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ACADEMIC, BEHAVIORAL, AND SOCIAL COMPETENCY CHARACTERISTICS
OF NON-HANDICAPPED, LEARNING DISABLED, AND
EMOTIONALLY/BEHAVIORALLY DISORDERED
ADJUDICATED JUVENILES

DISSERTATION

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By

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The juvenile justice system is society's response to juvenile misconduct. In spite of numerous federal, state, and local programs, the problem of juvenile delinquency persists. An increasing number of juveniles are being taken into custody and placed in institutional settings.

Although juvenile delinquents share a number of common general characteristics (e.g., sex, minority, lower socioeconomic status, a history of school failure), they are not a homogeneous group. Effective educational interventions with delinquent juveniles can meet their unique academic, vocational, and social skills deficits. Handicapped juveniles are disproportionately represented among juvenile correctional facility populations. The identification of handicapped juveniles among delinquent populations is compounded as they share many of the same general characteristics. Federal statutes require individualized educational programs for all handicapped juveniles.

This research investigated academic, behavioral, and social competencies of non-handicapped and handicapped adjudicated youth. Specifically, this investigation assessed measures of academic performance, classroom behavior, self-esteem, and social behavior. ANOVA indicated statistically significant differences between non-handicapped, learning disabled, and emotionally/behaviorally disordered adjudicated juveniles in reading achievement, mathematics achievement, and teacher generated measures of classroom behavior.

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CHAPTER 1

INTRODUCTION TO THE STUDY

Society's response to the problem of juvenile delinquency has been described as a "complex network of unorganized, unsystematic operations of many public and private agencies all operating within the context of one or more communities" (Breed, 1976, p. 7). This network is collectively known as the juvenile justice system. The characteristics of any given community's juvenile justice system are the result of a unique combination of local, state, and federal influences (Arnold & Brungardt, 1983).

Passage of the Juvenile Justice and Delinquency Prevention Act of 1974 (P.L. 93-415) was in response to increased public awareness and concern regarding the serious problem of juvenile delinquency. The Office of Juvenile Justice and Delinquency Prevention (OJJDP) within the Department of Justice is the Federal agency tasked with the implementation, administration, and coordination of all Federal programs addressing juvenile justice. An analysis and evaluation of Federal Juvenile Justice Programs in 1987 revealed that there were 330 Federal programs directed either solely or partially at reducing

or controlling delinquent behavior or assisting child victims. These programs were administered by 13 different Federal agencies (OJJDP, 1987).

A considerable number of youths come in contact with the juvenile justice system each year. In 1984, an estimated 1,538,143 youths aged 14 to 17 were arrested by law enforcement personnel (Bureau of Statistics, 1984), leading to an estimated 1,304,000 dispositions by the Nation's Juvenile Courts (National Center for Juvenile Justice, 1987). OJJDP (1989) estimates that state or local authorities assume custodial responsibility for approximately 800,000 youths annually. Between 1984 and 1986, the number of juvenile admissions to publicly administered juvenile custodial facilities rose from 527,759 to 590,654 (OJJDP, 1988a).

Although the actual incidence of delinquent behavior has remained stable during the 1980s (Fagan, Forst, & Vivona, 1988; Galvin & Polk, 1983); since 1983, there has been a 13% increase in the number of juvenile admissions to public juvenile facilities. This increase has occurred even though the actual number of youths in this age group has declined (OJJDP, 1988a). Although the philosophy and organization of juvenile programs may vary (e.g., punishment vs. treatment or probation vs. confinement), the goal of these programs is to enable the juveniles involved to make an orderly transition back into their communities where they will become productive

citizens (American Correctional Association [ACA], 1986; Gehring, 1984).

Rehabilitative programs in juvenile justice have received widespread criticism as being ineffective (Arnold & Brungardt, 1983; Bailey, 1966; Cook & Scioli, 1975; Lab & Whitehead, 1988; Robinson & Smith, 1971; Sechrest, White, & Brown, 1979; Slaikeu, 1973; Wright & Dixon, 1977). While the criticism may be widespread, it is not unanimous. Opposing viewpoints cite a lack of statistical and experimental controls (Logan, 1972), interventions and evaluation measures which were not theoretically linked (Fagan et al., 1988), and interventions which were not rigorously applied (Mark, 1983) as alternative explanations regarding why studies failed to detect positive outcomes. Finally, there are rehabilitative program evaluations which did identify successful outcomes following program involvement (Gendreau & Ross, 1980; Greenwood & Zimring, 1985; Neithercutt, 1978; Romig, 1978).

Programs which have been effective in reducing recidivism among juvenile offenders have had several common components. These programs provide specific interventions aimed at ameliorating deficits in the personal skills required to succeed in society (e.g., academic, interpersonal, vocational) (Romig, 1978) and a supervised structured transition from the juvenile facility into the community (Fagan, et al., 1988). Education, both within the juvenile facility and in the community, is an integral part of programs in juvenile

corrections (ACA, 1986; Arnold & Brungardt, 1983).

The importance of adequate educational interventions in juvenile correctional facilities is accentuated by the difficulties faced by youth attempting to make a transition into community based educational programs (Edgar, Webb, & Maddox, 1987). While as many as 85% of youths released from juvenile facilities reported plans to pursue educational opportunities (Pfannestiel & Keesling, 1980), in reality very few successfully complete post release educational programs (Besag & Greene, 1981; Haberman & Quinn, 1986; Pfannestiel & Keesling, 1980).

Scholastically, while juvenile offenders are collectively characterized as having poor school behavior and academic achievement (Bullock & Reilly, 1979; Finkenauer, 1984; Foxx, 1976; Frease, 1973; Haskel & Yablonski, 1978; Jensen, 1976), they are not a homogeneous group (Little & Kendall, 1979). Numerous studies have identified a disproportionate number of juvenile delinquents as handicapped, particularly as having learning and/or emotional/behavioral disorders (Dunivant, 1982a, 1982b; Kardash & Rutherford, 1983; Morgan, 1979; Pasternack & Lyon, 1982; Prout, 1981; Rutherford, et al., 1985). Appropriate educational programming for juvenile offenders is contingent on the identification of the diverse academic, interpersonal, and vocational needs of the individuals (Howell, Kaplan, & O'Connell, 1980;

Pasternack, Portillos, & Hoff, 1988; Rutherford, Nelson, & Wolford, 1985).

Passage of the Education for All Handicapped Children Act (P.L. 94-142) of 1975 has led to increased litigation and the potential for additional sources of funding. As a result, representatives of the juvenile justice system have increased incentive to identify and provide for the unique educational needs of handicapped juvenile offenders (Gerry, 1984; Hockenberry, 1980; Warboys & Shauffer, 1986).

Purpose

The purpose of this investigation was to elicit those discriminating characteristics which may assist in the identification and assessment of adjudicated learning disabled and emotionally/behaviorally disordered adolescents. Specifically, this study explored similarities and differences between non-handicapped, learning disabled, and emotionally/behaviorally disordered adjudicated juvenile offenders residing in juvenile correctional facilities. This investigation examined the: (a) type of offense; (b) intelligence quotient score, full-scale, verbal, and performance; (c) achievement in reading and mathematics; (d) classroom behavior, as measured by the classroom teacher; (e) self-esteem; and (f) measures of social competence, as measured by self-reported behavior.

Significance of the Study

This study should contribute to a further understanding of the unique academic and social characteristics of non-handicapped, learning disabled, and emotionally/behaviorally disordered adjudicated youth. The significance of this study lies in the variables which were investigated and the sample characteristics. Previous studies have used only general measures of cognitive, academic, and social behavior as descriptive variables, in which all three groups are known to demonstrate similar characteristics. Results were further confused by the use of subjects in dissimilar settings or using an aggregate group of handicapped youth. Instead of attempting to compare non-handicapped and a composite group of handicapped adjudicated youth or adjudicated youth and non-adjudicated handicapped youth, the sample in this study was selected to facilitate the identification of variance among non-handicapped, learning disabled, and emotionally/behaviorally disordered adjudicated youth.

Specifically, this study provides clarifying information regarding the similarities and differences among non-handicapped, learning disabled, and emotionally/behaviorally disordered adjudicated youth to assist professionals in meeting the educational and behavioral needs of adjudicated youth through:

1. Providing behaviorally specific classroom information to assist in the

identification, assessment and educational programming of non-handicapped, learning disabled, and emotionally/behaviorally disordered adjudicated juveniles;

2. Providing a description of the social competency characteristics of non-handicapped, learning disabled, and emotionally/behaviorally disordered adjudicated juveniles; and

3. Providing a description of the behavioral characteristics of learning disabled and emotionally/behaviorally disordered juveniles who are adjudicated.

This information could benefit juvenile justice and special education professionals in the following manner.

1. It may assist in meeting the requirements of P.L. 94-142. Delineating specific characteristics may improve identification, assessment, and individualized educational programming for learning disabled and emotionally/behaviorally disordered juveniles.

2. It may assist in the preparation of both correctional educators and correctional special educators. Specific information regarding the academic and social needs of non-handicapped, learning disabled, and emotionally/behaviorally disordered juveniles may help identify specific competencies needed by educators.

3. It may provide information which, when coupled with existing knowledge of the academic and behavioral needs of learning disabled and emotionally/behaviorally disordered juveniles, may lead to more focused early intervention programs aimed at reducing the risk of these students for involvement in the juvenile justice system.

4. It may provide juvenile justice professionals with information which will assist in the development of a more pragmatic classification system.

Limitations

As with any research, the results of this study must be interpreted with caution. There are several features of this study which may limit the generalizability of the findings.

1. Certain sample characteristics, size (N=112) and regional and facility specificity, may hinder the generalization of these findings to populations outside the state of Texas or to other types of juvenile justice facilities.

2. The identification of learning disabled and emotionally/behaviorally disordered juveniles was made by school personnel from numerous education agencies. To the extent that Texas Education Agency guidelines are interpreted differently, there may be variation in the operational identification criteria used in their selection. However, the sample should adequately reflect the level of uniformity of selection criteria found in Texas.

3. The study was conducted between August 25, 1989 and January 31, 1990. Caution should be used when generalizing these findings as the time of court disposition or facility placement may have influenced sample availability.

4. Measurement error tends to increase when the behaviors being measured are to the extreme. In the case of the academic and social behaviors of non-handicapped, learning disabled, and emotionally/behaviorally adjudicated youth this may influence the results.

Definition of Terms

The following definitions will apply in this study:

Achievement -- gains in knowledge or performance as the result of a standardized set of experiences. Achievement as measured by achievement tests reflects learning that occurs under partially known and controlled conditions, generally provided in educational settings (Anastasi, 1982).

Adjudicated juvenile -- a juvenile who has been found, as a result of a judicial disposition, to have committed an act, which if committed by an adult would be either a felony or misdemeanor (Arnold & Brungardt, 1983).

Delinquent act -- an act committed by a juvenile for which an adult could be prosecuted in a criminal court, but when committed by a juvenile is within the jurisdiction of the juvenile court. Delinquent acts include:

crimes against persons, crimes against property, drug offenses, and crimes against public order, when such acts are committed by juveniles (National Center for Juvenile Justice, 1984).

Emotionally/Behaviorally disordered (E/BD) -- a handicapping condition as defined by P.L. 94-142,

(i) The term means a condition exhibiting one or more of the following characteristics over a long period of time and to a marked degree, which adversely affects educational performance:

(A) An inability to learn unexplained by intellectual, sensory or health factors;

(B) an inability to build or maintain interpersonal relationships with peers or teachers;

(C) inappropriate behaviors or feeling under normal circumstances;

(D) a pervasive mood of unhappiness or depression; and

(E) a tendency toward physical symptoms associated with school or personal problems.

