exclusively from an analysis of the national data (see Table 5), the hypothesis would be rejected. The log-odds ratios from 1976, 1978, and 1980 show a steady increase in the disproportion of blacks in ED programs, with the highest ratio of .43 (Q=.21). By 1984, however, the ratio had regressed to a level of minimal significance (log-odds ratio=.19, Q=.10), and blacks accounted for only 5% more of the ED population than their representation in the nonhandicapped population would have predicted.

A regional breakdown of state placement patterns, displayed in Appendix E, Tables E-1 through E-5, presents a different perspective from the national profile. While the regional levels of disproportion register only moderate significance as of 1984, mean log-odds ratios have gradually increased during the eight years surveyed in four of the five regions (see Table 2). In fact if the Southern region, which falls 40 mean ratio points below the higher four, is factored out of the equation, the mean ratio for the remaining four regions is .59 (Q=.30), a moderately significant disproportion rate for the sample.

The data profile on the Southern states in Table E-4 represents not only a break with the other regions relative to ED placement rates and race, but a contrast with patterns in the South noted in reviewing the data on earlier hypotheses. While specific states such as North Carolina and Louisiana were more consistent with the trend

Table 5

National Summary of ED Placements by Race and Gender

		Race						Gender					
		Nonhandicapped Percentage		SED Percentage				Nonhandicapped Percentage		SED Percentage			
Year	n	Black	White	Black	White	Log-Odds	Q	Male	Female	Male	Female	Log-Odds	Q
1976	22,152,014	26.86	73.14	32.59	67.41	.28	.14	49.46	50.54	76.69	23.31	1.21	.54
1978	25,175,858	23.62	76.38	31.43	68.57	.39	.20	50.48	49.52	77.70	22.30	1.23	.55
1980	23,071,375	23.18	76.82	31.64	68.36	.43	.21	50.33	49.67	78.05	21.95	1.26	.56
1982	16,770,039	29.01	70.99	34.65	65.35	.26	.13	50.17	49.83	78.82	21.78	1.27	.56
1984	14,742,859	29.92	70.08	34.13	65.87	.19	.10	50.16	49.84	77.70	22.30	1.24	.55

towards an increase in black student disproportion (their respective ratios in 1984 were .56, Q=.27 and .50, Q=.25), the majority of Southern states showed a declining rate of disproportion. As of 1984, four states in the South registered negative log-odds indexes, two of which were moderately significant. Texas (log-odds=-.43, Q=-.21), and Alabama (log-odds=-.41, Q=-.20) displayed a greater probability of placing white students in ED programs in numbers disproportionate to their representation in the nonhandicapped sample population.

Black students residing in the Northeastern states were the most likely to be overrepresented in ED programs (see Table E-3). With four states excluded from the regional data sample because of limited black student enrollment, the remaining five states registered the highest mean log-odds ratio (.71, mean Q=.32) in the 1984 survey. In New York and New Jersey, black students accounted for better than 60% of the total ED enrollment, and New Jersey, Connecticut, and Rhode Island combined to to register significant levels of disproportion.

The Border states, depicted in Table E-1, displayed more diversity both between states and within states over time. For example, the mean log-odds ratio for the region increased from .50 (Q=.23) to .57 (Q=.27) between 1976 and 1984. In Delaware alone, the disproportion index went from a negative rate of -.08 (Q=-.04) to a positive and

significant ratio of .95 (Q=.44) in 1984. In looking across the states in 1984, however, the ratios range from a low of .07 (Q=.03) in Oklahoma to a high of 1.35 (Q=.59) in Kentucky.

The Midwest is also characterized by disparate placement patterns in every survey year. Overall mean log-odds ratios shifted slightly upward between 1976 and 1984 (Table 2), but even in 1984 Michigan recorded a negative ratio of -.35 (Q=-.17) while Nebraska registered a highly significant and positive log-odds ratio of 1.26 (Q=.56). Minnesota maintained increasingly higher levels of disproportion throughout all five survey years, while Michigan never generated a positive ratio.

The states comprising the West region (Table E-5) offer no definitive patterns of significance, except that it is the one region which registered a slight downward trend in the overall levels of disproportion. This decline came in spite of the fact that between 1976 and 1984, four of the states included in the data table showed an increase in log-odds ratios, while four ratios fell below 1976 levels. Nevada, Washington, and Alaska tended to place a significantly disproportionate number of blacks in ED programs as of 1984, as all three had log-odds ratios and related Q values well above the mean ratio and Q value for the region.

By 1984, four of the five regions in the United States

had shown a gradual increase in the rate of black disproportion in ED programs, with each of these regions registering moderately significant levels of overrepresentation. The Southern region was a marked exception to to this trend. Based on the data in four regions representing 40 of the 51 states examined, and the moderately significant disproportion rates in these regions, Hypothesis 5 is rejected.

Hypothesis 6: Male students will not be significantly overrepresented in programs for the emotionally disturbed.

This study analyzed the impact of race and gender on student placement in three categorical programs, and the relationship between the independent and dependent variables is the strongest and most significant in testing Hypothesis 6. The national data support this finding conclusively, as is evident in Table 5. The log-odds ratios range from 1.21 in 1976 to 1.24 in 1984, with a mean Q value of .55 for the 8 years surveyed, all of which represent significant levels of disproportion. The degree of male overrepresentation is most apparent, apart from the statistical data, in contrasting the 1976 male/female ratio of slightly above 3:1 with the 1984 ratio nearing 4:1.

The state placement patterns are equally

disproportionate, as the regional tables in Appendix F, Tables F-1 through F-5 substantiate. The Border, Southern, and Western states all produced measurable increases in the rate of disproportion, while the Midwestern and Northeastern states generated very slight overall decreases in mean log-odds ratios from 1976 through 1984. However, the lowest mean ratio for any region in 1984 (the Midwest) was still a highly significant 1.25 (Q=.55).

In looking more closely at the Midwestern states in profile (see Table F-2), seven of the 11 states have a log-odds ratio of 1.34 (Q=.58) or higher, with Ohio registering a ratio of 1.57 (Q=.65). The three states with ratios below 1.00 range from .87 (Q=.41) to .93 (Q=.44), all of which are significant in defining male student disproportion. The Midwestern states have remained consistent in generating highly significant probabilities of male overrepresentation in ED programs, with males accounting for 80% or more of the total ED population in five to seven states in every year surveyed.

The Border states (Table F-1) yielded both the highest mean log-odds ratio in 1984 (log-odds=1.48, Q=.62), and the largest increase in mean values (up 19 points from a mean log-odds ratio of 1.29 in 1976). All but one state yielded a ratio of 1.44 or greater, with the most significant rate of disproportion in the District of Columbia (log-odds=1.63, Q=.67). All the border states except

Delaware have in excess of 80% males in their ED programs, with corresponding statistical ratios which are highly significant.

The Northeast (Table F-3) and the South (Table F-4) produced strikingly similar results, though the South actually increased in rates of disproportion while the Northeast declined slightly. In 1984, the mean log-odds ratio for the Southern states was 1.33 (Q=.57) and the same ratio datum for the Northeast was 1.32 (Q=.57). In the final survey, only one of the states (Massachusetts) in either region produced a log-odds ratio below 1.05, and 17 of the 20 states had ratios of 1.23 (Q=.54) or higher. The typical ED program in either region included 79% male students, or a mean male/female ratio of 4:1. Most notably, no single state varied significantly from the shared regional norms, suggesting a high degree of acceptance of chronic, significant levels of disproportion in both regions.

The Western states (Table F-5) ranked second only to the Border states in increased levels of disproportion between 1976 and 1984. In 1976, six of the Western states exhibited log-odds ratios below the 1.00 level, but by 1984 only two (Utah and Wyoming) remained below that level. Idaho produced the highest log-odds ratio of 1.77 (Q=.71), which would be expected from a state in which males comprise 86% of the total ED program population sampled. A

review of the data from intervening survey years indicates the same degree of uniformity in levels of disproportion in Western states noted in the South and Northeast.

Data related to the association between gender and placement in ED programs are consistently and highly significant in verifying a uniformly disproportionate number of males on both a national and state level. Therefore, Hypothesis 6 is rejected.

Summary

This chapter presented the results of a log-linear analysis of secondary data from the U.S. Office for Civil Rights Elementary and Secondary School Surveys from 1976, 1978, 1980, 1982, and 1984. The statistical analysis was intended to assess the extent to which the independent variables of race and gender correlated with national student placement patterns in EMR, LD, and ED programs. The product generated by the analysis was a series of log-odds ratios which defined the probability of racial or gender disproportion, with a corresponding measure of association known as Yule's Q.

Based on the derived data, the following findings were noted:

1) Black students continue to be significantly over-represented in EMR programs in all regions of the United States. The overall level of disproportion has decreased, but not to a statistically significant degree.

2) Male students were overrepresented in EMR programs on a national level, but only to a moderate and declining extent. Levels of disproportion were more variable between regions, with the South exhibiting the highest mean rate of male overrepresentation.

3) White students are not overrepresented in LD programs at the national or regional level, though significant variability between and within regions was found. In recent years, there is a slight but increasing probability that black students will be placed in disproportion to expected representation.

4) The prevalence of males in LD programs is significantly higher than would be expected, both nationally and regionally. Ratios for males versus females in LD programs varies from 2:1 to 3:1 depending on the state or region.

5) Black students are overrepresented in ED programs at moderately significant levels, except in the majority of Southern states where black/white student ratios approach a probability level consistent with expected prevalence.

