

THE INFLUENCE OF GENDER AND STUDENTS'  
EXTERNALIZING OR INTERNALIZING PROBLEM  
BEHAVIOR ON THE CHARACTERISTICS OF  
DISRUPTION, ACADEMIC ACHIEVEMENT  
AND SCHOOL SERVICE PROVISION

By

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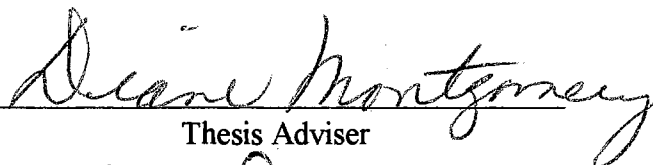
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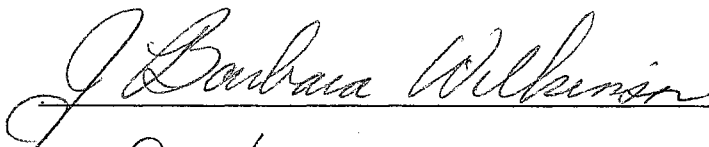
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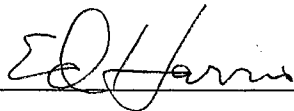
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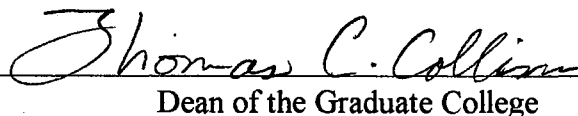
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## CHAPTER ONE

### INTRODUCTION

Teaching children and adolescents with behavior problems is a challenging task. Enforcement of school attendance laws, the formalization of school dropout statistics and adherence to special education law are demanding educators, parents and society to focus on the educational experience of students with behavior problems. There is a lack of systematic data on the characteristics of students with problem behaviors (Cullinan, Epstein, & Sabornie, 1992) and information about students with problem behaviors who are in different systems of care (Landrum, Singh, Nemil, Ellis, & Best, 1995). This study was an effort to provide accurate knowledge about students with problem behaviors by empirically describing their unique demographic, personal and educational characteristics.

The theory addressed in this research is that students with problem behavior can be described by unique behavior syndromes and may have varying needs for success in the school setting. All students with problem behavior are not the same and require different school interventions (Cessna, 1993; Clarizio, 1992a). The presence of two behavior constructs underlying childhood maladaptation, externalizing and internalizing, have been statistically evidenced (Achenbach & Edelbrock, 1978; Hale & Zuckerman, 1981; Kohn, 1977). The purpose of this study was to investigate male and female students in day-treatment school settings, with clinically severe externalizing or internalizing problem behavior in three student characteristics: disruption, academic achievement, and the educational service provided by the school.

Students with problem behaviors are not tolerated in the regular classroom setting if they disrupt management and instructional routines (Grosenick, 1981; Noel, 1982). The high school graduation success rate and academic achievement remain poor for these students (Wagner & Shaver, 1989). Outcome data for students with behavior disorders indicated that the promise inherent in the federal education law, to provide a free and

appropriate education (service provision), was far from being realized for this group (Steinberg & Knitzer, 1992). The provision of appropriate services for these students has proven to be a special challenge for educators (Wagner, 1991).

A comprehensive approach in the research of students with behavior disorders, which emphasizes the wide range of factors affecting and describing the student, is recommended by the Peacock Hill Working Group (Kauffman et al., 1991). In spite of this recent endorsement for research, the recognition that empirically based knowledge improves the school service delivery system for problem behavior students is a recent paradigm shift in the mental health/educational response to adolescents with emotional-behavioral problems (Duchnowski & Kutash, 1993). The mental health and school collaborative system of care is a middle ground of service for students with problem behavior. These two agencies have referral, diagnostic and treatment systems that have traditionally operated in a parallel fashion. The paradigm of an interactive service delivery system between school and mental health professionals in a day-treatment school setting opened the door to improved services for students with problem behavior.

Research expecting to differentiate and describe the problem behavior student population, by behavior type and gender, on school-related characteristics is limited but growing. Exploring how students in public school behavior day-treatment programs vary in the areas of disruption, academic achievement, and the number of school services provided to support their school success, yielded helpful information. Educators will continue to need information as they plan to keep these difficult students in the educational system.