(ii) The term does not include children who are socially maladjusted, unless it is determined that they are seriously emotionally disturbed (Office of Special Education and Rehabilitative Services

[OSERS], 1977, 42, 655084).

Intelligence -- an ability to learn from and react to situations in an individual's environment (Weschler, 1974).

Learning disability (LD) -- a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, which may manifest itself in an imperfect ability to listen, think, speak, read, write, spell, or to do mathematical calculations. The term includes such conditions as perceptual handicaps, brain injury, minimal brain disfunction, dyslexia, and developmental aphasia. The term does not include children who have learning handicapping condition which are primarily the result of visual, hearing, or motor handicaps, of mental retardation, of emotional disturbance, or of environmental, cultural, or economic disadvantage....

(1) whether... a child does not achieve commensurate with his age or her age and ability when provided with an appropriate educational experience, and (2) ... the child has a severe discrepancy between achievement and intellectual ability in one or more of the seven areas relating to communication skills and mathematical abilities. (OSERS, 1977, 42, p.655082 - 655083).

Within the state of Texas, learning disability is defined as a

significant discrepancy (more than one standard deviation) between academic achievement and intellectual ability. This can be in one or more of the following areas: (a) oral expression, (b) written expression, (c) listening comprehension, (d) reading comprehension, (e) basic reading skills, (f) mathematics calculation, (g) mathematics reasoning, and (h) spelling (Texas Education Agency, 1980).

Juvenile facilities -- although there is a wide variety of "types" of facilities in which juveniles taken into custody can be placed, in this study it refers only to those facilities which impose restraints on residents' movement, limit access to the community, long term, and hold adjudicated juveniles (OJJDP, 1988a).

Self-esteem -- a personal judgment of worthiness that is expressed in the attitudes that individuals have toward themselves (Gresham, 1984).

Social competence -- the ability to attain relevant social skills in specified social contexts, using appropriate behaviors resulting in desired positive outcomes (Gresham, 1986).

Hypotheses

The following null hypotheses were tested.

Hypothesis 1:

There are no significant differences in the types of offenses found in the records of non-handicapped, LD, and E/BD adjudicated youth in juvenile correctional facilities.

Hypothesis 2:

There are no significant differences among non-handicapped, LD, and E/BD adjudicated youth in juvenile correctional facilities in cognitive and academic ability

Corollary 2a: There are no significant differences among non-handicapped, LD, and E/BD adjudicated youth in juvenile correctional facilities in measures of intellectual ability as measured by the Wechsler Intelligence Scale for Children-Revised (WISC-R) (Wechsler, 1974).

Corollary 2b: There are no significant differences among non-handicapped, LD, and E/BD adjudicated youths in juvenile correctional facilities on reading achievement scores as measured by the reading subtest of Woodcock-Johnson Psycho-Educational Battery, Tests of Achievement (Woodcock & Johnson, 1978).

Corollary 2c: There are no significant differences among non-handicapped, LD, and E/BD adjudicated youths in juvenile correctional facilities

on scores of mathematics achievement as measured by the mathematics subtest of Woodcock-Johnson Psycho-Educational Battery, Tests of Achievement (Woodcock & Johnson, 1978).

Hypothesis 3:

There are no significant differences in teacher ratings of the classroom behavior of non-handicapped, LD, and E/BD adjudicated youth in juvenile correctional facilities as measured by the Behavior Dimensions Rating Scale (Bullock & Wilson, 1989).

Hypothesis 4:

There are no significant differences among non-handicapped, LD, and E/BD adjudicated youth in juvenile correctional facilities in ratings of self esteem as measured by the How I See Myself Scale (Gordon, 1968).

Hypothesis 5:

There are no significant differences among non-handicapped, LD, and E/BD adjudicated youth in juvenile correctional facilities in self ratings of behavior in the home, school, and with peers as measured by the Behavior Rating Profile (Brown & Hammill, 1978).

CHAPTER 2

LITERATURE REVIEW

Juvenile Justice System

The juvenile justice system is a subsystem of the criminal justice system. As such, it shares a similar organizational pattern. The Federal response to juvenile delinquency (JD) is primarily assigned to OJJDP which serves in an advisory, facilitative, and, on occasion, monitoring role. The Juvenile Justice and Delinquency Prevention Act of 1974 as amended authorized OJJDP to (a) coordinate Federal JD programs, (b) provide financial assistance to the States, (c) provide technical assistance to governmental and nongovernmental agencies, (d) conduct research on JD, (e) establish and evaluate juvenile justice programs, and (f) act as an information clearinghouse (OJJDP, 1987).

The primary authority for responding to juvenile delinquency rests at the state level. State governments establish penal codes and the jurisdictional organization of the Courts. As with the criminal justice system, actual service delivery responses to JD are predominately community based (Arnold & Brungardt, 1983; Finckenauer, 1984).

At the community level, official responses to JD may be contained within a loose network of four distinct service delivery systems: mental health, education, social service, and juvenile justice. Each of these institutions reflect differing, and occasionally competing, philosophies regarding the necessity of and appropriate response to JD (Arnold & Brungardt, 1983).

The juvenile justice system bears designated responsibility for responding to the problem of JD. Organizationally, the juvenile justice response is comprised of three components: local police departments, courts, and correctional services. The attributes of a community's response to JD are the result of a merging of local, state, and federal philosophies and programs (Arnold & Brungardt, 1983).

Development of the Juvenile Justice System

The evolution of the juvenile justice system is reflective of society's views regarding children and deviant behavior. The characteristics of society's response to JD are a synthesization of these occasionally incongruous philosophies. It is not the purpose of this review to provide a detailed accounting of the transformation of the juvenile justice system into its present form, but rather to provide a brief description of the developmental milestones.

The prevailing zeitgeist prior to an identified juvenile justice system viewed children as chattel and deviant behavior as the result of demons. This

resulted in the harsh treatment of juvenile delinquents. Youths whose behavior violated social norms experienced the same brutal punitive treatment as adult offenders, even to the point of death. The establishment of correctional institutions during the late 1700s did little to affect this as youths were routinely placed with adult offenders (Carter, McGee, & Nelson, 1975; Cole, 1972).

It was not until 1825 that separate juvenile facilities were established to house juvenile offenders. The "House of Refuge" exemplified the conflict between genuine concerns for the vulnerability of children and the desire to isolate and punish juveniles whose behavior was viewed as dangerous or socially unacceptable. While youths were separated from the deleterious environment of adult offenders and given vocational training, they were routinely subjected to severe disciplinary measures (Cole, 1972; Hawes, 1971; Mennel, 1973).

Direct governmental involvement in the juvenile justice system began when the English Doctrine of *Parens Patriae* was incorporated into American Juvenile Law. In the case of *ex Patriae Crouse* (1838), the Pennsylvania Supreme Court upheld a lower court decision which placed a child in a "House of Refuge" against the father's objections. In the opinion of the justices, the 6th and 9th Amendments were not applicable to children (*Ex Patriae Crouse*, 1838; Finckenauer, 1984).

The adoption of the *Parens Patriae* doctrine allowed "benevolent" governments to circumvent accepted due process procedures and assume responsibility for delinquent youth. This practice was institutionalized by 1905 when all but three states had officially created Juvenile Courts. Heralded as progressive, juvenile courts were characterized by the following: (a) rehabilitative orientations, (b) jurisdiction and dispositional alternatives, (c) informal and flexible procedures, and (d) ambitious intake processes (Finckenauer, 1984).

Governmental involvement necessitated a number of changes in official responses to JD. Initially, it led to the creation of large state operated juvenile institutions known as "reform schools." Overcrowding, questioned efficacy, and the acceptance of a "social casework" outlook led to the creation of indeterminate sentencing (i.e., probation and parole). This was the established practice for over 125 years (Piatt, 1969; Schlossman, 1977; Sutherland & Cressey, 1978).

Periodic criticism of juvenile courts led to a number of reforms in the 1970s. The first of these, addressed the need for due process procedures to protect the constitutional rights of juveniles. This was necessitated by several US Supreme Court decisions recognizing that children were entitled to protection under the Constitution (e.g., *In re Gault*, 1967; *In re Winship*, 1970).

Other reforms were in response to questions regarding the efficacy of juvenile correctional programs (National Advisory Commission on Criminal Justice Standards and Goals [NAC], 1973) and the recognition that a large number of offenses were being committed by a small group of repeat offenders (Shannon, 1980; Strasburg, 1978; Wolfgang, Figlio, & Sellin, 1972). Generally, these reforms have led to calls for case specific dispositions ranging from community-based corrections (NAC, 1973) to punitive and incapacitating sentences (President's Task Force on Violent Crime, 1982).

Components of the Juvenile Justice System

Police Departments

Although formally, youths can come in contact with the juvenile justice system (JJS) in a number of ways, the majority enter the system via contact with the local police department (Levin & Sarri, 1974). Police records reflect a disproportionate number of poor and minority youth as the perpetrators of delinquent acts (Liska & Tausig, 1979; Thornberry, 1973; Wolfgang, et al., 1972). Individual police officers may approach their work along several continuums: (a) social control vs. value maintenance, (b) proactive vs. reactive, (c) formal vs. informal processing, and (d) crime fighter vs. social worker. Police officers are also granted broad discretionary powers when dealing with juveniles. The combination of discretionary power, individual style, and local

practice can strongly influence the way in which a specific juvenile may be handled once in contact with the police (Arnold & Brungardt, 1983).

Juvenile Courts

Juvenile courts are very divergent. They differ in organization, size, type of cases handled, and age of clients. Generally, they are characterized by a semi-cooperative, as opposed to an adversarial, process which includes (a) pretrial detention hearing, (b) intake hearing, (c) adjudication hearing, (d) social investigation, and (e) disposition hearing. The actual dispositional alternatives available to the court may be limited by program availability, but include (a) dismissal, (b) release to parents, (c) restitution, (d) alternative home placement, (e) probation, (f) referral to community agencies, and (g) commitment to public or private institutions (Arnold & Brungardt, 1983).

Juvenile Corrections

Youths requiring restrictions on their behavior and participation in structured activities may be placed in juvenile correctional facilities. Facility types differ in the level of restrictiveness and structure. The principal facility is the juvenile correctional institution. These facilities are the most restrictive and are characterized as total institutions. They are frequently used as a last resort and are intended to provide educational, vocational, and treatment services (Prassel, 1975).

The resident population of juvenile correctional facilities is not representative of the juvenile population at large. It is disproportionately (a) young, (b) minority, and (c) of lower socioeconomic status (SES) (Vinter, Newcomb, & Kish, 1976). Numerous investigations have supported the finding that handicapped juveniles are over-represented in juvenile correctional facilities (Kardash & Rutherford, 1983; Morgan, 1979; Pasternack & Lyon, 1982; Prout, 1981; Rutherford, et al., 1985; Santamour & West, 1979; Zimmerman, Rich, Keilitz, & Broder, 1979).

As stated earlier, juvenile correctional facilities have not been notably effective in reducing delinquent behavior (Arnold & Brungardt, 1983; Bailey, 1966; Cook & Scioli, 1975; Lab & Whitehead, 1988; Robinson & Smith, 1971; Sechrest, White, & Brown, 1979; Slaikeu, 1973; Wright & Dixon, 1977). This failure has been attributed to an over-reliance on traditional casework and counseling interventions (Arnold & Brungardt, 1983), improper or poor treatment implementation (Fagan, et al., 1988) or a lack of program individualization (Romig, 1978).