6) Males are most significantly overrepresented in ED programs at all levels surveyed and analyzed. Male to female ratios range no lower than 7:3, with some states exceeding 4:1 ratios as of 1984.

CHAPTER V

CONCLUSIONS, SUMMARY, AND RECOMMENDATIONS

From its origins in the 1800's, special education has evolved primarily towards the objective of providing those educational services required by children and adolescents with identified disabilities. In the process of evolving, however, the field of special education has become burdened with three issues related to the identification of those students requiring services; a) classification and placement, b) prevalence and c) overrepresentation. During the decade prior to 1975, an increasing amount of discussion occurred within the field surrounding each of these issues. Since the passage of P.L. 94-142 in 1975 was a partial effort to address these issues, a review of the status of these issues in the decade following 1975 appeared appropriate.

The research on all three issues since 1975 has largely been limited to small studies at the district or state level. Those few studies examining national data have looked only at a given point in time, thereby providing no indication of shifts or trends which might have occurred with the passage of time. Some general conclusions have been drawn, however, which defined the status of placement, prevalence, and overrepresentation as this current study was undertaken.

The issue of student placement has continued to generate significant policy debate and research, much of it centering on concerns that classification and placement are more often the outgrowth of naturally occurring pupil characteristics rather than identifiable disabilities. Ysseldyke, Algozzine, Regan, and McGue (1979) found the strongest association between classification decisions and a student's gender, ethnicity, and physical characteristics. Wood (1981) found that teachers and administrators involved in the classification process viewed behavior as "disturbed" primarily based on "cultural and language differences related to ethnicity" (p. 53). Noting the absence of any reasonable explanation for the disproportionate number of boys in ED programs, Achenbach and Edelbrock (1981) concluded that this phenomenon "may...result more from the conflicts between their {boys'} behavior and official norms than from quantitative differences in problems" (p. 51). An even stronger indictment of the classification process stemmed from a review of research by Clarizio and McCoy (1983), in which they ascribed racial disproportion in ED programs to the "debilitating influence of such factors as prejudice, discrimination, segregation {and}...restricted educational and vocational opportunities" (p. 138).

In summary, placement in special education has not evolved into a more valid and reliable process when the

existing literature is considered. As Wang and Reynolds (1985) concluded exactly ten years following the passage of P.L. 94-142, a review of key studies regarding the major issues of classification and placement in special education "confirms a persistent concern in special education" (p. 497). This concern has most recently been reiterated by Ysseldyke (1988) in a major review of classification practices. He summarizes the literature by pointing out that "...different kinds of students are referred in different settings, ...the proportion of referred students who are classified is very high, and...different kinds of students are classified in different settings" (p. 261).

The issue of prevalence, both in terms of observed and expected occurrences, has been and will continue to be a major point of disagreement among policy analysts in special education. The debate conducted between Algozzine and Korinek (1985) and Hallahan, Keller, and Ball (1986), described in an earlier chapter, has recently been joined by Algozzine and Ysseldyke (1987) and Zucker and Polloway (1987). Apart from these discussions in the professional literature, most of which center on matters of statistical selection for prevalence studies, a significant review of the research was completed by Reschly (1988). After an extended survey of the problems of reliability and validity in the classification process, he summarizes by pointing to the substantial social system influences which have created

"huge variations in prevalence among states, {and} among districts within states" (p.41).

Overrepresentation in special education, whether by race or gender, has evolved as the "unintended outcome" generated by a questionable system of classification and placement and variable prevalence rates. Three major reviews of research since 1985 have reached strikingly similar conclusions in regard to overrepresentation, especially as it pertains to minorities. Reschly (1986) stipulated that "the most volatile issue in mild retardation has been and continues to be the overrepresentation of minority students" (p. 6). Brantlinger and Guskin (1988) reviewed the literature on ethnocultural factors related to placement and found a systematic "bias in referral rates, assessment strategies, and types of placements of minority children" (p. 25). The most pessimistic assessment comes from the work of Reynolds and Lakin (1988), who stated that "minority children are currently much more likely to be identified as mildly handicapped and minority enrollments in U.S. schools will continue to grow at a substantially higher rate than those of white pupils" (p.335). This projection, that the existing rate of overrepresentation may fail to improve and even worsen in the future, seemed sufficient justification for a detailed study of this issue in conjunction with placement and prevalence.

All of the empirical research on these three issues since 1975 has been characterized by one or more of the following limitations;

a) Small sample populations were drawn from one school district or state,
b) Larger samples, when studied, were analyzed at one specific point in time rather than over a period of time,
c) The power of the statistic used to analyze the data was so limited that few, if any, valid conclusions could be reached.

The present study was undertaken with the specific objective of compensating for these earlier limitations. The primary research question examined was "To what degree are race and gender related to the actual versus expected prevalence of students placed in programs for the educable mentally retarded, learning disabled, and emotionally disturbed nationally from 1976 through 1984?" A dataset was drawn from a secondary database compiled by the U.S. Office for Civil Rights from a biennial national survey of elementary and secondary schools. The data were analyzed by means of a log-linear statistic selected because of its ability to generate both a probability ratio and a reliable measure of association. Based on the findings relative to

each of six hypotheses, described in detail in the previous chapter, the following section will identify those conclusions which appear to arise from the results of this study.

Conclusion

Reynolds and Lakin (1988) identified the three objectives of a classification system in the social and health sciences; a) to specify etiology, b) to make a prognosis, and c) to select a treatment (p. 343). Viewed in light of the results of this study, it is difficult not to conclude that the current system of classifying and placing students in special education is prevaded by inconsistency. The literature validating the absence of any racial or gender predeterminants for intellectual, learning, or emotional deficits is well established. Despite this fact, these results lend strong credence to those policy analysts who suggest that a variety of social and attitudinal factors "predict" certain etiologies based on race or gender, rather than on the basis of discreet, observable deficits. If, then, the manner in which etiology is specified in special education is flawed, how reliable are the prognoses which follow and how valid the selection of treatments?

If the way in which students are classified and placed

in special education varies significantly on the basis of race or gender, as indicated by this study, the findings also suggest that where a student lives contributes significantly to the type of program for which he qualifies. All states operate under a federal law, and accompanying regulations, which identify a number of procedural safeguards specifically designed to prevent discriminatory classification and placement decisions. The effectiveness of these provisions has not been directly measured in this study. When the variation in placement practices among states is a significant determinant relative to which students are served, however, it seems clear that interpretation and enforcement of the provisions are also variable. Such a conclusion suggests that a doctrine of "unequal protection" may exist in special education, depending on a student's race, gender, or place of residence.

More specifically related to the findings are two conclusions about the need for definitive research to support commonly accepted notions within special education. It can be stated that, smaller studies to the contrary, a learning disability is not the predominant program of choice for white students. But the gradual increase in the proportionate representation of blacks in LD programs, which corresponds to a gradual decline in black student disproportion in EMR programs, may not be coincidental.

Tucker noted this inverse correlation in 1980, as did Brosnan (1983) in a later study of 61 school districts in California. These data may well suggest that, given the legal and social pressures related to the placement of black students in EMR programs, LD placement for blacks are increasingly more likely because of a continuing pattern of exclusion of black students from the mainstream of education.

A second conclusion involves the significance of time as a factor in the design of research in special education. Given the trends which emerged in analyzing the data in this study over an eight year period, the value of longitudinal studies becomes quite apparent. The litigation and social forces which were so potent in shaping P.L. 94-142 continue as a part of the fabric of special education. The NAS study (Heller, Holtzman, and Messick, 1982) drew from the same data base, but only for the last year of the three-year "phase-in" period allowed under P.L. 94-142. Given the policy changes that occur each time a new president is elected, or shifts in the "balance" of the Supreme Court and lower Federal Courts with the appointment of new judges, the knowledge base in special education must reflect an understanding of such factors as these over time as well as at a given point in time.

One conclusion which cannot be joined here is that one

reached by Heller, Holtzman, and Messick (1982) in the NAS study of minority overrepresentation. Having originally set out to identify the causes of racial and gender disproportion in special education, they revised their research question midway through the study. As the authors noted, their new focus centered on the question of "why" disproportion was a problem. Once redirected, they found that "their new question {was} premised on the belief that disproportion per se is not a problem; unequal numbers do not by themselves constitute an inequity" (p. x). Given that the majority of handicapping conditions, when viewed apart from the classification process, are generally found to be distributed proportionately, such a conclusion seems untenable in view of the findings reported here. There is a basis for disagreement with this conclusion in the literature, however, which must be acknowledged.

This study provides support for both positions argued in an effort to establish empirically derived expected prevalence rates relative to the EMR, LD, and ED catagories. There are those who may acknowledge the distribution of students in programs by race or gender, and then set out to explain disproportion as a function of disparate developmental norms or correlated factors such as socioeconomic status. These results do not identify causality, so such interpretations cannot be refuted. But in looking again at the scope of the study, and in

particular the size of the samples analyzed, many variables which cannot be controlled for in smaller studies are eliminated. The fact that race and gender continue to be salient factors in the classification and placement of students in the three largest special education programs cannot be "explained away" as symptomatic of some unidentified underlying "etiology". In conclusion, the problem of race and gender overrepresentation exists in special education, and a solution rather than an explanation is needed. With this conclusion, perhaps the remedy to a longstanding problem will be more fully discussed. This remedy was anticipated by the counsel for the defendant in Brown v. Board of Education, when he beseeched the U.S. Supreme Court not to render an expansive ruling;

> May it please the court, I think if the appellant's construction of the Fourteenth Amendment should prevail here, there is no doubt in my mind that it would catch the Indian within its grasp just as much as the Negro. If it should prevail, I am unable to see why a State would have any further right to segregate its pupils on the ground of sex or on the ground of age or on the ground of mental capacity. (Reynolds & Lakin, 1988, p. 333)

Summary

The purpose of this study was to examine the relationship between race and gender and the expected versus observed prevalence of students placed in EMR, LD,

and ED programs nationally from 1976 through 1984. The data sample was drawn from the bienniel survey of elementary and secondary schools conducted by the U.S. Office for Civil Rights, and following secondary analysis by means of a log-linear statistical model, the following findings were reported;

1) Black students continue to be significantly overrepresented in EMR programs at the national and state level.