### Problem Behavior

Defining what is meant by problem behavior has been one obstacle to serving students with behavior problems in the school setting. The definition of the behavior

problem student population must consider school situational specificity according to federal special education law (Federal Register, 1990). That is, what is normal or common in one situation may not be necessarily be appropriate or desirable behavior in a learning environment (Apter, 1982). There has been a history by schools to seek a homogeneous solution, suspension, to the problems of this heterogeneous set of students (Cessna, 1993).

Externalizing and internalizing problem behaviors empirically emerge from the literature as two broad-band factors describing syndromes of students with behavior problems (Achenbach & Edelbrock, 1978; Hale, 1978; McDermott, 1982; Walker, Block, Todis, Barckley, & Severson, 1988). These underlying dimensions are revealed by several assessment instruments. In a review of the literature spanning 50 years, it has been indicated that a clear two-factor pattern structure of problem behavior can be identified using children/adolescent behavior rating scales (Kohn, 1977). The great majority of social and behavioral adjustment problems of students occurring in the school setting can be classified as either exhibiting an internalizing or an externalizing nature (Walker, Block, et al., 1988). There is overlap, or co-morbidity, in externalizing and internalizing behaviors, but there is empirical divergence between them as reported in behavior rating scales (Achenbach, 1991), factor analytic studies (Quay & Peterson, 1979) and as reported by observing adult professionals (Achenbach & Edelbrock, 1981).

Educators and school boards have difficulty discerning behaviors which entitle a student to receive special education services for behavior problems (Forness & Knitzer, 1991; Maag & Howell, 1991). The exclusionary clause in the federal special education law definition of Serious Emotional Disturbance (SED) (Federal Register, 1990) is operationalized in various ways from state to state and school district to school district. The school service delivery for students with problem behavior is a difficult, often subjective, issue. Currently, a new definition of this special education category is being presented to American lawmakers (Forness & Knitzer, 1991). The proposed Emotionally

Behaviorally Disordered (EBD) definition does not include the exclusionary, social maladjustment, clause to limit disrupting or acting-out students from special education services.

## Gender

Gender bias in the schools is a question raised by educational researchers. The American Association of University Women (1992) makes the claim that girls are discriminated against in public schools. The exploration of gender differences in certain mental health disorders (Raymond, 1991) and the experience of a behavior disability from a particularly female point of view (Fine & Asch, 1988) is needed. Gender-specific research continues to be advocated by educational researchers in the area of emotional and behavioral disorders (Caseau, Luckasson, & Kroth, 1994). The gender of the problem behavior student is a descriptor not always reported in special education research.

Females are underrepresented in special education services for students with serious emotional disturbance (Coleman, 1986). Data indicated that girls with emotional problems, severe enough to interfere with life (including school), were served by reputable private psychiatric hospitals. The girls had problems serious enough to warrant hospitalization but were not typically identified by the schools as requiring supports for problem behavior in a special education class (Caseau et. al., 1994). Even the possibility of school institutional bias against girls with mental health problems warrants exploration. Gender bias in schools and the exploration of gender differences in certain mental health diagnoses are relevant concerns for public education.

Males represent a disproportionately large percentage of students in school programs for students with behavior disorders (Epstein, Kauffman, & Cullinan, 1985). Coleman (1986) estimated the ratio of males to females in SED classes to be approximately 8:1. This may account for the near exclusive research on boys in behavior-

related special education classes (Berry, Shaywitz, & Shaywitz, 1985). In the more recent findings, the boys outnumbered the girls in SED classes by a ratio of 4:1 (Caseau et al., 1994; Cullinan et al., 1992; Singh, Landrum, Donatelli, Hampton & Ellis, 1994). Female teacher gender appeared to be a factor in a teachers' decisions to refer students for special education services (McIntyre, 1990). The results of studies using only male participants may not be generalizable to females, warranting additional gender-specific research.

### The Characteristic of Disruption

Disruptive students in a school setting affect classroom climate, teacher morale, and distract the other students to "drift off task" (Doyle, 1984). The traditional disciplinary method of expulsion or suspension from the system only aggravates the behavior problem disability increasing the isolation and rejection aspect of a behavioral disorder (Kerr, Nelson, & Lambert, 1987). The current empirical evidence on the etiology of conduct disorders provides some evidence suggesting that students exhibiting unsocialized or aggressive behaviors are not engaging in the disturbing behavior on a voluntary basis (Quay, 1986). The level of disruption in the schooling process varies as a characteristic of the nature of the student's behavior problem, whether externalizing or internalizing (Cessna, 1993; Clarizio, 1992b).