Correctional Education

Correctional education is representative of the rehabilitative nature of corrections. Increases in the number of offenders and a recognition of their learning and social skill deficits has focused attention on the need to provide

remedial training. Because of the strong correlation between school failure and delinquency (Dunivant, 1982b) and the liability that school dropouts place on society (South Carolina Department of Education, 1987), education has long been regarded as a key component of juvenile corrections (Wolford, 1987).

Correctional education programs may be placed in regular schools, alternative settings or juvenile facilities. This review will focus on the provision of educational services in juvenile facilities, however, much of the information is applicable across settings.

Unfortunately, there are numerous factors which hinder the development and implementation of effective correctional education programs. The administrative structure of juvenile correctional facilities is oriented towards security issues rather than the provision of educational services. Additionally, the governance hierarchy leads to a department of corrections rather than education (Bannon, 1986; Rutherford, et al., 1985).

Juveniles reside within any given facility for a relatively short period of time. The average length of stay in long term institutional settings is 190 days, less than a school year (OJJDP, 1988a). An additional compounding factor is that juveniles are placed in, or removed from, facilities at the Courts' discretion, which may be with little or no warning and in the middle of an

academic semester (Bannon, 1986; Leone, Price, & Vitolo, 1986).

The unique demands of providing educational services to unmotivated underachieving students in a facility not designed to optimize educational opportunities requires qualified teachers with special skills and competencies (Roberts & Bullock, 1987). Research has consistently identified a shortage of qualified correctional educators (Leone, 1984; McKeen, 1983; Miller, Sabatino, & Larsen, 1980, Platt, Wienke, & Tunick, 1982; Richey & Willis, 1982, Rutherford, et al., 1985).

The transition of juvenile offenders from community to correctional facilities and back to the community is also hampered. Conflicting goals and a lack of planning often jeopardizes the educational needs of the juvenile (Horvath, 1982). Research indicates that insufficient information and the inefficient transfer of information have a negative effect on the identification, placement, and delivery of educational services to juvenile offenders (Dodaro & Salvemini, 1985).

Correctional Special Education

The provision of appropriate educational services to handicapped students within the public school system has not always been common practice. In fact, guaranteed access to a publicly funded education did not occur until 1975 with passage of Public Law (P. L.) 94-142 (Education of the

Handicapped Act of 1975). Passage of P. L. 94-142 was the result of litigation and lobbying efforts by parents and advocacy groups that focussed attention on the unconstitutional exclusion and inappropriate provision of educational services to handicapped students (Hardman, Drew, Egan, & Wolf, 1990; Meyen & Skrtic, 1988).

P. L. 94-142 requires state education agencies (SEA) to ensure handicapped students are provided appropriate educational opportunities. The major provisions of P. L. 94-142 are: (a) appropriate educational services at public expense, (b) an individualized educational program, (c) nondiscriminatory and multidisciplinary testing, (d) due process procedures ensuring fairness and parental and student participation in the educational planning, and (e) an educational environment to accommodate individual needs (Hardman et al., 1990; Meyen & Skrtic, 1988).

Generally, the local education agency (local school district) is the agency responsible to ensure that the provisions of P. L. 94-142 are met. In cases where a state agency is tasked with providing educational services to children, however, the SEA is designated responsible to ensure that the educational rights of handicapped students are not violated. Within juvenile corrections, this frequently places the SEA in the position of either monitoring or cooperating with another state agency (Wood, 1987). In fact, as many as

six different state agencies may have shared responsibility for the provision of educational services to handicapped students (Grosenick & Huntze, 1980).

As noted earlier, there are governance, administrative, and logistical problems facing the field of correctional education (Bannon, 1986; Leone et al., 1986; Rutherford et al., 1985). Programmatic difficulties, however, do not release SEA or state correctional agencies from meeting the requirements of P.L. 94-142 regarding the provision of educational services to handicapped students (Wood, 1987). Litigation has established that incarcerated juveniles have a right to rehabilitative treatment (*Martarella v. Kelly*, 1972; *Nelson v. Heyne*, 1974), nondiscriminatory programming within the correctional facility (*Santiago v. City of Philadelphia*, 1977), and the provision of appropriate educational services as delineated by P.L. 94-142, if eligible (*Green v. Johnson*, 1981; *Willie M. v. Hunt*, 1979).

Effective special correctional education programs provide interventions designed to meet specific personal skill deficits (Romig, 1978). A model program designed to meet the needs of handicapped juvenile offenders delineates six essential components (Rutherford, et al., 1985). This program requires (a) a process to identify skill deficits which interfere with educational achievement and social and vocational adjustment (Howell et al., 1980), (b) a curriculum designed to meet the identified needs, (c) a functional vocational

education program, (d) a transition program to facilitate the movement of relevant information and adjudicated juveniles between juvenile correction facilities and the community, (e) a comprehensive service delivery system for handicapped juveniles, and (f) a method of providing inservice and preservice training to correctional educators.

There is also a documented shortage of qualified special education teachers in juvenile correctional facilities (Bannon, 1986). One researcher found less than one certified special education teacher per juvenile correctional facility (Wolford, 1983). A national survey of state directors of correctional education and state directors of special education in 1984 revealed that only 28% of the teachers in programs for adjudicated juveniles with disabilities were certified special education teachers (Rutherford, et al., 1985). In 1986, the ratio of certified special education teachers to adjudicated handicapped juveniles, many with significant educational deficits, in correctional facilities was 1:17 (Rutherford, Nelson, & Wolford, 1986). The disparity of distribution of qualified special education teachers for adjudicated handicapped youth is illustrated by the findings of the OJJDP's Children in Custody census for 1987; only 87% of the public juvenile correctional facilities indicated the existence of special education programs for juvenile offenders in need of special education services (OJJDP, 1988b). The need for additional

special education training also exists among non-educational correctional personnel in juvenile correctional facilities (Bannon, 1986).

Juvenile Delinquency

Adolescence is marked by increased rates of acting out behaviors. Occasionally, these behaviors transgress the standards established by society and are labeled as misconduct. When a juvenile court has determined that a juvenile's conduct has violated a standard, it is officially labeled as delinquent behavior. Delinquent behaviors exhibited by juveniles may be either status offenses or delinquent offenses (Arnold & Brungardt, 1983; Finckenaue, 1984).

Status offenses are those behaviors which are prohibited based on the age of the juvenile (e.g., truancy, curfew violations). Delinquent offenses are those acts which if committed by an adult would constitute either a misdemeanor or felony offense (e.g., burglary, assault). Increasingly the resources of the juvenile justice system are directed at delinquent offenses (Arnold & Brungardt, 1983; Finkenauer, 1984; OJJDP, 1988a).

Characteristics

Studies of self-reported acts of delinquency reveal that most juveniles commit a delinquent act at some time or another. At any given time as many as 20% of the juvenile population may have been recently engaged in

delinquent activity. These acts are not correlated with social class or race (Duke & Duke, 1978; Fink & Truckenmiller, 1982; Linden, 1978; West, 1975; Yahraes, 1978). Higher rates of self-reported delinquency have been reported for males than females (Arnold & Brungardt, 1983).

Official records regarding delinquent acts, arrests, and adjudication reports reveal a different picture. In general, males are arrested four times more frequently than females; eight times more frequently for violent offenses (Arnold & Brungardt, 1983; Finckenauer, 1984). Research also reports that urban juveniles are more likely to come in contact with the juvenile justice system (Cohen & Felson, 1979).

The 1987 Children in Custody Survey conducted by OJJDP (1988a) revealed that 56% of all juveniles in public facilities were minority, and that 59% of the long term institutional residents were minority. Minority and lower SES juveniles are more frequently arrested, adjudicated, and committed to more restrictive institutions than non-minority or upper SES juveniles (Arnold & Brungardt, 1983; Finckenauer, 1984).

The representative adjudicated juvenile has a score of 90 (Harper, 1988) to 92 (Hirschi & Hindelang, 1977) on measures of intelligence, eight to ten points below average. One study (Reilly, Wheeler, & Etlinger, 1985) however, reported a mean score of 75.7 (range 49 - 102) for a sample of JD

youth on the Wechsler Intelligence Scale for Children - Revised. A recent investigation, however, suggests that while the average score on tests of intelligence remains below average, nearly 25% of a sample of adjudicated juveniles recorded scores above 110, ten points above average (Harper, 1988). They tend to score better on performance than verbal test items (Bullock & Reilly, 1979; Jerse & Fakouri, 1978).

Academically, adjudicated juveniles typically do not experience success in the school environment. Typically they receive poor or failing grades (Arnold & Brungardt, 1983). In fact, adjudicated juveniles are as much as 3 years behind in reading and 2 years behind in mathematics (Bullock & Reilly, 1979; Groff & Hubble, 1981; Meltzer, Levine, Karniski, Palfrey, & Clarke, 1984).

The behavior of juvenile delinquents in regular school settings can also be distinguished. They demonstrate a lack of motivation, increased disruptive behavior, and truancy (Meltzer, et al., 1984; Rizzo, 1981). Research indicates they are prone to elevated drop out rates (Cantwell, 1983). Future recidivism has been accurately predicted from measures of misconduct in school settings (Grenier & Roundtree, 1987).

Research among juveniles in custodial settings suggests that a relationship exists between low self esteem and high rates of delinquent behavior (Gold & Mann, 1972; Hepburn, 1973; Jensen, 1973). Adjudicated

juveniles demonstrate poorer social skills than nondelinquent youth (Freedman, 1975).

Learning Disabilities

The field of LD has been characterized by diversity and conflict since prior to the passage of P.L. 94-142. Divergent professional opinions appear in both the theoretical and applied areas (Meyen & Skrtic, 1988). Most state education agency definitions of LD reflect the wording of the Federal definition (Mercer, Forgnone, & Wolking, 1976). The Federal definition assumes there is a deficit in basic psychological processes which does not affect scores on standard measures of intelligence, and which is not caused by sensory or educational opportunity deprivation.

By definition LD students are identified by a significant discrepancy between ability and actual academic achievement in one or more specific content domains. The precise manner in which this is determined is delineated by the state education agency. These formulas assess the extent of underachievement. There are four basic approaches to the assessment of level of underachievement: (a) grade level, (b) expected performance, (c) comparison of standard scores, and (d) regression analysis (Cone & Wilson, 1981).

LD students comprise the largest single category of handicapped

students served under P.L. 94-142. During the academic year 1987-88, approximately 5.01% of all school-aged children were identified as LD (U. S. Department of Education [USDOE], 1989). Varying state definitions, eligibility formulas, and local education agency policies and practices has led to prevalence estimates which vary dramatically from state to state (Keogh, 1988). During the 1987-88 school year the percentage of identified LD students on a state by state basis ranged from a low of 1.22% to a high of 9.46% of enrolled students. Over 3,100 LD students were served in correctional settings during the 1986-87 school year (USDOE, 1989).

Characteristics

Professionals agree that the distinguishing characteristic of LD students is academic underachievement. The most prevalent academic problem experienced by LD students is associated with reading (Deshler, Schumaker, Lenz, & Ellis, 1984; Hansen, 1978; Lewis, 1983; Mercer, 1983). Other content areas in which LD students have demonstrated deficits are mathematics (Bley & Thornton, 1981; Larsen, Parker, Trenholme, 1978; Skrtic, 1980), written language (Mercer, 1983; Deshler, Ferrell, & Kass, 1978), and listening comprehension (Kotsonis & Patterson, 1980).

LD students frequently demonstrate thought processing deficits. These deficits have been identified in the areas of information processing (Torgesen

& Greenstein, 1982; Torgesen & Houck, 1980) and metacognition (Flavell & Wellman, 1977; Wong & Jones, 1982). Information processing deficits hinder an individual's ability to receive and process information necessary for adequate social functioning. Metacognitive skills are those learned thought processes which allow individuals to monitor their own actions and thoughts.