2) Male students continue to be overrepresented in in EMR programs on a national level, but not to a significant degree.

3) White students are not significantly overrepresented in LD programs at the national or state level, and in some regions black students are minimally overrepresented.

4) Males are overrepresented in LD programs in ratios varying between 2:1 and 3:1 depending on location.

5) Black students are disproportionately placed in ED programs at moderately significant levels.

6) Males are consistently and very significantly overrepresented in ED programs across all regions and at a national level.

Recommendations for Further Research

In reviewing the findings and conclusions generated by this study, several additional areas of potential research emerged which might further add to the knowledge base on race and gender as factors in the classification and placement of exceptional students.

Placement in special education was viewed as the sole focus of this study, apart from the critical process which precedes final classification and placement decisions. The results of this study suggest that, despite major modifications in the referral and classification process in 1975, the systematic overrepresentation of males and blacks in certain programs persists. In those states where student placement in special education is proportionate by race and gender, data from the OCR database might be examined in an effort to identify factors at the state and district level which contribute to equitable placement practices.

Given the shift in focus which occurred during the course of the NAS study of minority overrepresentation,

there appears to be a need to move beyond theoretical reasoning in establishing constructs underlying research on overrepresentation. The increased demand for empirical evidence to substantiate the deleterious effects of discriminatory placement practices is significant. A single work of great magnitude, such as that provided by Lloyd Dunn in 1968, is no longer sufficient to provoke change. For these reasons, more longitudinal research on the long-term effects of placement in special education needs to occur, with particular attention to furthering the knowledge base on overrepresentation.

Finally, because of the need to focus in this study on national and state data, no effort was made to look at placement patterns at the school district level. Because these data are included in the OCR database, a narrower focus on trends occurring over time in a sample comprised of school districts of various sizes from across the country would broaden the basis for interpreting state, regional, and national placement practices. At the very least, such research might continue to focus attention on those classification and placement practices in special education which are perpetuated daily, regardless of their impact on the lives of students.

APPENDIX A

Regional Summary Tables:

EMR Placements by Race and Year

Table A-1

EMR Placements by Race and Year for Border States

State	1976				1978				1980				1982				1984			
	%B	%W	Log-Odds	Q	%B	%W	Log-Odds	Q	%B	%W	Log-Odds	Q	%B	%W	Log-Odds	Q	%B	%W	Log-Odds	Q
Delaware	61	39	1.71	.70	56	44	1.43	.61	64	36	1.67	.68	61	39	1.43	.61	61	39	1.55	.65
District of Columbia	[a] -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Kentucky	37	63	1.21	.54	30	70	1.21	.54	29	71	1.16	.52	30	70	1.06	.48	26	74	.74	.35
Maryland	63	37	1.43	.61	60	40	1.29	.56	62	38	1.33	.58	68	32	1.18	.52	56	46	.51	.25
Missouri	52	48	1.20	.53	43	57	1.01	.46	41	59	.99	.46	48	52	.95	.44	62	38	1.01	.46
Oklahoma	41	59	1.34	.58	37	63	1.34	.58	38	62	1.26	.55	44	56	.95	.44	44	56	1.20	.53
West Virginia	9	91	.70	.34	10	90	.66	.32	9	91	.71	.34	9	91	.61	.30	9	91	.59	.29

[a] Indicates invalid data sample due to limited white student enrollment.

Table A-2

EMR Placements by Race and Year for Midwestern States

State	1976 %B	1976 %W	1976 Log-Odds	1976 Q	1978 %B	1978 %W	1978 Log-Odds	1978 Q	1980 %B	1980 %W	1980 Log-Odds	1980 Q	1982 %B	1982 %W	1982 Log-Odds	1982 Q	1984 %B	1984 %W	1984 Log-Odds	1984 Q
Illinois	74	26	1.26	.55	69	31	1.31	.57	65	35	1.22	.54	77	23	1.14	.51	76	24	.80	.38
Indiana	48	52	1.20	.53	40	60	1.17	.52	36	64	1.09	.49	45	55	1.09	.49	44	56	1.04	.47
Iowa	12	88	1.16	.52	12	88	1.03	.47	11	89	1.05	.48	11	89	.93	.44	13	87	.99	.46
Kansas	27	73	.98	.45	27	73	.99	.46	30	70	1.08	.49	30	70	.99	.46	32	68	1.09	.49
Michigan	55	45	.83	.39	49	51	.77	.37	45	55	.75	36	60	40	.77	.37	60	40	.55	.27
Minnesota	9	91	1.12	.51	10	90	1.08	.49	10	90	1.13	.51	21	79	1.23	.54	18	82	1.35	.58
Nebraska	29	71	1.49	.63	33	67	1.69	.69	33	67	1.64	.67	44	66	1.35	.58	28	72	1.30	.56
North Dakota	- [a]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ohio	48	52	.64	.31	37	63	.68	.33	34	66	.66	.32	41	59	.59	.29	47	53	.41	.20
South Dakota	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wisconsin	29	71	.87	.41	22	78	.81	.38	26	74	.93	.44	41	59	.85	.40	39	61	.81	.38

[a] Indicates invalid data sample due to limited black student enrollment.

Table A-3

EMR Placements by Race and Year for Northeastern States

State	1976				1978				1980				1982				1984			
	%B	%W	Log-Odds	Q	%B	%W	Log-Odds	Q	%B	%W	Log-Odds	Q	%B	%W	Log-Odds	Q	%B	%W	Log-Odds	Q
Connecticut	50	50	1.50	.63	43	56	1.46	.62	42	58	1.40	.60	60	40	1.28	.56	46	54	1.29	.56
Maine	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Massachusetts	10	90	-.24	-.12	12	88	.28	.14	10	90	-.57	.28	-	-	-	-	-	-	-	-
New Hampshire	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Jersey	69	31	1.35	.58	63	37	1.32	.57	64	36	1.51	.63	68	32	1.29	.56	67	33	1.04	.47
New York	64	36	.79	.38	52	48	.79	.38	48	52	.77	.37	39	61	1.39	.59	73	27	.95	.44
Pennsylvania	52	48	.89	.42	33	67	.89	.42	35	65	.77	.37	52	48	.61	.30	48	52	.54	.26
Rhode Island	13	87	1.04	.47	12	88	.93	.44	12	88	.57	.28	40	60	.99	.46	13	87	.68	.33
Vermont	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

[a] Indicates invalid data sample due to limited black student enrollment.

Table A-4

EMR Placements by Race and Year for Southern States

State	1976				1978				1980				1982				1984			
	%B	%W	Log-Odds	Q	%B	%W	Log-Odds	Q	%B	%W	Log-Odds	Q	%B	%W	Log-Odds	Q	%B	%W	Log-Odds	Q
Alabama	63	37	1.21	.56	62	38	1.20	.53	66	34	1.27	.55	65	35	1.26	.55	72	28	1.29	.56
Arkansas	67	33	1.41	.60	61	39	1.30	.57	66	34	1.36	.58	69	31	1.35	.58	65	35	1.34	.58
Florida	70	30	1.95	.75	68	32	1.90	.74	66	34	1.79	.72	63	37	1.63	.67	63	37	1.44	.61
Georgia	71	29	1.46	.62	69	31	1.40	.60	70	30	1.40	.60	70	30	1.43	.61	73	27	1.25	.55
Louisiana	74	26	1.44	.61	75	25	1.44	.61	74	26	1.37	.59	72	28	1.28	.56	75	25	1.25	.55
Mississippi	78	22	1.30	.56	77	23	1.32	.57	79	21	1.34	.58	79	21	1.39	.59	80	20	1.13	.51
North Carolina	69	31	1.55	.65	63	37	1.42	.60	65	35	1.51	.63	65	35	1.47	.62	69	31	1.51	.63
South Carolina	74	26	1.45	.61	75	25	1.54	.64	77	23	1.61	.66	76	23	1.58	.65	78	22	1.59	.66
Tennessee	48	52	.95	.44	47	53	1.04	.47	51	49	.97	.45	46	54	.91	43	55	45	.95	.44
Texas	61	39	1.54	.64	60	40	1.57	.65	57	43	1.41	.60	58	42	1.39	.59	62	38	1.15	.51
Virginia	60	40	1.35	.58	59	41	1.34	.58	54	46	1.21	.54	65	35	1.55	.65	58	42	1.31	.57