Students with behavior disorders often engage in behaviors that may disrupt others in the class and themselves to the detriment of the school experience. One concern is whether the disruptive behavior is the result of behaviors which are disabling to the individual or only annoying to school personnel and society. This ecological nature of the disturbing behavior can be recognized in the classroom climate (Algozzine, 1980). The effort to clarify disturbing behavior as externalizing or internalizing has been the focus of position papers and research projects (Maag & Howell, 1991; Nelson, Center, Rutherford, & Walker, 1991). There are consistent differences reported by schools between

aggressive, assertive, and submissive behaviors in typical children across types of school settings (Deluty, 1985).

Disruptions often involve teacher time with detrimental effect on other children in the regular class setting. Recent court rulings recognize the effect of a student on teacher time and other classmates as a consideration in mainstreaming students with special needs (Sacramento City Unified School District, Board of Education V. Holland, 1994). The student disruption characteristic affects the school climate and social relationships (Doyle, 1984). The educational settings and interventions used with the behavior disordered population should be based on differentiated school programming and services unique for the problem behavior student (Clarizio, 1992b). Identifying the style of disruption in the classroom setting becomes relevant for determining school support services. Steinberg and Knitzer (1992) advocate looking beyond the silent, orderly classroom to provide a condition for the student with problem behavior's development. Behavior rating scales based on parent, teacher or student reports are often used to assess students' behavior dysfunction, competence and often are part of the school record. In this study, the school's documentation of the student's problem behavior described the disruption characteristic.

### The Characteristic of Academic Achievement

Students with behavior problems appear to experience a substantial amount of academic underachievement throughout their formal education years (Coutinho, 1986; Epstein, Kinder, & Bursuck, 1989; Foley & Epstein, 1992). The academic achievement deficit of the students with behavioral disabilities was described as the "300-pound gorilla" of this population by Hill Walker, a celebrated researcher in the field, at the 1993 Council for Exceptional Children annual conference. This commonality of academic deficit in Dr. Walker's extensive research on behavior disordered students prompted his interest in early

identification. The low academic achievement and school failure rate of students with problem behavior is demonstrated by the high dropout rates in this population. The discrepancy between the academic achievement of students with behavior disorders and their nondisabled peers increases as the youngsters pass from elementary to secondary schools (Coutinho, 1986). Cullinan, Epstein, and Lloyd (1983) reported several prevalence estimates that ranged from approximately 33% to 80% of problem behavior students have academic difficulties. The combination of low academic achievement and behavior disorder increase the risk for severe mental health difficulties in later life (Kazdin, 1985).

The Fifteenth Annual Report to Congress (U. S. Department of Education, 1993) on the Implementation of the Individual with Disabilities Act, 1993, includes data that 45.2% of students in the United States who have been identified with a serious emotional disturbance category in the public schools will not complete the high school coursework (Wagner, 1991). Students with behavior problems drop out of secondary school at twice the rate of other special education students and nearly one-half of students identified as behaviorally disordered in the schools are involved in the court system within two years of leaving school (Jay & Padilla, 1987; Neel, Meadows, Levine, & Edgar, 1988).

Students identified with behavior problems have academic difficulties when compared with nonhandicapped peers. This school failure has been documented by researchers (Coutinho, 1986; Epstein, Kinder, & Bursuck, 1989) in the last decade, but not in concert with an assessment of the educational services provided.

### The Characteristic of School Service Provision

There are several possible ways to describe the school service provision for students who need special assistance to meet academic and normal behavioral performance expectations in the school environment. These extra services are varied and may be

conceptualized on a continuum from special education interventions to minimal academic or behavioral remediation provided by the school. The programming of services for the disabled may be in compliance with the special education federal law, the rehabilitation civil rights law under Section 504, or a formal behavioral or academic plan within the school setting.

The Fifteenth Annual Report to Congress on the Implementation of the Individuals with Disabilities Education Act (U.S. Department of Education, 1993) indicates that during the 1991-1992 school year, less than 1% of all students received special education services for behavioral disorders and emotional disturbance. This percentage is far lower than any credible estimates of need, projected at 3% to 6% of the school age population (Center & Obringer, 1987; Gonzales, 1991; Kauffman, 1992). There is considerable variation from state to state and school district to school district on the overall rates of identification and educational service for students with problem behavior.