Professionals have long recognized that LD students exhibit problematic classroom and social behaviors as well as learning problems. Recent research has confirmed that the problem behaviors of LD students are different than their non-LD peers (Bender, 1987; Cullinan, Schultz, Epstein, & Luebke, 1984; McKinney, McClure, & Feagans, 1982). In addition, there is a growing body of research indicating there may be a specific learning disability in social cognition. The social skills deficits of LD children are well documented (Bryan & Bryan, 1977; Schumaker, Hazel, Sherman, & Sheldon, 1982; White, Schumaker, Warner, Alley, & Deshler, 1980).

LD students are granted lower levels of social status than their non-handicapped peers (Bender, Wyne, Stuck, & Bailey, 1984; Perlmutter, Crocker, Cordray, & Garstecki, 1983; Sabornie, 1987). Teachers identify LD students as exhibiting greater levels of interpersonal and classroom behavior problems (Bender, 1985; Epstein & Cullinan, 1984). Research regarding the self-esteem of LD students is mixed. Some research reports no difference in

the self esteem of LD and Non-LD students (Silverman & Zigmond, 1983; Tollefson, Tracy, Johnson, Farmer, Buening, & Barke, 1982). Investigations of self-esteem which are sensitive to academic influences, however, have detected lower self-esteem ratings for LD students (Boersma, Chapman, & Maguire, 1978; Hiebert, Wong, & Hunter, 1982).

There is considerable evidence that LD individuals are over represented among adjudicated juveniles (Berman, 1976; Berstein & Rulo, 1976; Bullock & Reilly, 1979; Broder, Dunivant, Smith, & Sutton, 1981; Comptroller General, 1977; Kardash & Rutherford, 1983; Lenz, Warner, Alley, & Deshler, 1980; Morgan, 1979; Pasternack & Lyon, 1982; Prout, 1981). Numerous theories have been offered to explain this occurrence. One such explanation, the school failure hypothesis, stems from the well documented relationship between school failure and delinquency. This theory postulates that the academic difficulties experienced by LD individuals leads to reduced self-image, frustration, and alienation from peers (Post, 1981).

A second hypothesis suggests that the behavioral and social characteristics of LD juveniles make them more susceptible to delinquent activity (Muarry, 1976; Post, 1981; Sawicki & Schaffer, 1979; Werner & Smith, 1979). Identified characteristics associated with LD that place an LD juvenile at increased risk for delinquent acts include lack of impulse control, inability to

anticipate consequences for actions, poor perception of social cues, and a tendency to act out (Dunivant, 1984). Teachers frequently rate LD students as having greater social adjustment problems than non-handicapped peers (Center & Wascom, 1986; Perlmutter, et al., 1983). The behaviors of LD juveniles is perceived by teachers as predelinquent (Epstein, Cullinan, & Lloyd, 1986).

Finally, there are several proposed hypotheses to explain the phenomena as a function of differential treatment of LD individuals by the various elements of the juvenile justice system. The differential arrest hypothesis suggests the even though LD juveniles have similar delinquency rates, law enforcement personnel are more likely to detain LD juveniles than their non-handicapped peers. The differential adjudication hypothesis proposes that an LD juvenile charged with a similar offense as a non-handicapped peer is at greater risk of adjudication (Bryan, Sherman, & Fisher, 1980).

The National Institute for Juvenile Justice and Delinquency Prevention sponsored a research project in 1976 to investigate the nature of the relationship between LD and JD. Data were collected from 1,942 juvenile boys. The results indicated that the presence of a LD increased the frequency of self-reported acts of delinquency, and raised the probability of

arrest by .10 and adjudication by .15. Analysis also supported the school failure and susceptibility hypotheses (Dunivant, 1982b).

Emotional/Behavioral Disorders

There is widespread agreement among educators and mental health professionals that a sizable group of adolescents can be identified as E/BD. Most definitions of E/BD used in connection with P.L. 94-142 contain three common elements. As a group, E/BD youth have learning and achievement problems. They also demonstrate emotional and behavioral problems marked by disturbing and behavioral excess. Finally, they exhibit noticeable difficulties with interpersonal relationships (Algozzine, 1980; Bower, 1969; Coleman & Gilliam, 1983; Cullinan, Epstein, & Lloyd, 1983; Kauffman, 1977; Ross, 1980; Smith, Wood, & Grimes, 1988).

The field has been plagued by definitional and related assessment issues. There are varying state definitions and differential operationalizations of those definitions by local education agencies (National Association of State Directors of Special Education, 1985; White, Beattie, & Rose, 1985). The existence of imprecise definitions has led to inconsistent and conflicting research findings regarding prevalence rates, characteristics, and the efficacy of intervention programs (Balow, 1979; Cullinan, Epstein, & Lloyd, 1983; Epstein & Cullinan, 1984; Grosenick & Huntze, 1980; Smith, et al., 1988).

Nationally during the 1987-88 school year, .96% of the students enrolled in school were identified as E/BD. The prevalence of E/BD students served varies from state to state. On a state by state basis, numbers range from .02% to 2.64% of the student population (USDOE, 1989). Long (1983) reports that within states, the rate varies due to noneducational factors such as service availability. Teacher based estimates of the prevalence of E/BD are 10-20 times greater than the actual number of students served (Smith, et al., 1988).

Characteristics

Collectively, mild/moderate E/BD student scores on tests of intelligence average between 90-95. This places them below average (Bower, 1982; Forness, Bennett, & Tose, 1983; Fuller & Goh, 1981; Kauffman, Cullinan, & Epstein, 1987; Rubin & Balow, 1978; Schroeder, 1965; Stone & Rowley, 1964). Seriously E/BD individuals tend to score between 25-70 (Prior & Wherry, 1986; Rutter & Schopler, 1987).

As might be expected, E/BD students experience academic difficulties and are frequently behind their peers. Even when matched for intelligence, E/BD individuals typically experience less academic success (Bullock & Reilly, 1979; Epstein & Cullinan, 1984; Forness, et al., 1983; Forness & Dvorak, 1982; Forness, Frankel, Caldron, & Carter, 1980; Fuller & Goh, 1981; Harris & King,

1982; Scruggs & Mastropieri, 1984).

Behaviorally, E/BD students are characterized as demonstrating disturbing or deviant behaviors to a greater extent than their peers, in other words, more frequently, more disturbing, and for a longer duration. Extensive research efforts to identify clusters of behaviors exhibited by E/BD students has been conducted (Achenbach & Edelbrock, 1978; Bullock, Wilson, & Campbell, 1990; Epstein, Kauffman, & Cullinan, 1985; Kohn, 1977; Quay & Peterson, 1987). The results have repeatedly demonstrated that behaviors which are frequently used to identify E/BD individuals can be grouped, depending on specificity, into 2 to 6 clusters. Most can be grouped into three broad categories which depict problem behaviors in personal adjustment, social adjustment, and academic adjustment in the classroom (Bullock, et al., 1990; Hoge, 1983).

E/BD students also exhibit poor social skills (Morgan, 1986; Quay, Morse & Cutler, 1966). As a result, the quality of interaction with non-handicapped peers is low, which leads to reduced interactions and reduced opportunity to learn appropriate social skills (Gresham, 1984; Morgan, 1986).

There are negative social consequences related to low intelligence, poor academic achievement, poor social skills, and disruptive behavior. In the school setting, it translates into a greater likelihood of social rejection by peers

(Gelfand, Ficula, & Zarbatany, 1986; Sabornie, 1985; Sabornie & Kauffman, 1985). E/BD students typically express low self-esteem (Jones, 1985).

The number of E/BD students who are involved in the juvenile justice system is unknown. Estimates regarding the prevalence of E/BD among the JD population are misleading for a number of reasons. First, there is little available data at the individual level on juvenile offenders (USDOE, 1989). Decisions regarding the existence of E/BD among juvenile offenders is typically administrative and professional, not clinical. Estimates of the prevalence of E/BD among residents of juvenile correctional facilities however, range from 16.23% (Morgan, 1979) to 50% (Prout, 1981). Other research estimates are 36% (Kardash & Rutherford, 1983), 20% (Pasternack & Lyon, 1982) and 17% (severe) and 36% (moderate) (Young, Pappenfort, & Marlow, 1983).

During the 1986-1987 school year 7,189 E/BD students were served in correctional settings. E/BD juveniles accounted for 57% of all handicapped juveniles receiving educational services in correctional facilities. Over 1.9% of all E/BD children and youth receiving special education services are served in correctional facilities. Based on the numbers reported in the Eleventh Annual Report to Congress on the Implementation of the Education of the Handicapped Act (USDOE, 1989) E/BD juveniles are placed in correctional facilities at a rate in excess of 2,600 per 100,000 juveniles. OJJDP estimated

that in 1987 the juvenile incarceration rate was 207 per 100,000 juveniles (OJJDP, 1988b).

Research

A research study investigating similarities and differences between JD and handicapped youths in 1985 stated "there is a need for greater understanding of the relationship between learning problems and juvenile delinquency" (Reilly et al., 1985, p. 194). The study examined measures of intelligence and academic achievement among JD, LD, E/BD, and educable mentally retarded (EMR) youths (N=40, 40, 21, and 20 respectively). It is important to note that the sample of youths with disabilities were not adjudicated as juvenile delinquents but were selected from special education classrooms in public schools.

Results indicated that JD, LD, and E/BD youths had similar cognitive abilities, as measured on the WISC-R (Wechsler, 1974). On measures of academic achievement, however, the E/BD sample scored significantly higher than the LD and JD samples in reading and spelling achievement, as measured by the Wide Range Achievement Test (Jastek & Jastek, 1978).

A more recent study, Walter (1988), investigated the existence of distinguishing cognitive and/or behavioral characteristics between educationally handicapped and non-handicapped male youths incarcerated in a training

school. The study sample consisted of 43 non-handicapped and 37 educationally handicapped (not further differentiated). Variables relevant for this review included comprehension, abstract reasoning, self-reported delinquency, and institutional disciplinary records.

Statistically significant differences were found to exist between the non-handicapped and handicapped samples in comprehension and abstract reasoning skills as measured on the WISC-R (Wechsler, 1974). The two samples did not differ on self-reported delinquency. There were differences, however, in the institutional disciplinary records of the two groups. The higher number of disciplinary referrals for the handicapped sample was attributed to incidents involving non-educational staff. In other words, the institutional staff placed handicapped youths in a disciplinary status more frequently than their non-handicapped peers.

A final study (Zucker, 1989) compared academic characteristics of adjudicated youth in a state correctional facility that were referred for special education evaluation. The sample (N=173) contained both male and female youths. Only descriptive data were collected.

Those students not found eligible for special education services had a reported measure of intelligence quotient (type of measure used was not reported) of 91. Youths identified LD scored 92 and those labeled E/BD had

a score of 89. The reported grade equivalent (GE) achievement scores in reading and mathematics were as follows: GE 7.6 and GE 7.6 for the non-handicapped, GE 5.3 and GE 5.3 for the LD, and GE 6.7 and GE 6.7 for the E/BD youths.

Summary

Juvenile delinquency continues to be identified as a problem in the United States. In spite of numerous federal, state, and local programs designed to prevent and ameliorate juvenile delinquency, a substantial number of youths come in contact with the juvenile justice system each year. One component of the juvenile justice system is juvenile corrections. Increasingly, adjudicated youth are sent to juvenile correctional facilities. There is considerable lack of agreement regarding the efficacy of programs in juvenile correctional facilities to reduce the future delinquent behavior of residents. Coordinated programs which meet the academic and vocational needs of adjudicated youth have the greatest likelihood of reducing recidivist behavior.