Table A-5

EMR Placements by Race and Year for Western States

State	1976 %B	1976 %W	1976 Log-Odds	1976 Q	1978 %B	1978 %W	1978 Log-Odds	1978 Q	1980 %B	1980 %W	1980 Log-Odds	1980 Q	1982 %B	1982 %W	1982 Log-Odds	1982 Q	1984 %B	1984 %W	1984 Log-Odds	1984 Q
Alaska	18	82	1.59	.66	16	84	1.35	.58	14	86	1.08	.49	25	75	1.49	.63	14	86	1.08	.49
Arizona	28	80	1.40	.60	22	78	1.46	.62	21	79	1.44	.61	23	77	1.39	.59	24	76	1.47	.62
California	44	56	1.07	.49	30	70	.61	.30	36	64	.94	.44	51	49	1.05	.48	46	54	.82	.39
Colorado	19	81	1.27	.56	17	83	1.16	.52	16	84	1.05	.48	22	78	1.05	.48	19	81	.97	.45
Hawaii	-[a]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Idaho	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Montana	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nevada	39	61	1.71	.69	32	68	1.39	.59	27	73	1.20	.53	41	59	1.64	.67	27	73	1.08	.49
New Mexico	18	82	1.54	.64	18	82	1.37	.59	18	82	1.43	.61	8	92	.54	.26	18	82	1.35	.58
Oregon	7	93	.67	.32	8	92	.81	.38	7	93	.81	.38	11	89	.68	.33	7	93	.68	.33
Utah	2	98	1.39	.59	3	97	1.45	.61	2	98	1.41	.60	-	-	-	-	-	-	-	-
Washington	15	85	1.13	.51	9	91	.68	.33	10	90	.70	.34	41	59	.85	.40	15	85	.95	.44
Wyoming	7	93	1.37	.59	4	96	.97	.45	3	97	.39	.19	-	-	-	-	4	96	1.10	.49

[a] Indicates invalid data sample due to limited black student enrollment.

APPENDIX B

Regional Summary Tables:

EMR Placements by Gender and Year

Table B-1

EMR Placements by Gender and Year for Border States

State	1976				1978				1980				1982				1984			
	%M	%F	Log-Odds	Q	%M	%F	Log-Odds	Q	%M	%F	Log-Odds	Q	%M	%F	Log-Odds	Q	%M	%F	Log-Odds	Q
Delaware	57	43	.29	.14	58	42	.30	.15	54	46	.20	.10	52	48	.11	.05	50	50	0.00	0.00
District of Columbia	69	31	.82	.39	71	29	.91	.43	- [a]	-	-	-	68	33	.79	.38	70	30	.89	.42
Kentucky	62	38	.48	.24	62	38	.48	.24	61	39	.45	.22	62	38	.48	.24	60	40	.44	.22
Maryland	63	37	.51	.25	65	35	.64	.31	64	36	.61	.30	62	38	.51	.25	54	46	.17	.08
Missouri	61	39	.44	.22	61	39	.43	.21	59	41	.37	.18	60	40	.39	.19	58	42	.35	.17
Oklahoma	59	41	.37	.18	.60	.40	.42	.21	61	39	.43	.21	61	39	.43	.21	60	40	.39	.19
West Virginia	64	36	.56	.27	65	35	.59	.29	64	36	.57	.28	62	38	.49	.24	61	39	.48	.24

[a] Indicates insufficient data sample to fill cells in matrix.

Table B-2

EMR Placements by Gender and Year for Midwestern States

State	1976				1978				1980				1982				1984			
	%M	%F	Log-Odds	Q	%M	%F	Log-Odds	Q	%M	%F	Log-Odds	Q	%M	%F	Log-Odds	Q	%M	%F	Log-Odds	Q
Illinois	61	39	1.37	.59	58	42	.30	.15	60	40	.40	.20	58	42	.35	.17	59	41	.37	.18
Indiana	64	36	.55	.27	62	38	.48	.24	61	39	.44	.22	60	40	.37	.18	59	41	.33	.16
Iowa	57	43	.29	.14	58	42	.29	.14	58	42	.31	.15	55	45	.23	.11	55	45	.21	.10
Kansas	58	42	.31	.15	57	43	.27	.13	57	43	.25	.12	55	45	.19	.09	55	45	.21	.10
Michigan	63	37	.51	.25	61	39	.45	.22	60	40	.40	.20	61	39	.45	.22	61	39	.47	.23
Minnesota	61	39	.45	.22	60	40	.40	.20	59	41	.33	.16	60	40	.40	.20	56	44	.27	.13
Nebraska	61	39	.45	.22	57	43	.29	.14	57	43	.31	.15	54	46	.19	.09	56	44	.25	.12
North Dakota	58	42	.33	.16	57	43	.29	.14	60	40	.41	.20	58	42	.27	.13	56	44	.23	.11
Ohio	62	38	.45	.22	61	39	.44	.22	61	39	.44	.22	60	40	.42	.21	60	40	.37	.18
South Dakota	59	41	.35	.17	57	43	.27	.13	57	43	.29	.14	- [a]	-	-	-	55	45	.21	.10
Wisconsin	58	42	.33	.16	58	42	.31	.15	56	44	.24	.12	55	45	.15	.07	54	46	.15	.07

[a] Indicates insufficient data sample to fill cells in matrix.

Table B-3

EMR Placements by Gender and Year for Northeastern States

State	1976				1978				1980				1982				1984			
	%M	%F	Log-Odds	Q	%M	%F	Log-Odds	Q	%M	%F	Log-Odds	Q	%M	%F	Log-Odds	Q	%M	%F	Log-Odds	Q
Connecticut	58	42	.33	.16	57	43	.30	.15	55	45	.25	.12	58	42	.35	.17	57	43	.31	.15
Maine	61	39	.45	.22	60	40	.39	.19	60	40	.37	.18	56	44	.27	.13	56	44	.27	.13
Massachusetts	63	37	.55	.27	63	37	.56	.27	64	36	.56	.27	62	38	.45	.22	65	35	.61	.30
New Hampshire	62	38	.49	.24	57	43	.29	.14	58	42	.35	.17	- [a]	-	-	-	59	41	.37	.18
New Jersey	61	39	.44	.22	60	40	.37	.18	59	41	.37	.18	58	42	.33	.16	57	43	.31	.15
New York	58	42	.29	.14	58	42	.29	.14	57	43	.27	.13	55	45	.21	.10	70	30	.87	.41
Pennsylvania	62	38	.48	.24	61	39	.42	.21	60	40	.37	.18	60	40	.35	.17	57	43	.27	.13
Rhode Island	59	41	.37	.18	57	43	.29	.14	57	43	.33	.16	56	44	.29	.14	58	42	.35	.17
Vermont	63	37	.49	.24	58	42	.31	.15	60	40	.39	.19	-	-	-	-	56	44	.25	.12

[a] Indicates insufficient data sample to fill cells in matrix.

Table B-4

EMR Placements by Gender and Year For Southern States

State	1976				1978				1980				1982				1984			
	%M	%F	Log-Odds	Q	%M	%F	Log-Odds	Q	%M	%F	Log-Odds	Q	%M	%F	Log-Odds	Q	%M	%F	Log-Odds	Q
Alabama	65	35	.59	.29	64	36	.33	.16	63	37	.56	.26	63	37	.55	.27	63	37	.53	.26
Arkansas	64	36	.57	.28	63	37	.57	.28	63	37	.54	.26	62	38	.51	.25	60	40	.44	.22
Florida	61	39	.57	.28	59	41	.35	.17	58	42	.31	.15	57	43	.29	.14	57	43	.29	.14
Georgia	63	37	.54	.26	62	38	.45	.24	61	39	.45	.22	59	41	.37	.18	58	42	.33	.16
Louisiana	65	35	.59	.29	64	36	.56	.27	63	37	.54	.26	64	36	.55	.27	64	36	.55	.27
Mississippi	65	35	.62	.30	64	36	.48	.24	64	36	.59	.29	63	37	.55	.27	61	39	.47	.23
North Carolina	63	37	.51	.25	62	38	.51	.25	60	40	.44	.22	59	41	.37	.18	57	43	.31	.15
South Carolina	63	37	.50	.25	62	38	.48	.24	61	39	.45	.22	60	40	.44	.22	60	40	.42	.21
Tennessee	66	34	.66	.32	66	34	.64	.31	65	35	.59	.29	62	38	.49	.24	63	37	.51	.25
Texas	61	39	.44	.22	60	40	.37	.18	58	42	.31	.15	58	42	.31	.15	58	42	.31	.15
Virginia	63	37	.50	.25	61	39	.45	.22	61	39	.43	.21	58	42	.35	.17	58	42	.31	.15

Table B-5

EMR Placements by Gender and Year for Western States

	1976				1978				1980				1982				1984			
State	%M	%F	Log-Odds	Q	%M	%F	Log-Odds	Q	%M	%F	Log-Odds	Q	%M	%F	Log-Odds	Q	%M	%F	Log-Odds	Q
Alaska	56	44	.23	.11	57	43	.27	.13	51	49	.005	.003	62	38	.65	.22	56	44	.21	.10
Arizona	58	42	.33	.16	56	44	.24	.11	54	46	.20	.10	54	46	.19	.09	54	46	.17	.08
California	57	43	.27	.13	57	43	.29	.14	56	44	.25	.12	58	42	.29	.14	57	43	.27	.13
Colorado	57	43	.27	.13	56	44	.23	.11	55	45	.22	.11	53	47	.09	.04	50	50	0.00	0.00
Hawaii	63	37	.55	.27	58	42	.30	.15	56	44	.23	.19	54	46	.15	.07	52	48	.07	.03
Idaho	59	41	.37	.18	60	40	.41	.20	59	41	.35	.17	59	41	.35	.17	57	43	.25	.12
Montana	58	42	.31	.15	58	42	.30	.15	58	42	.31	.15	61	39	.45	.22	55	45	.21	.10
Nevada	59	41	.35	.17	58	42	.29	.14	57	43	.25	.12	50	50	.05	.02	57	43	.29	.14
New Mexico	62	38	.49	.24	60	40	.42	.21	59	41	.35	.17	56	44	.24	.12	57	43	.31	.15
Oregon	58	42	.33	.16	59	41	.35	.17	58	42	.31	.15	56	44	.25	.12	57	43	.27	.13
Utah	62	38	.50	.25	59	41	.37	.18	56	44	.27	.13	55	45	.21	.10	54	46	.19	.09
Washington	60	40	.42	.21	57	43	.27	.13	58	42	.31	.15	58	42	.31	.15	57	43	.29	.14
Wyoming	59	41	.33	.16	55	45	.20	.10	62	38	.47	.23	- [a]	-	-	-	54	46	.15	.07

[a] Indicates insufficient data sample to fill cells in matrix.