School services in the form of additional supports are limited for this problem behavior population. The urgency of appropriate educational programs for adolescents with behavior disorders has been underscored by the call for additional supports and program development from the Office of Special Education and Rehabilitative Services (Epstein, Foley, & Cullinan, 1992). Specific environments have been documented to affect behavior (Leone, Trickett, & Zlotlow, 1986). The student with problem behaviors demonstrates a particular set of needs to be analyzed in a particular school context (Neel & Cessna, 1993). There are questions about the appropriate types of classroom interventions for problem behavior students based on their needs (Clarizio, 1992a; Forness, 1992). The implications of contextual changes in the environment of a student with a behavior problem must begin with a needs-based assessment of the student. School-based day treatment programs recently have emerged as a setting where education and mental health services for students with problem behavior are provided in a somewhat integrated and cooperative fashion (Duncan, Forness, & Hartsough, 1995).



## School Records

Students with behavior problems have school cumulative and behavioral files describing their past school behavior, academic performance and the school programs implemented. To quantify this information in a way that facilitates decision making by school personnel and parents provides a valuable use for the records. Quantifying the information puts it in a concise format for evaluation. The records also indicate how the school has accommodated each student's behavior over time and specifically targets functional information for student-need assistance in relation to the student's unique behavior disability. To quantify the use of school archival records satisfies the special education law requirement to use school history in the identification and eligibility process (Walker, Block-Pedego, Todis, & Severson, 1991).

A rich source of data and information about school adjustment, academic performance, and the educational services provided are contained in individual student school archival records. Student records are a primary means for systematically documenting student performance. The records also provide a basis for analysis of the school system efforts to accommodate the broad range of the students it serves. These records provide a capsule-like picture of student performance in academic, behavioral, and assisted areas. The more problematic a student's adjustment to the schooling process, the more detailed and voluminous are the resulting school records (Walker & Severson, 1991).

## Rationale for the Study

In an attempt to differentiate students with problem behaviors in a school/mental health setting, the specific characteristics in the areas of disruption, academic achievement, and school service provision were described. Behavior and gender served as two

independent variables to further determine differing school characteristics for externalizing and internalizing males and females. In addition to the growing empirical evidence to substantiate disruption differences in behavior and poor academic success, educators are beginning to examine the prior school service provision for students with problem behaviors in various systems of care. Day-treatment service delivery has previously been studied as a mental health issue included with inpatient or residential patient research. Often the educational systems and mental health institutions are disconnected, failing to share information or collaborate concerning the student. Seldom does one discover the school service provision consideration as part of a mental health service and vice versa. Descriptive student characteristics and school services provided to students with behavior problems are the focus of this three-part inquiry.

#### Statement of the Problem

The purpose of this study was to investigate male and female students in day-treatment school setting with clinically severe externalizing or internalizing problem behavior on three characteristics: disruption, academic achievement, and the service provision by the school. The data were coded using a quantifiable systematic search instrument for student archival records.

#### Research Questions

Research Question 1: Does the influence of problem behavior on disruption as reported in school records for males and females depend on externalizing and internalizing problem behavior?

Research Question 1-A: Is disruption as reported in school records the same for students who exhibit externalizing or internalizing problem behavior?

Research Question 1-B: Is disruption as reported in school records affected by gender?

Research Question 2: Does the influence of problem behavior on academic achievement as reported in school records for males and females depend on externalizing and internalizing problem behavior?

Research Question 2-A: Is academic achievement as reported in school records the same for students with externalizing or internalizing problem behavior?

Research Question 2-B: Is academic achievement as reported in school records affected by gender?

Research Question 3: Does the influence of problem behavior on school service provision as reported in school records for males and females depend on externalizing and internalizing problem behavior?

Research Question 3-A: Is school service provision as reported in school records the same for students with externalizing or internalizing problem behavior?

Research Question 3-B: Is school service provision as reported in school records affected by gender?

### Definition of Terms

These definitions were pertinent to this study.

Externalizing problem behavior: The Externalizing syndrome included behavior problems involving aggression, non-compliance, disruption, hyperactivity, oppositional-defiance, anti-social behavior or negativism (i.e. acting-out or undercontrolled behaviors). The problem behavior was assessed using the Teacher Report Form of the Child Behavior Checklist (Achenbach, 1991).

Internalizing problem behavior: Internalizing syndrome indicators involved peer neglect and rejection, social skills deficits, immaturity, depression, low-self-esteem, and school phobias (i.e. with-in directed or overcontrolled behavior). The problem behavior was assessed using the Teacher Report Form of the Child Behavior Checklist (Achenbach, 1991).