While juvenile delinquents share a common label and a number of common characteristics, they are nonetheless a heterogeneous group. One particularly important distinguishing characteristic pertains to the existence of handicapping conditions as defined by P. L. 94-142. The existence of an educational handicap has both programmatic and individual significance. For

the correctional program, the existence of handicapped youth among residents in a juvenile correctional facility necessitates compliance with state and federal regulations regarding procedures for the identification, assessment, and provision of appropriate educational services to these youths. The existence of a handicapping condition may also have a significant impact on the individual. Educational services designed to meet the unique individual educational needs of handicapped individuals frequently require the provision of related services, changes in instructional style, adaptation of curricular materials, and modifications in classroom management techniques.

Unfortunately, the task of identifying LD and E/BD adjudicated youth from non-handicapped adjudicated youth is complicated by a number of common characteristics. All three groups tend to be over represented by minority groups, below average scores on measures of cognitive ability, underachievement in reading and mathematics, and poor classroom behavior. Although research investigating distinguishing characteristics of non-handicapped, LD, and E/BD adjudicated youth is sparse, it does suggest that measures of cognitive ability, achievement in reading and mathematics, classroom behavior, offense record, self-esteem, and self-rated behavior may be useful in the identification of LD and E/BD adjudicated youth.

The review of relevant literature regarding obstacles to the full

implementation of P.L. 94-142 in juvenile correctional settings due to problems in the identification, assessment, and provision of appropriate educational services for LD and E/BD adjudicated youth in such facilities (Bannon, 1986; Leone, et al., 1986; Rutherford, et al., 1985) lead the researcher to ask a number of research questions. These questions were: Do non-handicapped, LD, and E/BD adjudicated youth differ from non-handicapped adjudicated youth in academic, behavioral, and social competency characteristics? Furthermore, could the combination of previously recorded information on the offense record and cognitive functioning, measured upon intake to the facility, combined with information gained from using readily available self-report and teacher observation instruments, once the juveniles were placed in the facility, differentiate between non-handicapped, LD, and E/BD adjudicated youth?

CHAPTER 3

METHODOLOGY AND PROCEDURES

The nature of the questions regarding the identification, assessment, and provision of appropriate educational services for LD and E/BD adjudicated youth in correctional juvenile correctional facilities dictated the research design. Information was collected through a review of juvenile records, self-report instruments, and teacher observations. Adjudicated juveniles were residents in state operated juvenile correctional facilities.

Setting

There are six long term institutional correctional facilities in the Texas Youth Corrections system. Two provide specialized therapeutic services for specific groups of juvenile offenders. Of the remaining four facilities, two separate state operated juvenile correctional facilities utilized in this study. These facilities were chosen for convenience and because the resident population was sufficiently large to meet data collection requirements. The sites met the OJJDP description of training schools and the U. S. Census Department definition of long term institutional facilities, in that they: (a) impose restraints on and monitor juvenile movement within the facility, (b) limit access

to the community, (c) typically are long term placements (average of 8 months), and (d) all youth are court ordered to the facility (OJJDP, 1988a). Both sites were facilities whose function was to provide custodial control and non-specific rehabilitative interventions with adjudicated youth. Non-specific in this case means that the resident youth were not identified as being primarily in need of either substance abuse or psychiatric treatment.

Routine operations in both facilities involved youths placed in group cottages with 8-12 juveniles in each cottage supervised by a juvenile corrections officer. Attendance at meals, class, and other functions was accomplished primarily on a cottage basis. Placement in a particular cottage was a function of administrative classification based on several factors including offense record, age, and security precautions. In general, the education day included a combination of basic academics, required high school courses, electives, and vocational classes. Class size within the facilities averaged 8-12 juveniles per class.

The resident juveniles in these facilities were between the ages of 13 and 21, with the average age being slightly less than 16. They were disproportionately over-represented by Hispanic and Black juveniles when compared with the state population. On a state-wide basis, approximately 29%-42% of the juveniles were identified as eligible for special education

services, primarily as either LD or E/BD. Average reading and mathematics achievement scores, for all juveniles, upon entry to the juvenile corrections system were GE 5.5 and GE 6.1 respectively.

Sample Selection

The subjects in this study were residents of two state operated juvenile correctional facilities. They were committed to the facilities by juvenile courts for delinquent acts. All subjects were male and were residents between August 25, 1989 and January 31, 1990.

Study participants were selected under the following guidelines. Field data collectors received from the education unit principal of each juvenile facility a list of adjudicated juveniles in residence. Juveniles were identified on the list as to whether or not they were receiving special education services. Those receiving special education services were further identified as to the nature of their handicapping condition. Only juveniles who had been previously identified by local school personnel as eligible for special education services prior to adjudication were eligible for inclusion in the subject pool. Non-handicapped juveniles had no history of receiving special education services. Three pools of all potential subjects were compiled: non-handicapped, LD, and E/BD.

Field data collectors included all appropriately identified LD and E/BD

subjects as potential subjects. The non-handicapped sample, 20 from each site, was randomly selected from a list of non-special education eligible youths. All subjects were informed that their participation was voluntary. Subjects were also informed that at any time they could withdraw from the study at any time without negative consequences. The anonymity of the subject's identity and responses was guaranteed.

Field Data Collectors

Two field data collectors were employed to collect records data, administer the student generated data, and collect teacher generated data. The field data collectors were both full-time doctoral candidates in special education and had previous experience in data collection and test administration. Detailed written instructions were provided and a training session with the student assessment instruments was conducted prior to the commencement of actual data collection activities.

Instrumentation

Data regarding the type of offense, scores on tests of intelligence, and reading and mathematics achievement scores were obtained from juvenile records.

Wechsler Intelligence Scale for Children-Revised

The Wechsler Intelligence Scale for Children-Revised (WISC-R)

(Wechsler, 1974) is an individually administered intelligence test. It was designed to measure, and scale, an individual's capacity to understand and contend with the cognitive demands of the environment. An overall intelligence quotient (IQ) score is calculated by combining five verbal and five performance tests. The WISC-R is appropriate for use with children aged 6 years 0 months to 16 years 11 months.

The normative sample used in the standardization of the WISC-R was selected using a stratified sampling plan. Age, sex, race, geographic region, urban-rural area, and occupation of the head of household were the variables used in the design of the sampling plan. The overall sample consisted of 2200 children.

The WISC-R is constructed to have a mean score of 100 and a standard deviation of 15 points. As such, approximately two-thirds of the sample scores are between 85 - 115. Instrument reliability was measured using the split-half approach, except for those test segments which are timed. Reliability coefficients for the verbal, performance, and full-scale scores were .94, .90, and .96 respectively. Stability coefficients, a measure of the test's reliability over time, for ages 14.5 - 15.5 years were: verbal scores, .94; performance scores, .90; and full-scale, .95.

Woodcock-Johnson Psycho-Educational Battery

The Woodcock-Johnson Psycho-Educational Battery (Woodcock & Johnson, 1978) is an individually administered battery of standardized instruments designed to measure cognitive ability, scholastic aptitude, academic achievement, and adaptive behavior. It is intended for use with handicapped and non-handicapped individuals. Part II, Tests of Achievement, was used in this study. The norming sample (N=3,577) for the Tests of Achievement was selected from 42 different localities. Test reliability coefficients for the Tests of Achievement were reported at .80 or higher. Part II, Tests of Achievement also has acceptable measures of validity in four areas: construct, content, concurrent criterion-related and predictive criterion-related.

Subtests in Part II, Tests of Achievement are grouped into five clusters: reading, mathematics, written language, knowledge, and preschool achievement. In this study, scores from the reading and mathematics clusters were recorded. The reading cluster is comprised of scores in: letter-word identification, word attack, and passage comprehension. Calculation and applied problems subtests are combined to create the mathematics cluster score.

Behavior Dimensions Rating Scale

The Behavior Dimensions Rating Scale (BDRS) (Bullock & Wilson, 1989) was developed and used in research to study the patterns of behaviors demonstrated by subjects with behavioral problems. Its characteristics have been influenced by numerous research studies (Bullock & Brown, 1970; Bullock & Zagar, 1980; Bullock, Wilson, Sarnacki & Campbell, in press; Bullock, Zagar, Donahue, & Pelton, 1985; Guetzloe, 1975; Johnson, 1983; Wilson, Moore, & Bullock, 1987). The BDRS meets the criteria established by Wilson (1980) for improved behavior rating scale construction.

The BDRS consists of 43 pairs of bipolar descriptors, each specifically defined in the manual in order to avoid misinterpretation. The scale allows for a finer discrimination of behavior through the use of a 7-point Likert-type scale. The BDRS was normed using an ethnically and geographically representative national sample. The norming sample (N=1,847) included both handicapped and non-handicapped subjects. Additionally, research has shown response patterns of ratings on regular education, special education, and correctional education students to be factorially equivalent. This finding means the instrument may be used in correctional settings with a greater degree of confidence than instruments not specifically validated for use in correctional settings (Campbell, Bullock, & Wilson, 1990).

The BDRS is composed of four subscales: Aggressive/Acting Out, Irresponsible/Immature, Socially Withdrawn, and Fearful/Anxious. The reliability coefficients, computed through a test-retest procedure, range from .82 for the Socially Withdrawn subscale to .91 for the instrument as a whole. The content validity of the BDRS was established through numerous research projects and an expert review process. The ability of the BDRS to accurately discriminate between E/BD and non-E/BD populations is a measure of the criterion-related validity of the instrument. Discriminant analysis confirmed the criterion-related validity of the BDRS. Construct validity was verified through the use of both exploratory and confirmatory factor analysis.

Behavior Rating Profile

The Behavior Rating Profile (BRP) (Brown & Hammill, 1978) provides an ecological approach to behavioral assessment. BRP provides insight regarding subject behavior from four socially relevant sources: teachers, parents, peers, and the subject. Gresham (1986) suggests that measures of social competence be socially valid. The BRP was standardized on a sample (N=1,326 students) was drawn from 11 states, including the state in which this study was conducted. In this investigation data from the Student Rating Scales (SRS) was utilized.

The Student Rating Scale provides the subject with 60 true-false items

designed to assess behaviors in school, home, and with peers. Internal reliability scores range from .74 for the school subtest to .85 for the peer and home subtests. Content validity for the BRP was established in its construction through comparison of instrument items with other behavior rating scales and anecdotal information from parents and teachers. Concurrent validity was established through a correlation of BRP scores with scores from instruments used in the diagnosis of behaviorally handicapped youths: Behavior Problem Checklist (Quay & Peterson, 1987), Walker Problem Behavior Checklist (Walker, 1970), and Vineland Social Maturity Scale (Doll, 1965). Validity coefficients in over 70% of the possible cases were statistically significant at the .01 level.

How I See Myself Scale

The How I See Myself Scale (HISMS) (Gordon, 1968) was designed to measure a child's perception of self and school. The HISMS was chosen because it is sensitive to the influence of school experiences on the self-esteem of children and youth. This was an important consideration as research with LD students suggests a correlation between academic experiences and lower ratings of self-esteem (Boersma, et al., 1978; Hiebert, et al., 1982). The HISMS has been used in several research projects (Gordon, 1964; Gordon & Spears, 1962; Gordon & Wood, 1963, Yeatts, 1967). It is

sensitive to developmental changes in self-concept. Data used for interpretation purposes was collected on almost 9,000 school-aged children. Test-retest reliability coefficients for the HISMS range between .78 and .87.

Items on the HISMS were developed from open ended responses by children about themselves (Jersild, 1952). Comparisons of the HISMS with measures of inferred self-concepts, observed behavior, environmental variables, developmental variables, and other personality variables are indicators of construct validity. The scale contains 42 items which comprise six subscales: (a) Teacher-School, (b) Physical Appearance, (c) Interpersonal Adequacy, (d) Autonomy, (e) Physical Adequacy, and (f) Peer. It can be administered individually or in groups.