APPENDIX C

Regional Summary Tables:

LD Placements by Race and Year

Table C-1

LD Placements by Race and Year for Border States

State	1976 %B	1976 %W	1976 Log-Odds	1976 Q	1978 %B	1978 %W	1978 Log-Odds	1978 Q	1980 %B	1980 %W	1980 Log-Odds	1980 Q	1982 %B	1982 %W	1982 Log-Odds	1982 Q	1984 %B	1984 %W	1984 Log-Odds	1984 Q
Delaware	28	72	-.35	-.17	29	71	-.31	-.15	41	59	-.75	-.36	44	56	-.75	-.36	42	58	-.75	-.36
District of Columbia	[a] -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Kentucky	23	77	-.55	-.27	23	77	-.81	-.38	23	77	-.83	-.39	29	71	-1.01	-.46	29	71	-.89	-.42
Maryland	52	48	-.98	-.45	46	54	-.73	-.35	47	53	-.71	-.34	52	48	-.49	-.24	55	45	-.53	-.26
Missouri	27	73	-.13	-.06	15	85	.43	.21	15	85	.47	.23	22	78	.25	.12	35	65	.09	.04
Oklahoma	19	81	-.23	-.11	17	83	-.23	-.11	19	81	-.29	-.14	30	70	-.33	-.16	27	73	-.45	-.22
West Virginia	6	94	-.25	-.12	5	95	.05	.02	4	96	.17	.08	6	94	-.27	-.13	6	94	-.15	-.07

[a] Indicates invalid data sample due to limited white student enrollment.

Table C-2

LD Placements by Race and Year for Midwestern States

State	1976				1978				1980				1982				1984			
	%B	%W	Log-Odds	Q	%B	%W	Log-Odds	Q	%B	%W	Log-Odds	Q	%B	%W	Log-Odds	Q	%B	%W	Log-Odds	Q
Illinois	38	62	.33	.16	31	69	.31	.15	28	72	.33	.16	45	55	.31	.15	48	52	.45	.22
Indiana	21	79	.05	.02	19	81	-.11	-.05	17	83	-.05	-.02	22	78	-.03	-.01	23	77	-.03	-.01
Iowa	6	94	-.30	-.15	6	94	-.29	-.14	7	93	-.47	-.23	8	92	-.51	-.25	7	93	-.39	-.19
Kansas	16	86	-.15	-.07	12	88	0.00	0.00	16	84	-.27	-.13	16	84	-.19	-.09	16	84	-.23	-.11
Michigan	20	80	.82	.39	21	79	.51	.25	19	81	.51	.25	34	66	.35	.17	35	65	.47	.23
Minnesota	7	93	-.79	-.38	7	93	-.71	-.34	7	93	-.67	-.32	9	91	-.27	-.13	8	92	-.47	-.23
Nebraska	17	83	-.76	-.36	19	81	-.91	-.43	19	81	-.89	-.42	21	79	-.69	-.33	13	87	-.35	-.17
North Dakota	-[a]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ohio	26	74	.35	.17	16	84	.49	.24	17	83	.33	.16	23	77	.25	.12	29	71	.39	.19
South Dakota	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wisconsin	13	87	.17	.08	14	86	-.23	-.11	16	84	-.31	-.15	29	71	-.33	-.16	26	74	-.21	-.10

[a] Indicates invalid data sample due to limited black student enrollment.

Table C-3

LD Placement by Race and Year for Northeastern States

State	1976				1978				1980				1982				1984			
	%B	%W	Log-Odds	Q	%B	%W	Log-Odds	Q	%B	%W	Log-Odds	Q	%B	%W	Log-Odds	Q	%B	%W	Log-Odds	Q
Connecticut	24	76	-.39	-.19	20	80	-.35	-.17	19	81	-.31	-.15	34	66	-.21	-.10	26	74	-.37	-.18
Maine	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Massachusetts	4	96	1.22	.54	8	92	.27	.13	3	97	1.43	.61	2	98	2.83	.89	3	97	1.93	.74
New Hampshire	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Jersey	33	67	.15	.07	25	75	.33	.16	23	77	.31	.15	32	68	.21	.10	40	60	.09	.04
New York	42	56	.13	.06	23	77	.53	.26	25	75	.25	.12	19	81	-.41	-.20	56	44	-.21	-.10
Pennsylvania	17	83	.79	.38	15	85	.09	.04	23	77	-.21	-.10	45	55	-.31	-.15	41	59	-.27	-.13
Rhode Island	8	92	-.49	-.24	5	95	0.00	0.00	10	90	-.35	-.17	26	74	-.37	-.18	9	91	-.21	-.10
Vermont	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

[a] Indicates invalid data sample due to limited black student enrollment.

Table C-4

LD Placements by Race and Year for Southern States

	1976				1978				1980				1982				1984			
State	%B	%W	Log-Odds	Q	%B	%W	Log-Odds	Q	%B	%W	Log-Odds	Q	%B	%W	Log-Odds	Q	%B	%W	Log-Odds	Q
Alabama	22	78	.59	.29	21	79	.65	.31	23	77	.65	31	25	75	.47	.23	30	70	.51	.25
Arkansas	24	76	.47	.23	23	77	.35	.17	27	73	.33	.16	38	62	-.05	-.02	34	66	-.03	-.01
Florida	29	71	-.27	-.13	31	69	-.35	-.17	31	69	-.35	-.17	33	67	-.40	-.20	33	67	-.21	-.10
Georgia	28	72	.40	.20	27	73	.40	.20	30	70	.31	.15	31	69	.23	.11	35	65	.39	.19
Louisiana	29	71	.51	.25	32	68	.21	.10	33	67	.37	.18	40	60	.13	.06	49	51	-.11	-.05
Mississippi	26	74	1.05	.48	28	72	.89	.42	36	64	.61	.30	41	59	.31	.15	50	50	.27	.13
North Carolina	34	66	-.05	-.02	31	69	-.11	-.05	36	64	-.29	-.14	38	62	-.35	-.17	43	57	-.41	-.20
South Carolina	41	59	-.05	-.02	40	60	0.00	0.00	41	59	0.00	0.00	38	62	.09	.04	44	56	-.09	-.04
Tennessee	31	69	-.25	-.12	30	70	-.31	-.15	32	68	-.17	-.08	27	73	-.05	-.02	31	69	.11	.05
Texas	32	68	-.31	-.15	30	70	-.33	-.16	29	71	-.27	-.13	33	67	-.37	-.18	40	60	-.23	-.11
Virginia	22	78	.33	.16	19	81	.49	.24	19	81	.43	.21	24	76	.23	.11	27	73	.03	.01

Table C-5

LD Placements by Race and Year for Western States

State	1976 %B	1976 %W	1976 Log-Odds	1976 Q	1978 %B	1978 %W	1978 Log-Odds	1978 Q	1980 %B	1980 %W	1980 Log-Odds	1980 Q	1982 %B	1982 %W	1982 Log-Odds	1982 Q	1984 %B	1984 %W	1984 Log-Odds	1984 Q
Alaska	7	93	-.55	-.27	9	91	-.65	-.31	11	89	-.77	-.37	13	87	-.71	-.34	11	89	-.83	-.39
Arizona	7	93	-.21	-.10	8	92	-.31	-.15	8	92	-.37	-.18	10	90	-.39	-.19	10	90	-.49	-.24
California	19	81	.12	.06	18	82	.68	.33	17	83	.07	.03	30	70	-.15	-.07	34	66	-.29	-.14
Colorado	9	91	-.41	-.20	9	91	-.37	-.18	8	92	-.29	-.14	13	87	-.41	-.20	11	89	-.35	-.17
Hawaii	- [a]	-	-	-	6	94	.09	.04	5	95	.21	.10	7	93	-.09	-.04	8	92	-.15	-.07
Idaho	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Montana	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nevada	34	66	-1.46	-.62	35	65	-1.51	-.63	27	73	-1.23	-.54	32	68	-1.21	-.54	28	72	-1.10	-.49
New Mexico	8	92	-.61	-.30	10	90	-.67	-.32	6	94	-.19	-.09	9	91	-.67	-.32	9	91	-.61	-.30
Oregon	3	97	.15	.07	3	97	.35	.17	3	97	-.07	-.03	9	91	-.37	-.18	6	94	-.47	-.23
Utah	2	98	-1.13	-.51	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Washington	9	91	-.49	-.24	8	92	-.49	-.24	8	92	-.39	-.19	14	86	-.72	-.35	12	88	-.75	-.36
Wyoming	4	96	-.83	-.39	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

[a] Indicates invalid data sample due to limited black student enrollment.