Disruption: This characteristic indicated that a student was experiencing problems with rule-governed behavior and meeting the behavioral expectations of school officials with behaviors which interrupt the classroom environment. This was assessed using the School Archival Records Search (SARS) (Walker & Severson, 1991). The disruption score was comprised of four individual variables: School Discipline Contacts, Within-school Referrals for behavior problems, Referrals Out-of school for specialized assistance for behavior problems, and Negative Narrative Comments.

Academic Achievement: This characteristic included information about a student on academic achievement tests. This was assessed using the School Archival Records Search (SARS). The achievement score consisted of receiving Chapter I Services and recording the overall mean percentile achievement test score.

School Service Provision: This characteristic described the number of services the school provided for the student to support deficits in school success. This was assessed using the School Archival Records Search (SARS). This score was comprised of these student variables: Non-regular Classroom Placement, Current IEP, Within-school Referrals for speech, and Within-school referrals for academic problems.

Seriously Emotionally Disturbed (SED)--Special Education Services in Public Schools:

According to the Individuals with Disabilities Education Act (IDEA) (Federal Register, 1990), SED is defined as:

A condition exhibiting one or more of the following characteristics over a long period of time and to a marked degree, that adversely affects a child's educational performance:

- A. An inability to learn that cannot be explained by intellectual, sensory, or health factors;
- B. An inability to build or maintain satisfactory interpersonal relationships with peers or teachers;
- C. Inappropriate types of behavior or feelings under normal circumstances;
- D. A general pervasive mood of unhappiness or depression; or
- E. A tendency to develop physical symptoms or fears associated with personal or school problems.

The term includes schizophrenia. The term does not apply to children who are socially maladjusted, unless it is determined that they have a serious emotional disturbance (Federal Register, 1990).

Public School Day-Treatment: This service delivery system for students with problem behaviors consisted of public school services in conjunction with mental health services. This included educators and mental health professionals working with students on a daily school-day basis. The student received specific psychiatric treatment plan interventions for problem behavior and classroom academic instruction within equal time frames. The student remained in the home environment after the school-day. Many state legislatures have adopted psychiatric day-treatment standards to insure students receive quality mental health care and a coordinated school component. One of the public school day-treatment

programs in this study was located in a comprehensive medical complex, one in a community-based mental health center and one was located in a school building.

### Significance of the Study

The school experience of adolescents with behavior problems places high demands on the public school system to meet the unique curricular and management needs of this disturbing population (Knitzer, 1993). No other subgroup of students has this national school failure rate (Wagner & Shaver, 1989). Prior research examined students receiving special education emotional-behavioral classes in the educational system, in small samples, usually with a male population (Center & Obringer, 1987). Little is known about school characteristics of adolescents receiving residential and inpatient hospitalization for mental illness, although mental health issues have been discussed (Singh et al., 1994; Landrum et al., 1995). Only one current research article was found exploring students in public school day-treatment settings, as a unique integrated school/mental health service (Duncan et al., 1995). No information was found differentiating these students in a day-treatment school setting on student characteristics including school services.

This study examined clinically severe behavior problem students in public school day-treatment programs by gender and externalizing or internalizing problem behavior, for group similarities and differences, with particular attention to: (1) the amount of disruption reported in the student records, (2) the academic achievement level of the groups, and (3) the number of school services previously provided to the student as documented in the school records. The intent of this study was to provide useful information about the emotionally-behaviorally disordered student population for administrators and special educators as they seek to improve school services for these students.

## CHAPTER TWO

### REVIEW OF THE LITERATURE

Literature reviewed as relevant to the present study centered on students with emotional and behavioral problem behaviors. Empirical and descriptive research about this population is limited but growing. Areas reviewed as related to this research were the problem behavior of students, gender differences, and the characteristics of disruption, academic achievement, and school service provision. To support the choice of research instruments used, literature describing the use of teachers as reliable observers and referral sources is presented. In addition, prior research about the use of archival school records as a formalized source of data and information describing academic performance and school adjustment is reviewed.

#### Problem Behavior

The identification of two types of problem behavior (externalizing and internalizing) has been suggested to have implications for the service delivery for adolescent students with problem behaviors (Achenbach & Edelbrock, 1978). These two behavioral dimensions encompass the wide range of behavior disorders that occur in the school-age range. Kohn's (1977) hypothesis of a two-factor structure or the presence of two constructs underlying childhood maladaptation, have been statistically evidenced using the Behavior Problem Checklist and the Bristol Social Adjustment Scale (Hale & Zuckerman, 1981).