Data Collection

The research design required data to be collected through records review, direct assessment, and teacher report. Data collection was begun on August 25, 1989 and completed on January 31, 1990.

Records review

Juvenile records containing demographic, offense records, and educational assessment data are maintained for all juveniles in each facility. Data collectors reviewed each selected sample member's records for the following information: full scale IQ quotient score, verbal IQ quotient score,

performance IQ quotient score, mathematics achievement score, reading achievement score, date of birth, number of parents in household, ethnicity, and type of offense. A numerical code was used to designate whether the sample member was non-handicapped, LD, or E/BD.

Student Assessment

Student generated data, BRP and HISMS were administered in small group settings. Procedural guidelines directed the data collectors to facilitate the accuracy of the self-report data through the following procedures:

1. Sample members were informed that their participation was voluntary and they were entitled to withdraw from the study at any time without negative consequences.

2. Sample members were assured that their responses would be kept in complete anonymity and that only aggregate information would be provided to the facility administration.

3. Sample members were encouraged to request additional instructions if directions or individual items were unclear. Data collectors were instructed in ways to restate scale items without changing the content of the question.

Teacher Rating Scales

Teachers were selected to participate based on their willingness to participate and their ability to meet the requirements necessary to meet the

administration protocols of the BDRS. Teachers had a minimum of three weeks classroom experience with the sample subject being rated. Data collectors distributed BDRS rating scales to teachers prior to student assessment and collected the rating scales one week later.

Ethical Considerations

This study was reviewed and approved by the Institutional Review Board of the University of North Texas. Permission to conduct research in the juvenile correctional facilities was granted by the Director of Research and Planning in accordance with state youth commission regulations. Provisions of the Family Educational Rights and Privacy Act (20 USC 1232) guided the researcher's storage and use of data.

Data Analysis

Analysis of the data collected from the sample (N=112) was conducted in three stages. All statistical analysis was performed using the Statistical Package for the Social Sciences (SPSS, 1987).

The first stage was to provide descriptive statistics on each of the following variables: age, number of parents in the home, types of offense, full scale IQ quotient, verbal IQ quotient, performance IQ quotient, mathematics standardized scores, reading standardized scores, teacher ratings of classroom behavior, student ratings of self-esteem, and student ratings of behavior.

Statistics included measures of central tendency and variance.

The second stage of the analysis was to test the validity of the hypotheses and corollaries regarding the invariance of each group of subjects, non-handicapped, LD, and E/BD adjudicated juveniles on the measured variables. One-way analysis of variance is the appropriate technique to test for significant statistical differences between mean scores from two or more samples (Ferguson, 1981; Kachigan, 1986).

For this study, there were three individual comparisons (i.e., JD x LD, LD x E/BD, JD x E/BD) that comprised the comparison-wise comparison for each measurement variable. Additionally, there were an initial eleven variables identified a priori for analysis. In cases where there are both individual comparisons of means and a set-wise comparison of means there are two significance levels to be considered.

The significance level for individual comparisons is of interest and is determined by the researcher based on criteria for Type A and Type B error probability. The significance level for set-wise analysis is the product of the significance level for each of the individual comparisons. If the significance level for the individual comparisons are set at $p < .1$ then the significance level for the set-wise comparison is $.90 \times .90 \times .90 = .729$ thus making the probability of a Type A error, rejecting a null hypothesis which is indeed true,

in at least one of the individual comparisons $1 - .729 = .27$, or approximately one in four.

Generally, researchers are concerned with the significance level of individual comparisons and pay little or no attention to set-wise significance levels (Kachigan, 1986). Due to the number of set-wise comparisons and small power associated with approximately 30 sets of subjects (Cohen, 1969), the researcher decided to make a compromise between the increased likelihood of a Type A error in individual comparisons and set-wise comparisons. In order to account for the increased probability of a Type A error when making multiple comparisons a Scheffe interval with a significance level of $p < .05$ was used (Ferguson, 1981; Kachigan, 1986).

The Scheffe interval is the most conservative of possible measures used to guard against Type A errors when making multiple comparisons. It is applicable with comparisons with unequal N's and is relatively robust against violations of normality and homogeneity of variance (Ferguson, 1981).

Since one of the underlying purposes of this study was to investigate the utility of existing or easily administered instruments to assist in the identification of LD and E/BD adjudicated juveniles in juvenile correctional facilities, a third stage of analysis was conducted. Regression analysis was used to determine the nature of the relationship between the measurement

variables and the presence of an educational handicap as well as, to determine if there is sufficient variability in the measured variables to distinguish between non-handicapped, LD, and E/BD adjudicated juveniles.

Regression analysis is a statistical procedure that describes the relationship between two variables and provides a regression equation for predicting criterion variable values. It is particularly applicable in this study as it can be used with combinations of continuous and categorical variables (Kachigan, 1986; Pedhazer, 1982).

CHAPTER 4

RESULTS

This chapter presents the results of data analysis. First, the demographic characteristics of the non-handicapped, LD, and E/BD sample members will be presented. Next the results of the statistical analysis associated with each of the five hypotheses and three corollaries will be presented. While descriptive data are generally available for the total sample (N=112), missing data, particularly on the teacher generated variables, lowers the effective sample size for selected analyses. Non-handicapped and E/BD samples were less than 40 due to attrition (e.g., transfers from the institution). In all cases the effective sample size is presented with the results of the analysis.

Demographic Characteristics

The total sample for this study consisted of 112 adjudicated male youth. Youths were residents at two state operated juvenile correctional facilities (N=63 and N=49) (see Table 1). The youth's ages (N=112) ranged from 13 to 18 years of age, with the average age being slightly over 16. Table 2 displays the sample age distribution by disability. The sample average age

was older than the state reported average age (15.6 years) for youths in long-term correctional facilities during the year of 1987 and below the national average (16.4 years) for the same time period (OJJDP, 1988b).

Table 1

Distribution of Sample by Facility and Disability

Facility	Disability			Total
	Non-handicapped	LD	E/BD	
A	19	23	21	63
B	13	20	16	49
Total	32	43	37	112
Percent	29%	38%	33%	

Minorities were over-represented in juvenile correctional facilities both nationally (56%) (OJJDP, 1988a) and within the study state (68%) (OJJDP, 1988b) during 1987. The ethnic composition of the study sample (N=112) was 37.5% (N=42) Black, 34.8% (N=39) Hispanic, 26.8% (N=30) Caucasian, and .9% (N=1) Asian/Pacific. A breakdown of the sample by ethnicity and disability is available in Table 3. A total minority representation of 73.2% was greater than the most recent national or state figures reported above.

Table 2

Distribution of Sample by Age and Disability

Age	Disability			Total
	Non-handicapped	LD	E/BD	
18	1	0	1	2
17	13	7	9	29
16	11	10	17	38
15	5	16	8	29
14	2	9	2	13
13	0	1	0	1
Total	32	43	37	112
Average Age	16.2	15.3	16.1	16.0

Sample subject records were reviewed for information regarding parental supervision at home (N=102) prior to their adjudication. Results indicated that the greatest number, 43.8% (N=49), were from single parent families. Only 40.2% (N=45) had both parents at home. Another 7% (N=8) resided with other relatives prior to adjudication. Table 4 delineates a breakdown of the number of parents in the home for each disability code.

Information regarding parental supervision was not available on 10 subjects.

Table 3

Distribution of Sample by Ethnicity and Disability

Ethnicity	Disability			Total
	Non-handicapped	LD	E/BD	
Asian/Pacific	0	1	0	1
Black	11	17	14	42
Caucasian	11	9	10	30
Hispanic	10	16	13	39
Total	32	43	37	112

Table 4

Distribution of Sample by Number of Parents in Household and Disability

Parents	Disability			Total
	Non-handicapped	LD	E/BD	
1	10	22	17	49
2	15	15	15	45
Other Arrangement	0	5	3	8
Missing Data	7	1	2	10
Total	32	43	37	112

Offense Type

There were 24 different types of offenses that study subjects could have had entered into their facility records. Each offense found in an individual's record was coded and entered as data. Specific offenses were grouped by juvenile justice criteria into five categories of offenses: (a) crimes against persons, (b) crimes against property, (c) drug related offenses, (d) crimes against public order, and (e) status offenses. The effective sample size in this analysis was N=112 subjects. Tables 5, 6, 7, 8, and 9 represent the five categories of offenses and present a breakdown of the distribution of offenses by disability. Table 10 is a summary of the study subjects' documented offense records by offense category and disability.

There were a total of 388 documented offenses committed by the subjects in this study, an average of 3.5 per subject. By disability, non-handicapped juveniles averaged 3.5 offenses each, 29% of the total number of offenses, LD juveniles averaged 3.7 offenses each, 41% of the total number of offenses, and E/BD juveniles averaged 3.3 offenses each, 31% of the total number of offenses.

Table 5

Distribution of Crimes Against Persons by Disability

Offense	Disability			Total
	Non-handicapped	LD	E/BD	
Homicide	0	1	0	1
Rape	0	1	0	1
Assault	7	9	12	28
Other	0	0	2	2
Total Crimes				
Against Persons	7	11	14	32

A one-way ANOVA of offense category by disability revealed one statistically significant difference between non-handicapped, LD, and E/BD subjects. The number of crimes against property recorded for LD subjects (N=74) was significantly higher than the number of crimes against property recorded for non-handicapped subjects (N=33), $F(2, 109) = 4.28, p < .016$. The finding that the offense records of LD juveniles contained a significantly greater number of crimes against property than the offense records of E/BD

and non-handicapped adjudicated youth meant that the data failed to support Hypothesis 1, that there were no differences in the types of offenses committed by non-handicapped, LD, and E/BD youth.

Table 6

Distribution of Crimes Against Property by Disability

Offense	Disability			Total
	Non-handicapped	LD	E/BD	
Burglary	12	30	18	60
Larceny	0	0	0	0
Motor Vehicle Theft	10	20	4	34
Arson	1	3	2	6
Possession of				
Stolen Property	5	12	8	25
Trespassing	3	9	6	18
Other Offenses	2	0	0	2
Total Crimes				
Against Property	33	74	38	145

Table 7

Distribution of Drug Related Offenses by Disability

Offense	Disability			Total
	Non-handicapped	LD	E/BD	
Possession	15	19	15	49
Distribution	4	3	3	10
Total Drug Related				
Offenses	19	22	18	59

Academic Ability

Five measures of cognitive and academic ability were analyzed: (a) full - scale intelligence quotient score (IQ), (b) performance scale intelligence quotient (PERIQ), (c) verbal scale intelligence quotient scale (VERBIQ), (d) achievement in reading, and (e) achievement in mathematics. This information was obtained during the records review process. Missing information in subjects' records caused the effective sample size to decrease to N=108 in the case of full scale IQ, N=91 for PERIQ, N=86 for VERBIQ, and N=109 for the achievement in reading and mathematics variables. Table 11 presents a summary of mean scores and standard deviations for measures of cognitive and academic ability by disability.