APPENDIX D

Regional Summary Tables:

LD Placements by Gender and Year

Table D-1

LD Placements by Gender and Year for Border States

State	1976 %M	1976 %F	1976 Log-Odds	1976 Q	1978 %M	1978 %F	1978 Log-Odds	1978 Q	1980 %M	1980 %F	1980 Log-Odds	1980 Q	1982 %M	1982 %F	1982 Log-Odds	1982 Q	1984 %M	1984 %F	1984 Log-Odds	1984 Q
Delaware	73	27	.99	.46	72	28	.93	.44	70	30	.89	.42	71	29	.89	.42	69	31	.82	.39
District of Columbia	72	28	.98	.45	73	27	1.03	.47	76	24	1.17	.52	73	27	1.10	.49	69	31	.85	.40
Kentucky	76	24	1.15	.51	74	26	1.01	.46	73	27	.95	.44	72	28	.93	.44	71	29	.89	.42
Maryland	71	29	.91	.43	69	31	.83	.39	69	31	.83	.39	69	31	.83	.39	69	31	.82	.39
Missouri	71	29	.85	.40	73	27	.98	.45	73	27	.99	.46	73	27	.99	.46	72	28	.95	.44
Oklahoma	73	27	.95	.44	72	28	.91	.43	71	29	.91	.43	70	30	.85	.40	70	30	.85	.40
West Virginia	72	28	.93	.44	75	25	1.06	.48	75	25	1.11	.50	78	22	1.25	.55	75	25	1.13	.51

Table D-2

LD Placements by Gender and Year for Midwestern States

State	1976				1978				1980				1982				1984			
	%M	%F	Log-Odds	Q	%M	%F	Log-Odds	Q	%M	%F	Log-Odds	Q	%M	%F	Log-Odds	Q	%M	%F	Log-Odds	Q
Illinois	73	27	1.91	.74	71	29	.87	.41	70	30	.87	.41	69	31	.83	.39	69	31	.82	.39
Indiana	80	20	1.36	.58	71	29	.87	.41	76	24	1.13	.51	76	24	1.11	.50	75	25	1.07	.49
Iowa	73	27	.99	.46	72	28	.95	.44	70	30	.87	.41	72	28	.95	.44	70	30	.87	.41
Kansas	74	26	1.01	.46	77	23	1.17	.52	72	28	.91	.43	72	28	.98	.45	71	29	.91	.43
Michigan	77	23	1.17	.52	76	24	1.13	.51	74	26	1.07	.49	74	26	1.08	.49	74	26	1.07	.49
Minnesota	74	26	1.03	.47	72	28	.95	.44	72	28	.91	.43	73	27	.98	.45	71	29	.91	.43
Nebraska	72	28	.98	.45	70	30	.87	.41	69	30	.79	.38	69	31	.83	.39	70	30	.87	.41
North Dakota	75	25	1.13	.51	72	28	.95	.44	72	28	.91	.43	71	29	.87	.41	70	30	.85	.40
Ohio	67	33	.70	.34	77	23	1.21	.53	71	29	.89	.42	76	24	1.17	.52	76	24	1.15	.51
South Dakota	67	33	.72	.35	70	30	.85	.40	68	32	.75	.36	- [a]	-	-	-	67	33	.72	.35
Wisconsin	76	24	1.17	.52	77	23	1.21	.53	75	25	1.10	.49	73	27	.98	.45	73	27	.99	.46

[a] Indicates insufficient data sample to fill cells in matrix.

Table D-3

LD Placements by Gender and Year for Northeastern States

State	1976				1978				1980				1982				1984			
	%M	%F	Log-Odds	Q	%M	%F	Log-Odds	Q	%M	%F	Log-Odds	Q	%M	%F	Log-Odds	Q	%M	%F	Log-Odds	Q
Connecticut	73	27	1.01	.46	73	27	1.03	.47	73	27	1.03	.47	71	29	.93	.44	70	30	.87	.41
Maine	70	30	.83	.39	70	30	.83	.39	71	29	.91	.43	72	28	.98	.45	70	30	.85	.40
Massachusetts	72	28	.93	.44	70	30	.85	.40	70	30	.83	.39	70	30	.83	.39	66	34	.64	.31
New Hampshire	70	30	.85	.40	72	28	.93	.44	71	29	.91	.43	71	29	.91	.43	71	29	.91	.43
New Jersey	74	26	1.03	.47	74	26	1.01	.46	71	29	.93	.44	70	30	.87	.41	69	31	.83	.39
New York	67	33	.70	.34	72	28	.91	.43	71	29	.89	42	72	28	.93	.44	70	30	.85	.40
Pennsylvania	74	26	1.05	.48	76	24	1.11	50	74	26	1.05	.48	74	26	1.01	.46	71	29	.89	.42
Rhode Island	74	26	1.05	.48	73	27	1.01	.46	71	29	.93	.44	71	29	.93	.44	69	31	.85	.40
Vermont	70	30	.83	.39	69	31	.77	.37	66	34	.68	.33	- [a]	-	-	-	71	29	.89	.42

[a] Indicates insufficient data sample to fill cells in matrix.

Table D-4

LD Placements by Gender and Year for Southern States

	1976				1978				1980				1982				1984			
State	%M	%F	Log-Odds	Q	%M	%F	Log-Odds	Q	%M	%F	Log-Odds	Q	%M	%F	Log-Odds	Q	%M	%F	Log-Odds	Q
Alabama	73	27	.99	.46	75	25	1.07	.49	75	25	1.12	.51	75	25	1.11	.50	74	26	1.07	.49
Arkansas	72	28	.95	.44	74	26	1.04	.47	72	28	.92	.43	72	28	.93	.44	71	29	.91	.43
Florida	77	23	1.37	.59	76	24	1.14	.51	75	25	1.11	.50	74	26	1.05	.48	74	26	1.07	.49
Georgia	74	26	1.05	.48	75	25	1.09	.49	75	25	1.11	.50	74	26	1.07	.49	75	25	1.10	.49
Louisiana	76	24	1.11	.50	74	26	1.04	.48	74	26	1.05	.48	73	27	.97	.45	72	28	.93	.44
Mississippi	75	25	1.07	.49	77	23	1.21	.54	76	24	1.17	.52	75	25	1.11	.50	74	26	1.05	.48
North Carolina	75	25	1.13	.51	76	24	1.15	.51	75	25	1.10	.49	74	26	1.07	.49	74	26	1.05	.48
South Carolina	73	27	.99	.46	73	27	.99	.46	74	26	1.04	.47	74	26	1.07	.49	74	26	1.05	.48
Tennessee	68	32	.77	.37	69	31	.81	.38	69	31	.79	.38	71	29	.87	.41	72	28	.95	.44
Texas	69	31	.82	.39	70	30	.83	.39	70	30	.87	.41	71	29	.87	.41	71	29	.89	.42
Virginia	77	23	1.17	.52	77	23	1.23	.54	77	23	1.21	.53	74	26	1.07	.49	73	27	1.01	.46

Table D-5

LD Placements by Gender and Year for Western States

State	1976				1978				1980				1982				1984			
	%M	%F	Log-Odds	Q	%M	%F	Log-Odds	Q	%M	%F	Log-Odds	Q	%M	%F	Log-Odds	Q	%M	%F	Log-Odds	Q
Alaska	68	32	.72	.35	67	33	.67	.32	68	32	.72	.35	67	33	.67	.33	68	32	.71	.34
Arizona	74	26	1.04	.47	72	28	.95	.44	71	29	.89	.42	70	30	.85	.40	69	31	.79	.38
California	77	23	1.22	.54	75	25	1.09	.49	72	28	.95	.44	71	29	.89	.42	70	30	.85	.40
Colorado	72	28	.93	.44	71	29	.91	.43	70	30	.87	.41	70	30	.83	.39	70	30	.83	.39
Hawaii	75	25	1.09	.49	72	28	.95	.44	72	28	.93	.44	71	29	.89	.42	71	29	.87	.41
Idaho	68	32	.73	.35	70	30	.85	.40	68	32	.73	.35	67	33	.67	.33	68	32	.73	.35
Montana	70	30	.82	.39	70	30	.83	.39	69	31	.75	.36	69	31	.79	.38	68	32	.75	.36
Nevada	72	28	.93	.44	69	31	.79	.38	70	30	.83	.39	71	29	.91	.43	70	30	.85	.40
New Mexico	72	28	.93	.44	70	30	.85	.40	70	30	.83	.39	71	29	.91	.43	70	30	.87	.41
Oregon	64	36	.56	.27	68	32	.73	.35	69	31	.77	.37	69	31	.79	.38	68	32	.77	.37
Utah	67	33	.72	.35	70	30	.83	.39	68	32	.77	.37	67	33	.73	.35	67	33	.72	.35
Washington	74	26	1.01	.46	72	28	.93	.44	70	30	.85	.40	71	29	.89	.42	69	31	.79	.38
Wyoming	71	29	.83	.39	70	30	.82	.39	68	32	.73	.35	- [a]	-	-	-	67	33	.72	.35

[a] Indicates insufficient responses to fill cells in matrix.