Students with problem behaviors may vary their behavior dependent upon the setting (Kauffman, 1992). Also, there is a co-morbidity or overlap phenomena in the behavior disordered population. That is the student with problem behaviors may exhibit anxious and withdrawn behavior or anxious and acting-out behavior or a combination of

both. The co-occurrence of different types of behaviors indicate the complexity of this population. Generally, there are substantial social deficits in all students with problem behaviors as they interact with their environment (Zaragoza, Vaughn, & McIntosh, 1991).

Students who experience externalizing behavior problems early in their school careers are at risk for a host of longterm adjustment problems including school dropout, delinquency, and may appear on psychiatric registers in adulthood (Kazdin & Frame, 1983). Students with internalizing behavior problems early in their school careers are similarly at risk for school and peer adjustment problems, including academic underachievement and peer neglect or rejection (Hops, Finch, & McConnell, 1985). A meta-analysis of studies investigating the identification of early learning problems, found that the best single predictors of school problems during the elementary school years were attention-distractibility, internalizing behavior problems, and language variables (Horn & Packard, 1985).

A descriptive study analyzing group differences between externalizing, internalizing, and nonranked students indicated that students with externalizing behaviors clearly exhibited less adaptive behavior, more maladaptive behavior, and a higher frequency of critical behavior problem incidents than did nonranked students. The externalizing students also spent significantly less time academically engaged during classtime, and exhibited fewer positive social interactions in playground settings than either nonranked students or students with internalizing behaviors (Walker et al., 1994). Similarly, the internalizing group was perceived by the teachers as exhibiting less adaptive behavior, more maladaptive behavior, and more critical behavior incidents than nonranked students. Students in this group also spent less time academically engaged, and as expected, spent more time alone and in parallel play within free-play settings than did nonranked students. The internalized students' participation levels in structured games and activities controlled by their peers were approximately half of that of the externalizing group or the nonranked subjects. The students with externalizing and internalizing



problem behavior do not represent a homogeneous grouping of students with behavior disorders as they attend public schools.

### Gender Differences

Gender-specific research in the areas of certain mental health disorders and public education are reported. Raymond (1991) cited the lack of proportional representation of women in mental health research, diagnoses and treatment. Research examining prevalence rates of childhood psychological disorders consistently show similar rates of problem behavior for normative samples of boys and girls ages 4 to 16 years of age (Achenbach & Edelbrock, 1981; Achenbach, Howell, Quay, & Conners, 1991). The lack of gender differences in rates of psychological problems has also been found cross culturally. In samples of American and Thai 6 to 11 years olds, boys and girls had different types of problems, but they did not have different rates of problems (Weisz et al., 1987). The American Association of University Women (1992) make the broad claim that girls are discriminated against in public schools. Boys more often have easily observed acting out problems, where girls may have less visible behavior problems. This gender difference, with boys more commonly having externalizing disorders and girls having a preponderance of internalizing disorders has been frequently replicated (Achenbach et al., 1991; Walker, Severson, 1988). As males represent a disproportionately large percentage of students in school programs for students with behavior disorders (Epstein et al., 1985), this may account for the nearly exclusive research on boys in behavior-related special education classes (Berry et al., 1985).

Studies suggest that teacher attitudes have been shown to tolerate less deviance from the norm for boys than for girls behavior. This was attributed to the American societal attitudes of expected behavior (Cohen, 1989). In contrast, a study by Texas Tech University researchers validated the phenomena, called the 'teacher-belief-and-practice

discrepancy', in the discernment of externalizing and internalizing behavior disorders. Gender effects were missing in the hypothetical situations requiring teachers to discriminate problem behavior (Pearcy, Clopton, & Pope, 1993). Yet, sex differences consistently have been found in general education teacher rankings of students with problems. Walker et al. (1990) report that a greater proportion of males are identified as externalizers and a greater proportion of females are identified as internalizers. A University of Utah study reported in 1994, that approximately 82% of the highest ranked externalizers were male on the Systematic Screening for Behavior Disorders (SSBD) Procedure (Walker et al., 1994) involving 1,468 students and 58 teachers' rankings. It was also found that approximately 56% of the three highest ranking internalizers were female on the SSBD (Walker et al., 1994). This affects the research results which use school populations of students with problem behavior as subjects. A greater proportion of males are observed in self-contained American classrooms for students with emotional disturbance. There is a need for research which equally represents females in this population.