Table 8

Distribution of Crimes Against Public Order by Disability

Offense	Disability			Total
	Non-handicapped	LD	E/BD	
Weapons	4	6	7	17
Sex	2	4	6	12
Drunkenness	2	2	9	13
Disorderly Conduct	9	5	5	19
Contempt of Court	10	3	3	16
Other Offenses	2	4	7	13
Total Crimes Against				
Public Order	29	24	37	90

No statistically significant differences were found between non-handicapped, LD, and E/BD subjects with regards to full-scale intelligence quotient scores $F(2, 107) = 2.17, p < .12$. Likewise, there were no significant differences in the PERIQ or VERBIQ scores of non-handicapped, LD, and E/BD juveniles, $F(2, 90) = .60, p < .55$ and $F(2, 85) = .21, p .81$. Thus, data supported Corollary 2a: There are no significant differences among non-handicapped, LD, and E/BD adjudicated youth in juvenile corrections facilities

in measures of cognitive ability as measured by the Wechsler Intelligence Scale for Children-Revised (Wechsler, 1974).

Table 9

Distribution of Status Offense by Disability

Offense	Disability			Total
	Non-Handicapped	LD	E/BD	
Runaway	9	10	9	28
Truancy	12	10	4	26
Curfew Violations	0	1	2	3
Liquor Law Violations	2	2	1	5
Total Status Offenses	23	23	16	62

Statistically significant differences were found in the areas of achievement. Non-handicapped juveniles scored higher in reading than either the LD or E/BD juveniles, $F(2, 109) = 8.39, p < .0004$. Reading achievement scores for LD and E/BD youths did not significantly differ. Corollary 2b, there is no difference in the reading achievement of non-handicapped, LD, and E/BD youths in juvenile correctional facilities, was not supported by analysis of

the reading achievement scores on the reading subtest of the Woodcock-Johnson Psycho-Educational Battery, Tests of Achievement (Woodcock & Johnson, 1978).

Table 10

Summary of Offenses by Offense Category and Disability

Offense	Disability							
	Non-handicapped		LD		E/BD		Total	
	N	%	N	%	N	%	N	%
	32	29	43	38	37	33	112	100
Crimes Against Persons	7	22	11	34	14	44	32	08
Crimes Against Property	33	23	74*	51	38	26	145	37
Drug Related Offenses	19	32	22	37	18	31	59	15
Crimes Against Public Order	29	32	24	27	37	41	90	23
Status Offenses	23	37	23	37	16	26	62	16
Total Offenses	111	29	159	41	123	32	388	

* $p < .016$. LD offenses and non-handicapped offenses.

Regarding achievement in mathematics, LD subjects scored statistically significantly lower than E/BD and non-handicapped subjects, $F(2, 109) = 12.99, p < .0001$. No significant differences were found in mathematics achievement test scores between non-handicapped and E/BD subjects. The significantly lower scores of LD youths on the mathematics achievement subtests of the Woodcock-Johnson Psycho-Educational Tests of Achievement failed to support Corollary 2c of Hypothesis 2.

Classroom Behavior

The classroom behavior of non-handicapped, LD, and E/BD subjects was measured through teacher observations. The BDRS (Bullock & Wilson, 1989), a nationally validated behavior rating scale for use in juvenile correctional facilities was used. Analysis of the data failed to support Hypothesis 3, that there was no significant differences in the classroom behavior of non-handicapped, LD, and E/BD youths. A statistically significant difference in the reported classroom behavior of non-handicapped and E/BD juveniles was found, $F(2, 75) = 3.145, p < .049$. E/BD subjects scored higher, had less adaptive classroom behavior, than their non-handicapped or LD adjudicated peers. No differences were found between non-handicapped and LD or LD and E/BD subjects. Table 12, delineates the relationship of scores and disability. The effective sample size in this analysis was $N=76$.

Table 11

Summary of Sample Academic Characteristics, Mean Scores, by Disability

Variable	Disability			
	Non-handicapped	LD	E/BD	Group
Full Scale IQ				
mean score	92	88	86	88.5
standard deviation	8.3	12.1	13.7	12
Performance IQ				
mean score	96.8	93.3	93	94.1
standard deviation	10.5	14.1	15.5	13.7
Verbal IQ				
mean score	83.7	80.8	81.6	81.8
standard deviation	23	14.6	12.4	16.1
Reading Achievement				
mean score	92.3a	83.1a	85.2a	86.4
standard deviation	10.	11.4	12.8	12
Mathematics Achievement				
mean score	88b	76.5b	84.7b	82.4
standard deviation	10.5	8.5	11.2	11

a $p < .0004$. Non-handicapped juveniles higher than LD and E/BD juveniles.

b $p < .0001$. LD juveniles lower than E/BD and non-handicapped juveniles.

Further ANOVA was conducted to determine the source of the variance between non-handicapped and E/BD subjects in classroom behavior. Through analysis of BDRS subscale scores, a statistically significant difference between non-handicapped and E/BD subjects was found on the Irresponsible/Immaturity scale, $F(2,80) = 4.2, p < .019$. There were no other significant differences found on BDRS subscale scores.

Table 12

Summary of Behavior Dimensions Rating Scale Scores by Subscales and Disability

<u>BDRS</u>	Disability			
	Non-handicapped	LD	E/BD	p value
Aggressive/Acting Out	50	53.39	57	.165
Irresponsible/Immature	34.04	38.03	43.08a	.018
Socially Withdrawn	48.12	49.13	51.83	.528
Fearful/Anxious	33.04	34.48	36.87	.206
Total <u>BDRS</u>	162	174.7	189.6b	.049

a E/BD juvenile score significantly higher than non-handicapped juvenile score.

b E/BD juvenile score significantly higher than non-handicapped juvenile score.

Self-esteem

In order to collect data regarding self-esteem, study subjects completed the HISMS (Gordon, 1968). The total instrument score was used in the one-way ANOVA. No statistically significant differences in the self-esteem of non-handicapped, LD, and E/BD subjects was found, $F(2, 110) = .289, p < .75$. The effective sample size for this analysis was $N=111$. Hypothesis 4, there are no significant differences in the self-esteem of non-handicapped, LD, E/BD youths in juvenile correctional facilities as measured by the HISMS (Gordon, 1968), was not supported by analysis. As there was no difference in subject scores, no further ANOVA was conducted on the HISMS scores.

Self-reported Behavior

Subject generated scores on the SRS (Brown & Hammill, 1978) were submitted to a one-way ANOVA. The effective sample size was $N=109$. The total score of the SRS was analyzed and no statistically significant differences were found between any combination of scores from the non-handicapped, LD, and E/BD subjects. An ANOVA was conducted on the SRS subscales: peer, school, and home; $F = (2, 109), .109, p < .74$. No statistically significant differences were found, thus analysis supported the hypothesis that there were

no differences in the self-ratings of non-handicapped, LD, and E/BD youths in juvenile correctional facilities regarding behavior in the home, school, or with peers, Hypothesis 5.

Regression Analysis

In order to determine the predictive ability of study variables regression analysis was performed. Table 13 contains a summary of the ANOVA phase of the analysis. Variables identified by ANOVA as having a statistically significant relationship were entered into the regression analysis. The variables used were total BDRS score, achievement in reading, achievement in mathematics, and crimes against property. Results of the stepwise regression analysis indicated that only the total BDRS score was entered into the regression formula, $T(1,73) = 2.649, p < .009$. The total BDRS score accounted for 9% of the variance between non-handicapped, LD, and E/BD youths.

Table 13

Summary of ANOVA by Variables and F Ratio and Probability

Variable	F Ratio	Probability
Fullscale IQ	.5174	.474
Reading Achievement	8.3905	.0004a
Mathematics Achievement	12.9865	.0000b
Crimes against persons	1.033	.359
Crimes against property	4.283	.016c
Drug laws	.2439	.784
Public order	2.490	.088
Staus offenses	1.339	.266
<u>BDRS</u>	3.145	.049d
<u>HISMS</u>	.298	.750
<u>SRS</u> Total	.109	.74

a Non-handicapped reading scores higher than LD and E/BD reading scores.

b LD mathematics scores lower than non-handicapped and E/BD mathematics scores.

c LD more crimes against property offenses than non-handicapped and E/BD crimes against property offenses.

d E/BD BDRS scores higher than LD and non-handicapped BDRS scores.

Chapter 5

DISCUSSION, IMPLICATIONS, AND RECOMMENDATIONS

The purpose of this research study was to examine possible discriminating characteristics which may assist in the identification and assessment of adjudicated LD and E/BD youths. Specifically, this study explored similarities and differences between non-handicapped, LD, and E/BD adjudicated juvenile offenders residing in state administered juvenile correctional facilities. This study examined the (a) type of offense, (b) full-scale intelligence quotient score, (c) performance scale intelligence quotient score, (d) verbal scale intelligence score, (e) achievement in reading and mathematics, (f) classroom behavior, as reported by the classroom teacher, and (g) self-esteem and self-reported measures of social competence. This section discusses the results of the study, presents implications for practice and suggests directions for future research.

Limitations of the Study

Any research is only generalizable to the extent that the sample characteristics are representative of those characteristics found in the population in question. To the extent that this research study differs from

national, state, or local populations of adjudicated juveniles residing in state administered juvenile correctional facilities, discretion should be exercised when interpreting the results of this study.

The study sample was selected from two of six state administered juvenile correctional facilities in the state of Texas. The correctional facilities are classified as training schools by OJJDP and as long-term institutional settings by the U. S. Census Department (OJJDP, 1988a). Data were gathered on subjects in residence between August 15, 1989 and January 31, 1990. All subjects were volunteers.

Several practical considerations precluded the use of a randomly selected sample, notably the necessity to include all available LD and E/BD youths in each facility. Field data collectors examined facility records for juveniles identified by local school district interpretation of Texas Education Agency guidelines as LD and E/BD. All subjects meeting this criterion were included in the sample. An attempt was made to obtain a representative sample of non-handicapped adjudicated youth through random selection of 20 non-handicapped juveniles from the school rosters of each facility. Missing or incomplete juvenile records, unreturned teacher generated data, and the departure of juveniles from the facility reduced the effective sample size in

each category. It is not possible to ascertain what impact the missing data may have had on the final results.

The classifications of LD and E/BD were made by local school personnel prior to the juvenile's commitment to the correctional facility. Presumably the classifications were made in accordance with Texas Education Agency (TEA) guidelines. Different guidelines or interpretations of TEA guidelines may have lead to different results.

Measurement Variables

Offense Type

The over-representation of handicapped youth in juvenile correctional facilities has led to a number of studies investigating delinquency among handicapped youth with inconclusive results. In a widely publicized study (Dunivant, 1984), LD youth reportedly had higher rates of self-reported delinquent behavior and were more likely to be arrested and adjudicated than their non-handicapped peers. Yet in another study (Walters, 1988), self-reported delinquency rates among incarcerated non-handicapped and educationally handicapped youth did not substantially differ with regard to the nature of offenses committed. This study investigated the offense records of non-handicapped, LD, and E/BD adjudicated youth in juvenile correctional facilities. Five offense categories were investigated: crimes against persons;

crimes against property; drug laws; crimes against public order; and status offenses.

The only significant difference identified in this investigation was in the general offense category of crimes against property. In spite of the fact LD youth comprised 38% of the sample, the records indicated LD youths committed 47% of all crimes against property. This was a statistically significantly higher rate than found in the records of non-handicapped adjudicated youth. While the only statistically significant relationship identified was that of the substantially higher number of crimes against property committed by LD juveniles than their non-handicapped peers, a review of Table 10, Summary of Number and Percent of Offenses by Category and Disability, reveals a number of trends in the types of offenses committed by adjudicated youth in youth correctional facilities. LD juveniles were documented as having committed more offenses in only one category, crimes against property. In the other categories, crimes against persons, drug related offenses, crimes against public order, and status offense, non-handicapped and/or E/BD had higher offense rates, although not at statistically significant different rates. E/BD youth, while comprising 33% of the sample, committed 44% of the crimes against persons. Convictions for violations of

drug laws were evenly distributed across the sample. Finally, E/BD youth had fewest, number and percentage, status offense convictions.