APPENDIX E

Regional Summary Tables:

ED Placements by Race and Year

Table E-1

ED Placements by Race and Year for Border States

State	1976 %B	1976 %W	1976 Log-Odds	1976 Q	1978 %B	1978 %W	1978 Log-Odds	1978 Q	1980 %B	1980 %W	1980 Log-Odds	1980 Q	1982 %B	1982 %W	1982 Log-Odds	1982 Q	1984 %B	1984 %W	1984 Log-Odds	1984 Q
Delaware	21	79	-.08	-.04	25	75	.10	.05	42	58	.77	.37	47	53	.87	.41	47	53	.95	.44
District of Columbia	[a] -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Kentucky	40	60	1.31	.58	34	65	1.38	.59	35	65	1.44	.61	39	61	1.43	.61	40	60	1.35	.59
Maryland	30	70	.05	.02	33	67	.19	.09	33	67	.13	.06	38	62	.09	.04	44	56	.08	.04
Missouri	36	67	.53	.26	28	72	.33	.16	20	80	-.06	-.03	27	73	.01	.005	41	59	18	.09
Oklahoma	21	79	.36	.18	31	69	1.05	.49	15	85	.04	.02	38	62	.67	.32	20	80	.07	.03
West Virginia	11	89	.81	.39	11	89	.78	.37	13	87	1.13	.51	13	87	1.10	.50	12	88	.90	.42

[a] Indicates invalid data sample due to limited white student enrollment.

Table E-2

ED Placements by Race and Year for Midwestern States

State	1976				1978				1980				1982				1984			
	%B	%W	Log-Odds	Q	%B	%W	Log-Odds	Q	%B	%W	Log-Odds	Q	%B	%W	Log-Odds	Q	%B	%W	Log-Odds	Q
Illinois	50	50	.20	.09	43	57	.21	.10	40	60	.17	.08	62	38	.38	.19	61	39	.09	.04
Indiana	38	62	.79	.38	28	72	.59	.29	31	69	.83	.39	34	66	.63	.30	30	70	.43	.21
Iowa	10	90	.89	.42	11	89	.98	.45	9	91	.81	.38	10	90	.82	.39	13	87	1.01	.46
Kansas	19	81	.47	.23	19	81	.50	.25	25	75	.77	.37	23	77	.63	.30	21	79	.53	.26
Michigan	31	69	-.20	-.10	30	70	-.05	-.025	23	77	-.27	-.13	32	68	-.41	-.20	38	62	-.35	-.17
Minnesota	8	92	.90	.42	9	91	1.03	.48	13	87	1.35	.58	23	77	1.33	.58	16	84	1.20	.54
Nebraska	27	73	1.38	.59	33	67	1.68	.69	34	66	1.67	.68	37	63	1.46	.62	28	72	1.26	.56
North Dakota	- [a]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ohio	32	68	-.01	-.005	34	66	.51	.25	31	69	.48	.24	40	60	.53	.26	42	58	.18	.09
South Dakota	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wisconsin	18	82	.21	.10	21	79	.71	.34	20	80	.63	.30	30	70	.39	.19	32	68	.47	.23

[a] Indicates invalid data sample due to limited black student enrollment.

Table E-3

ED Placements by Race and Year for Northeastern States

State	1976 %B	1976 %W	1976 Log-Odds	1976 Q	1978 %B	1978 %W	1978 Log-Odds	1978 Q	1980 %B	1980 %W	1980 Log-Odds	1980 Q	1982 %B	1982 %W	1982 Log-Odds	1982 Q	1984 %B	1984 %W	1984 Log-Odds	1984 Q
Connecticut	46	54	1.36	.59	31	69	.93	.44	27	73	.75	.36	44	56	.64	.31	35	65	.80	.38
Maine	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Massachusetts	6	94	-.76	-.36	16	84	.59	.29	5	95	-.75	-.36	-	-	-	-	-	-	-	-
New Hampshire	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Jersey	56	44	.78	.37	46	54	.59	.29	45	55	.75	.35	59	41	.88	.41	60	40	.74	.35
New York	70	30	1.05	.48	63	37	1.22	.54	63	37	1.37	.59	36	64	1.27	.56	64	36	.51	.25
Pennsylvania	36	64	.24	.12	30	70	.78	.37	38	62	.89	.42	60	40	.85	.40	49	51	.59	.29
Rhode Island	20	80	1.49	.63	14	86	1.02	.47	13	87	.65	.31	44	56	1.16	.53	14	86	.71	.34
Vermont	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

[a] Indicates invalid data sample due to limited black student enrollment.

Table E-4

ED Placements by Race and Year for Southern States

State	1976				1978				1980				1982				1984			
	%B	%W	Log-Odds	Q	%B	%W	Log-Odds	Q	%B	%W	Log-Odds	Q	%B	%W	Log-Odds	Q	%B	%W	Log-Odds	Q
Alabama	34	66	.03	.02	35	65	.06	.03	33	67	-.13	-.06	31	69	-.18	-.09	32	68	-.41	-.20
Arkansas	31	70	-.09	-.05	31	69	.03	.02	41	59	.30	.15	40	60	.12	.06	37	63	.16	.08
Florida	25	65	.52	.25	34	66	.50	.25	35	65	.49	.24	36	67	.52	.25	37	63	.38	.19
Georgia	38	62	.06	.03	41	59	.27	.13	34	66	-.12	-.06	37	63	.05	.02	43	57	-.04	-.02
Louisiana	48	52	.29	.14	44	56	.14	.07	46	54	.15	.07	51	49	.32	.16	59	41	.50	.25
Mississippi	40	60	-.40	-.20	40	60	-.28	-.14	37	63	-.57	-.28	37	63	-.45	-.22	60	40	.11	.05
North Carolina	36	62	.24	.12	39	61	.42	.21	39	61	.40	.20	40	60	.44	.22	46	54	.56	.27
South Carolina	35	65	-.23	-.11	35	65	-.25	-.12	39	61	-.06	-.03	39	61	-.03	-.01	45	55	.13	.06
Tennessee	35	65	.39	.19	37	63	.60	.29	34	66	.27	.13	27	73	.06	.03	32	68	-.01	-.005
Texas	22	78	-.18	-.09	22	78	-.07	-.03	20	80	-.24	-.12	21	79	-.24	-.12	26	74	-.43	-.21
Virginia	33	67	.21	.10	32	68	.23	.11	35	65	.44	.22	36	64	.37	.18	34	66	.32	.16

Table E-5

ED Placements by Race and Year for Western States

State	1976				1978				1980				1982				1984			
	%B	%W	Log-Odds	Q	%B	%W	Log-Odds	Q	%B	%W	Log-Odds	Q	%B	%W	Log-Odds	Q	%B	%W	Log-Odds	Q
Alaska	7	93	.55	.27	7	93	.39	.19	6	94	.05	.03	11	90	.48	.24	9	91	.66	.32
Arizona	7	93	.11	.06	8	92	.24	.12	7	93	.12	.06	8	92	.10	.05	9	91	.31	.15
California	32	68	.55	.27	47	53	1.34	.58	37	63	1.00	.46	30	70	.17	.08	30	70	.11	.05
Colorado	11	89	.58	.28	11	89	.66	.32	12	88	.65	.31	15	85	.56	.27	12	82	.38	.19
Hawaii	- [a]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Idaho	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Montana	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nevada	14	86	.30	.15	20	80	.72	.35	27	73	1.20	.54	32	68	1.23	.55	25	75	.93	.44
New Mexico	9	91	.72	.35	9	91	.51	.25	10	90	.78	.37	8	92	.52	.25	8	92	.45	.22
Oregon	10	90	1.05	.48	11	89	1.17	.52	7	93	.88	.41	10	90	.51	.25	6	94	.44	.22
Utah	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Washington	10	90	.61	.30	9	91	.60	.29	10	90	.69	.33	18	82	1.03	.47	14	86	.86	.40
Wyoming	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

[a] Indicates invalid data sample due to limited black student enrollment.

APPENDIX F

Regional Summary Tables:

ED Placements by Gender and Year

Table F-1

ED Placements by Gender and Year for Border States

State	1976				1978				1980				1982				1984			
	%M	%F	Log-Odds	Q	%M	%F	Log-Odds	Q	%M	%F	Log-Odds	Q	%M	%F	Log-Odds	Q	%M	%F	Log-Odds	Q
Delaware	72	28	.93	.44	72	28	.95	.44	72	28	.99	.46	74	26	1.06	.48	73	27	.99	.46
District of Columbia	76	24	1.17	.52	82	18	1.51	.63	73	27	1.04	.47	80	20	1.50	.63	83	17	1.63	.67
Kentucky	80	20	1.37	.59	79	21	1.30	.56	81	19	1.41	.60	83	17	1.59	.66	83	17	1.59	.66
Maryland	82	18	1.56	.65	80	20	1.41	.60	83	17	1.60	.66	80	20	1.45	.61	82	18	1.55	.65
Missouri	81	19	1.41	.60	81	19	1.44	.61	82	18	1.51	.63	81	19	1.47	.62	81	19	1.49	.63
Oklahoma	80	20	1.37	.59	72	28	.91	.43	78	22	1.23	.54	76	24	1.15	.51	81	19	1.44	.61
West Virginia	77	23	1.22	.54	79	21	1.28	.56	83	17	1.54	.64	80	20	1.37	.59	83	17	1.64	.67