## Student Characteristics

### Disruption

Disturbing student behavior is the hallmark characteristic of many students with problem behaviors. The disruptive behaviors as they affect other people, bring the question of which behaviors are disabling to the individual and which are annoying to school or society? There is an ecological nature to be recognized in the classroom climate when clarifying disruptive behavior (Algozzine, 1980). This relationship between the student and the school environment is reciprocal, as one influences the other equally. The mutual responsibility of the student and the school climate on disruption is the premise

presented. This concept has been the focus of position papers and research projects describing schools and students with problem behaviors in the school setting (Maag & Howell, 1991; Nelson et al., 1991).

Teachers are clearly differentially reactive to the behaviors of students with whom they interact. Achievement level, gender, race, and facial attractiveness have been investigated as biasing factors in the development and continuation of classroom relationships (Brophy & Good, 1974). Over 15 years ago, while summarizing teacher training programs in behavioral disorders, Fink, Glass, and Guskin (1975), noted that "Much of what needs to be taught (to teachers) involves greater sophistication in human interactive processes than can be provided by adherence to any singly applied system of thinking about behavior difficulty". The term, disruption, has implications about the student-teacher relationship, classroom management, and the power balance in the school setting (Steinberg & Knitzer, 1992).

Disruptive behavior is dysfunctional and contributes to school failure. The U. S. Department of Education (1990) indicated that seriously emotionally disturbed students have a higher failure rate than any other group of special education students. Federal data suggest that the dropout rate for these students is 42%. In comparison, this is nearly 50% higher than the next highest special education category of 26% for students with any handicapping condition. When these students leave school, approximately one-third neither work or receive job training (Neel et al., 1988) and 40% will have a criminal record within two years of leaving school (Jay & Padilla, 1987).

The disruption characteristic uniquely affects the school discipline climate and school relationships (Doyle, 1984). The use of suspension or isolation (i.e. at-home or home-based schooling) to punish or correct disruptive behavior by school administrators are reported to aggravate the disability (Kerr et al., 1987). The educational settings and interventions used with students with problem behavior should be based on differentiated programming relative to the disruptive characteristic unique to the student (Clarizio,

1992b). The disruption style, behavior directed outwardly (externalizing) or inwardly (internalizing), is important to identify in problem behavior students. Steinberg and Knitzer (1992) advocate looking beyond the silent, orderly classroom to provide a condition for the behaviorally disordered student's development.

Students with disruptive disorders such as oppositional defiant disorder and conduct disorder are described as socially maladjusted under IDEA and are not eligible for special education services (Federal Register, 1990). The exclusionary clause, social maladjustment, limits student eligibility for special education unless the student is also determined to be Seriously Emotionally Disturbed (SED) (Forness & Knitzer, 1991). This considerable debate around the implementation of the federal definition of the special education disability category, Seriously Emotionally Disturbed (SED) directly affects school services to students with problem behaviors (Skiba & Grizzle, 1991). Nonetheless, these disorders tend to be among the most frequent types of disorders found in SED classrooms (Mattison, Morales, & Bauer, 1992).

### Academic Achievement

Low academic achievement in isolation may not automatically result in a poor prognosis for later adult functioning, but add the element of behavior disorder, and the risk for later mental health difficulty increases. Several researchers have documented that students with problem behaviors have academic difficulties when compared to nondisabled students (Coutinho, 1986; Epstein et al., 1989). The prevalence estimates of students with problem behavior who had academic achievement deficits in reading, arithmetic, and functional illiteracy, ranged from approximately one-third to three-fourths of the population. Cullinan, Epstein and Lloyd (1983) reported academic difficulty prevalence estimates that ranged from approximately 33% to 80% of the problem behavior students. Close to two-thirds of these students functioned below grade level, and many had a history

of repeated failures (Wagner & Shaver, 1989). The discrepancy between the academic achievement of students with behavior disorders and their nondisabled peers increased as the youngsters passed from elementary to secondary schools (Coutinho, 1986). This discrepancy also correlates with the high dropout rate for eighth and ninth graders from the nation's schools (Stroup & Robins, 1972).

It is clear that academic remediation is a need for many students with problem behaviors (Foley & Epstein, 1992). Some researchers promote the notion that students with problem behavior have many similar characteristics to other mildly disabled students in the area of academics. Yet, Scruggs and Mastropieri (1986) have cautioned that if two groups are performing at a similar academic level, one cannot assume that instructional interventions should be the same. The wide variability of academic and social behavior of this population is acknowledged by Epstein and Cullinan (1988), who suggest that academic intervention research specifically use problem behavior subjects in the two clinical ranges of problem behavior, externalizers and internalizers. They propose more research into the academic characteristics of the students with problem behaviors in a school setting.