The findings of this study would tend to dispute those reported by Dunivant (1984), that LD youths were more frequently arrested and adjudicated for all types of offenses than their non-handicapped peers, as well as, the findings of Walter (1988) which reported no differences in the nature of self-reported delinquency. Results, however, may be biased from several sources. Records may not have been complete. Police officers and courts have considerable discretionary powers when dealing with juveniles and may be responsive to a variety of influences which may lead to official offense records which are not representative of either undetected delinquency, police contacts, or even court appearances.

Academic Abilities

The results of ANOVA on the five variables of cognitive and academic ability provided potentially helpful information. Full-scale IQ, PERIQ, and VERBIQ scores of non-handicapped, LD, and E/BD adjudicated juveniles may be viewed as statistically and practically invariant (see Table 11 for means and standard deviations). This information, while possibly expected, adds to the knowledge base regarding the cognitive abilities of non-handicapped, LD, and E/BD youths incarcerated in juvenile correctional facilities. Previous studies

have not reported data regarding the similarities or differences in cognitive abilities of non-handicapped, LD, and E/BD youths in juvenile correctional facilities.

Differences in achievement reading scores, however, were statistically and, arguably, practically significant. Non-handicapped juveniles, although still below grade level, were able to read at a much higher grade level than either LD or E/BD youths. There was also a significant difference recorded in the area of mathematics achievement. LD juveniles scored lower than either non-handicapped or E/BD youth.

Two grade levels in reading ability has direct implications regarding a number of educational decisions (e.g., textbooks, student grouping). The lower mathematics abilities of LD students suggests the need for similar educational considerations. The results of this investigation would lend support to those stressing the need for special education programming within juvenile correctional facilities.

It should be noted here, that obviously there is a relationship between age and achievement in both reading and mathematics. The LD sample, as can be seen in Table 2, was on the average a year younger than either the non-handicapped sample or the E/BD sample. In order to account for the possible confounding effects of age on reading and mathematics achievement

standardized scores, based on age, from the Woodcock-Johnson Psycho-Educational Battery, Tests of Achievement were used in the analysis of reading and mathematics achievement. There is virtually no difference in the ages of the E/BD and non-handicapped samples to obscure the variance in reading ability of the two groups. Thus, significant differences, not attributable to age, exist between LD and E/BD and non-handicapped adjudicated youth in reading achievement and between LD and non-handicapped and E/BD youth in mathematics.

Teacher Observations on Classroom Behavior

The results of ANOVA on classroom teacher generated BDRS scores indicated a statistically significant relationship between the scores of non-handicapped and E/BD youths. Further analysis of the BDRS subscale scores denoted the source of the variance to be primarily in the Irresponsible/Immature subscale (see Table 12). Regression analysis designed to compute a regression equation to predict the disability status of the sample using all identified significant variable relationships used only the total BDRS score.

It should be noted that the effective sample size for this variable was only 76 cases. Unreturned teacher observations may have had a biasing effect on the results of this analysis. The BDRS Aggressive/ Acting Out

subscale, one measuring frequently identified classroom behaviors of E/BD youths, approached significance at $F(2,78) = 1.84, p < .16$. It is impossible to determine what effect a greater teacher response would have generated.

Self-esteem

Previous investigations regarding the self-esteem of juvenile delinquents, (Gold & Mann, 1972; Hepburn, 1973; Jensen, 1973), LD (Boersma et al., 1978; Hiebert et al., 1982), and E/BD (Jones, 1985) youth indicate, that as a group, they express lower levels of self-esteem than peers. The results of this investigation suggest that non-handicapped, LD, and E/BD adjudicated juveniles do not differ in their perception of self-worth.

It should be noted, that in this investigation the measured self-esteem of adjudicated youth in juvenile correctional facilities did not differ from that of the HISMS normative sample. In fact, the adjudicated youth actually scored slightly higher in both total score and on each of the sub-scales. The differences were not statistically significant but these results do not lend support to investigations in the 1970s (Gold & Mann, 1972; Hepburn, 1973; Jensen, 1973) suggesting a relationship between reduced self-esteem and delinquency .

One possible explanation for the lack of difference in the measures of self-esteem between non-handicapped, LD, and E/BD adjudicated youth, as well as, the normative sample, is that the measure of self-esteem is dependent upon the youth's immediate environment. It is also possible that with juvenile delinquent samples self-esteem instruments relying on self-report may be susceptible to inflated responses.

Self-reported Social Competency

As a group, juvenile delinquents have been found to exhibit behavior problems in school (Meltzer et al., 1984; Rizzo, 1981) and poorer social skills (Freedman, 1975). The social competency deficits of LD students is well documented (Bryan & Bryan, 1977; Schumaker et al., 1982; White et al., 1980). They also have been found to have classroom behavior and interpersonal problems (Bender, 1985; Epstein & Cullinan, 1984) and suffer from reduced social status (Bender et al., 1984; Perlmutter, 1983; Sabornie, 1987). E/BD youths have similar social skill deficits (Morgan, 1986; Quay et al., 1966) and experience social rejection (Gelford et al., 1986; Sabornie, 1985; Sabornie & Kauffman, 1985).

The results of this investigation regarding the self-reported social competency of non-handicapped, LD, and E/BD adjudicated youth suggest that these individuals view their home, school, and peer relationships similarly

to non-adjudicated peers scoring in the average range of the SRS. Since the SRS is a self-report measure, this finding does not repute previous findings that suggest there are social competency deficits and accompanying social ostracism based on independent observation. The findings may, however, suggest the need for educational and therapeutic interventions designed to improve the social competency of these groups of adjudicated juveniles may not be recognized by the intended beneficiaries. The finding that the three groups, non-handicapped, LD, and E/BD adjudicated juveniles, are not different in their perceived social competencies would not support differentiated treatment settings for social skills training.

Implications

This investigation purposed to investigate measures of type of offense, academic achievement, classroom behavior, self-esteem, and self-reports of social competency in order to assist in the identification and assessment of LD and E/BD youth in juvenile correctional facilities. The results of this investigation illustrate the practical need for the provision of special education services within juvenile correctional facilities. Significant discrepancies in reading and mathematics achievement scores between non-handicapped and LD and E/BD juveniles suggests the need for differential educational programming within the juvenile correctional facility. Identifiable behavior

characteristics of E/BD youths are also indicative of the need for the inclusion of special education services within the correctional education classroom.

These results have implications in the area of personnel preparation. First, because of the over-representation of LD and E/BD youth in correctional facilities, all correctional educators should be cognizant of the behavioral and academic characteristics associated with these juveniles. Whether LD and E/BD youth are "mainstreamed" into the classes of correctional educators or remain unidentified, correctional educators have substantial contact with special education students within the correctional facility. Preservice and in-service training is needed which provides correctional educators with information regarding (a) educational characteristics of LD and E/BD students, (b) behavioral management, and (c) the requirements of P.L. 94-142 and its amendments.

Second, the results of this investigation call attention to the need for qualified correctional special education teachers. The national average of one special educator per correctional facility (OJJDP, 1988b) is far below the number needed to adequately serve LD and E/BD adjudicated juveniles. Correctional special educators require not only special education expertise, but must also be able to provide special education services within the

administrative structure of the correctional facility and understand the subculture associated with juvenile delinquency.

Finally, the correctional facility personnel (e.g., guards, social workers) should be trained to recognize the impact of severe reading and behavioral deficits on the LD and E/BD youths in the day to day activities of the facility. These personnel should also receive additional training in (a) educational characteristics of LD and E/BD students, (b) behavioral management, and (c) the requirements of P.L. 94-142 and its amendments.

Knowledge that the offense records of LD youth in juvenile correctional facilities contain a significantly higher number of crimes against property than other juveniles may have importance for early intervention efforts. The development of law related curricula that includes relevant and appropriately presented information regarding property rights would seem to be a reasonable early intervention.

Recommendations for Future Research

The findings of this study suggest the need for further research in several related areas. A more closely controlled study on the variable of age is needed to further clarify the extent of the academic achievement characteristics of LD juveniles from their non-handicapped adjudicated peers.

Clarification of this variable may aid in the identification of unidentified LD youth in juvenile correctional facilities.

Further research on the ability of the BDRS to differentiate between non-handicapped and E/BD adjudicated youth is justified by the findings of this investigation. Of particular need, is research using a larger sample with controls for age and type of offense. An investigation with greater statistical power is needed to confirm the preliminary findings of this investigation. Also, an investigation regarding variability in scores across facilities would provide much needed information regarding the case management utility of the instrument.

Finally, further research is required to explore the nature of the substantial number of crimes against persons found in the records of LD youths. It remains unclear whether the large number of offenses is unique to this sample, attributable to criminal justice system characteristics, or are indeed characteristic of LD youths involved in delinquent acts.

APPENDIX A
PERMISSION TO CONDUCT RESEARCH



RON JACKSON
Executive Director

JAY LINDGREN
Deputy Executive Director

TEXAS YOUTH COMMISSION

8900 Shoal Creek Blvd.
P. O. Box 9999 • Austin, Texas 78766
(512) 452-8111

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Dallas

KENNETH S. GEORGE
Dallas

Rev. FLOYD N. WILLIAMS, SR.
Houston

July 25, 1989

Robert Campbell
University of Hawaii-Manoa
Dept. of Special Education
1776 University Ave., Wist #208
Honolulu, Hawaii 96822-808

Dear Mr. Campbell:

I am pleased to inform you that your research project has been approved for 60 students at the Gainesville State School and 60 at the Brownwood State School. Please contact Jane Chandler, Assistant Superintendent of Gainesville, and Linda Steen, Superintendent at Brownwood, to set up the logistics of the study.

Enclosed is a Research Confidentiality Agreement for you and anyone who interviews our students to sign. A separate form should be used for each individual.

I also request that you send a copy of your final report to me upon completion.

If I may assist you further, please let me know.

Sincerely,

A handwritten signature in cursive script that reads "Chuck Jeffords".

Charles R. Jeffords, Ph.D.
Director of Research & Planning

CRJ/ea

cc: Lyndal Bullock

APPENDIX B
CODE BOOK

CODE BOOK

Title 'TYC Inmate Academic, Social, and Behavioral Data'

Subtitle 'data list'

/1 faccode 1 discode 2 incode 3-4

scode 1-4 fulliq 5-7 verbiq 8-10 perfiq 11-13

aachmath 14-16 aachread 17-19 birthdt 20-25 numpar 26

race 27 homicide 28 rape 29 assault 31 other 32

burg 33 larc 34 mvt 35 arson 36 vandal 37 stolprop 38

trespas 39 ot 40

posses 41 distrib 42

weapons 43 sex 44 drunk 45 discond 46 contemp 47 oth 48

runaway 49 truancy 50 curfew 51 liquor 52 stdrding 53-55

stdrmath 56-58

/2 code 1-4 birthyr 5-6 ethnic 7 bdrs1 to bdrs43 8-50

/3 stcde 1-4 cmysf1 to cmysf42 5-46

/4 stucode 1-4 srs1 to srs60 5-64.

Value Labels

Race	1	'Amerindian'
	2	'Asain Pacific'
	3	'Black (non-hispanic)'

	4	'Caucasion'
	5	'Hispanic'
	6	'Other'
Homicide to Liquor	1	'Past Arrest'
	2	'Present Offense'
	3	'No Offenses'
Ethnic	1	'Amerindian'
	2	'Asain Pacific'
	3	'Black (non-hispanic)'
	4	'Caucasion'
	5	'Hispanic'
	6	'Other'
SRS1 to SRS60	1	'True'
	2	'False'

APPENDIX C
RAW DATA

Raw Data

begin data.

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