Table F-2

ED Placements by Gender and Year for Midwestern States

State	1976				1978				1980				1982				1984			
	%M	%F	Log-Odds	Q	%M	%F	Log-Odds	Q	%M	%F	Log-Odds	Q	%M	%F	Log-Odds	Q	%M	%F	Log-Odds	Q
Illinois	70	30	1.76	.71	74	26	1.03	.47	79	21	1.31	.57	78	22	1.30	.56	71	29	.91	.43
Indiana	83	17	1.57	.65	80	20	1.39	.59	79	21	1.34	.58	84	16	1.63	.67	81	19	1.47	.62
Iowa	81	19	1.45	.61	83	17	1.56	.65	80	20	1.39	.59	80	20	1.39	.59	80	20	1.44	.61
Kansas	76	26	1.15	.51	74	26	1.06	.48	82	18	1.50	.63	80	20	1.37	.59	80	20	1.41	.60
Michigan	81	19	1.47	.62	81	19	1.41	.60	79	21	1.30	.57	80	20	1.35	.58	80	20	1.41	.60
Minnesota	67	33	.72	.35	74	26	1.06	.48	69	31	.77	.37	67	33	.71	.34	74	26	1.06	.48
Nebraska	83	17	1.61	.66	82	18	1.51	.63	78	22	1.28	.56	80	20	1.41	.60	79	21	1.34	.58
North Dakota	68	32	.72	35	75	25	1.10	.49	80	20	1.39	.59	- [a]	-	-	-	72	28	.93	.44
Ohio	77	23	1.22	.54	80	20	1.36	.58	81	19	1.44	.61	83	17	1.56	.65	83	17	1.57	.65
South Dakota	70	30	.83	.39	75	25	1.08	.49	61	39	.44	.22	-	-	-	-	70	30	.87	.41
Wisconsin	81	19	1.44	.61	81	19	1.44	.61	80	20	1.39	.59	78	22	1.31	.57	79	21	1.36	.58

[a] Indicates insufficient data sample to fill cells in matrix.

Table F-3

ED Placements by Gender and Year for Northeastern States

	1976				1978				1980				1982				1984			
State	%M	%F	Log-Odds	Q	%M	%F	Log-Odds	Q	%M	%F	Log-Odds	Q	%M	%F	Log-Odds	Q	%M	%F	Log-Odds	Q
Connecticut	80	20	1.37	.59	80	20	1.41	.60	78	22	1.31	.57	76	24	1.17	.52	78	22	1.31	.57
Maine	73	27	.99	.46	75	25	1.11	.50	72	28	.95	.44	78	22	1.30	.56	77	23	1.23	.54
Massachusetts	80	20	1.37	.59	79	21	1.34	.58	79	21	1.34	.58	- [a]	-	-	-	72	28	.91	.43
New Hampshire	89	11	2.03	.78	71	29	.89	.42	83	17	1.61	.66	70	30	.89	.42	79	21	1.35	.58
New Jersey	83	17	1.58	.65	82	18	1.50	.63	82	18	1.54	.64	82	18	1.54	.64	81	19	1.45	.61
New York	78	22	1.23	.54	79	21	1.31	.57	79	21	1.31	.57	78	22	1.25	.55	74	26	1.05	.48
Pennsylvania	83	17	1.56	.65	81	19	1.41	.60	79	21	1.31	.57	81	19	1.41	.60	81	19	1.41	.60
Rhode Island	79	21	1.34	.58	78	22	1.28	.56	82	18	1.56	.65	85	15	1.79	.71	82	18	1.59	.66
Vermont	72	28	.91	.43	75	25	1.11	.50	73	27	.98	.45	-	-	-	-	83	17	1.59	.66

[a] Indicates insufficient data sample to fill cells in matrix.

Table F-6

ED Placements by Gender and Year for Southern States

State	1976				1978				1980				1982				1984			
	%M	%F	Log-Odds	Q	%M	%F	Log-Odds	Q	%M	%F	Log-Odds	Q	%M	%F	Log-Odds	Q	%M	%F	Log-Odds	Q
Alabama	80	20	1.37	.59	76	24	1.15	.51	77	23	1.22	.54	76	24	1.15	.51	77	23	1.23	.54
Arkansas	70	30	.87	.41	71	29	.89	.42	78	22	1.29	.56	80	20	1.41	.60	81	19	1.45	.61
Florida	80	20	1.51	.63	79	21	1.35	.58	79	21	1.34	.58	78	22	1.30	.56	80	20	1.39	.59
Georgia	77	23	1.23	.54	66	23	1.22	.54	77	23	1.22	.54	77	23	1.26	.55	78	22	1.29	.56
Louisiana	80	20	1.36	.58	77	23	1.17	.52	78	22	1.25	.55	77	23	1.21	.54	79	21	1.34	.58
Mississippi	73	27	.98	.45	76	24	1.13	.51	74	26	1.06	.48	79	21	1.36	.58	78	22	1.28	.56
North Carolina	78	22	1.28	.56	76	24	1.17	.52	77	23	1.23	.54	79	21	1.31	.57	80	20	1.37	.59
South Carolina	75	25	1.08	.49	75	25	1.10	.49	76	24	1.13	.51	77	23	1.23	.54	77	23	1.26	.55
Tennessee	75	25	1.11	50	76	24	1.17	.52	76	24	1.17	.52	80	20	1.36	.58	81	19	1.47	.62
Texas	73	27	.98	.45	73	27	.99	.46	73	27	1.01	.46	76	24	1.15	.51	76	24	1.17	.52
Virginia	84	16	1.64	.67	81	19	1.44	.61	80	20	1.41	.60	79	21	1.34	.58	80	20	1.37	.59

Table F-5

ED Placements by Gender and Year for Western States

State	1976				1978				1980				1982				1984			
	%M	%F	Log-Odds	Q	%M	%F	Log-Odds	Q	%M	%F	Log-Odds	Q	%M	%F	Log-Odds	Q	%M	%F	Log-Odds	Q
Alaska	64	36	.56	.27	72	28	.91	.43	73	27	.98	.45	78	22	1.25	.55	78	22	1.23	.54
Arizona	79	21	1.34	.58	77	23	1.23	.54	81	19	1.44	.61	81	19	1.47	.62	81	19	1.44	.61
California	80	20	1.35	.58	82	18	1.51	.63	82	18	1.54	.64	77	23	1.23	.54	77	23	1.17	.52
Colorado	73	27	.99	.46	75	25	1.08	.49	75	25	1.13	.51	78	22	1.26	.55	79	21	1.34	.58
Hawaii	82	18	1.51	.63	79	21	1.30	.56	83	17	1.58	.65	84	16	1.61	.66	79	21	1.30	.56
Idaho	71	23	.91	.43	64	36	.57	.28	78	22	1.26	.55	61	39	.40	20	86	14	1.77	.71
Montana	72	28	.91	.43	72	28	.93	.44	78	22	1.25	.55	75	25	1.10	.49	75	25	1.08	.49
Nevada	84	16	1.67	.68	79	21	1.31	.57	76	24	1.15	.51	76	24	1.17	.52	79	21	1.31	.57
New Mexico	80	20	1.37	.59	78	22	1.30	.56	80	20	1.39	.59	79	21	1.35	.58	81	19	1.44	.61
Oregon	81	19	1.45	.61	80	20	1.34	.58	81	19	1.44	.61	82	18	1.51	.63	79	21	1.34	.58
Utah	70	30	.87	.41	72	28	.98	.45	71	29	.91	.43	73	27	.99	.46	72	28	.98	.45
Washington	74	26	1.01	.46	75	25	1.08	.49	78	22	1.28	.56	83	17	1.56	.65	79	21	1.34	.58
Wyoming	66	34	.61	.29	61	39	.42	.21	73	27	.95	.44	- [a]	-	-	-	72	28	.91	.43

[a] Indicates insufficient data sample to fill cells in matrix.

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ABSTRACT

AN ANALYSIS OF THE RELATIONSHIP BETWEEN RACE AND GENDER AND NATIONAL STUDENT PLACEMENT IN PROGRAMS FOR THE EDUCABLE MENTALLY RETARDED, LEARNING DISABLED, AND SERIOUSLY EMOTIONALLY DISTURBED FROM 1976 THROUGH 1984

Robert F. Richardson, Jr., Ed.D.

The College of William and Mary in Virginia, April 1989

Chairman: Dr. F. Douglas Prillaman

Both prior to and since the passage of 94-142 in 1975, researchers and policy analysts have raised consistent concerns about the overrepresentation of black males in EMR and ED programs, especially in view of an often noted disproportion of white males in LD programs.

All of the empirical research on overrepresentation since 1975 has been characterized by one or more of the following limitations;

a) Small sample populations were drawn from one school district or state,
b) Larger samples, when studied, were analyzed at one specific point in time rather than over a period of time,
c) The power of the statistic used to analyze the data was so limited that few, if any, valid conclusions could be reached.

The present study was undertaken with the specific objective of compensating for these earlier limitations. The primary research question examined was "To what degree are race and gender related to the actual versus expected prevalence of students placed in programs for the educable mentally retarded, learning disabled, and emotionally disturbed nationally from 1976 through 1984?" A dataset was drawn from a secondary database compiled by the U.S. Office for Civil Rights from a biennial national survey of elementary and secondary schools. The data were analyzed by means of a log-linear statistic selected because of its ability to generate both a probability ratio and a reliable measure of association.

Results of the study indicated that black students continue to be significantly overrepresented in EMR programs, both nationally and regionally, as are blacks and males in ED programs. Males are significantly more likely to be placed in LD programs than are females, as they are to a lesser degree in EMR programs. White students are not disproportionately classified as learning disabled,

however, and a trend towards black student disproportion in LD programs appears to be emerging.

The author concluded that, despite specific procedural safeguards enacted in 1975, factors other than educational and behavioral data (such as race and gender) continue to influence significantly the classification process in special education. The need for meaningful and valid classification was seen as critical as long as a catagorical model of special education continues to pervade the field.