A survey research project by Ruhl and Berlinghoff (1992) yielded twelve studies addressing academic intervention for the behaviorally disordered school population. The project identified from the studies that it is logical to focus on ways to build academic competence in students with problem behaviors. However, increased instructional time and task engagement are incompatible with the social behavior emitted by these students. This survey summarized that little is really known regarding the optimal strategies for teaching basic skills within a social skill deficit, and less is known about teaching content area information to the problem behavior population in general. The researchers concluded that this incompatibility reduced the occurrence of on-task behaviors and emphasized the need for alternative sources of reinforcement.

## School Service Provisions

This characteristic refers to the manner in which the school system attempts to accommodate the wide range of students it serves when the student needs assistance to meet the normal behavioral performance demands of the school setting. There is increasing consensus among interested groups working with behaviorally disordered school populations that the Education for All Handicapped Children Act (Federal Register, 1975), and the reauthorization of the law in the Individuals with Disabilities Education Act (Federal Register, 1990), have delivered less than was expected for the 374,000 children and adolescents identified by the schools as having emotional and behavioral disorders (Forness, 1989; Knitzer, 1982). This population of students with behavior problems is said to be underserved by some researchers in their profile of school programs for the behaviorally disordered (Grosenick, George, & George, 1987; Knitzer, 1993). Current epidemiologic research suggests that public schools identify and serve less than 1% of behaviorally disordered students in the United States. Estimates of the actual number of students with Serious Emotional Disturbance (SED) may range from 3% to 6% of the school-age population (Kauffman, 1992). There is considerable variation from state to state and school district to school district on the overall rates of identification and service. Connecticut serves a 21% Seriously Emotionally Disturbed (SED) school population, while Arkansas serves 1% of its special education program with SED services. Nationally, 7% of the special education students have been provided SED services (Gonzales, 1991).

The daily classroom life of students in SED classes was generally lacking in educational vitality and imagination, as reported by Steinberg and Knitzer (1992) in an interview and observational study. The researchers reported that the classes were boring and focused on control. The curriculum and behavior management had become merged,

as determined from interviews of teachers in the SED classes. The researchers found "the curriculum of control understandable but regrettable". The behavior of students with problem behavior challenge the schools' tolerance and understanding.

### Teachers as Observers and Referral Sources

A strong empirical base in the last decade documents the accuracy of teacher judgment of child behavior and performance (Greenwood, Walker, Todd, & Hops, 1979; Gresham, 1986). Due to the demonstrated quality of these judgments, Gerber and Semmel (1984) state that the classroom teacher is the best, most knowledgeable, accurate judge of whether a student can benefit from instruction in a regular classroom. They believe that traditional psychometric procedures should use teacher judgment for validation. Forness and Kavale (1985) similarly have advocated teachers assuming a more instrumental role in the screening and identification of the school-aged, behavior disordered population. Various studies have shown that teachers are competent judges of students' academic and social-behavioral characteristics (Bain, Holliman, & McCallum, 1989; Ollendick, Oswald, & Francis, 1989).

Students with the highest probability of being referred for specialized programs and behavioral services often exhibit externalizing-type behavior problems that (a) are considered highly aversive to teachers and peers, and (b) are also disruptive to the classroom setting (Grosenick, 1981; Noel, 1982). These children and youth tend to be noncompliant, aggressive, and defiant of adult authority. Factors that seem to influence the teacher's decision to refer such students for support services typically include the teacher's generic standards and expectations regarding appropriate student behavior (Kornblau & Keogh, 1980). The teacher's tolerance of aversive student behavior, the willingness to accommodate the behavior, and the teacher perception of services available

to successfully support the problematic behavior also influence teacher ratings (Gerber & Semmel, 1984).

Students with internalizing problem behavior may have difficulty accessing the range of available services in the school setting. Students who exhibit problem behavior of an internalizing nature tend not to be referred by teachers for extra school supports to the same extent as are children with externalizing problem behavior (Walker, Severson, 1988). One possible explanation for the comparatively smaller number of referrals for students with internalizing problem behaviors by general education teachers may be that the teachers do not see themselves as having responsibility for problem behaviors like shyness, social withdrawal, isolation, phobias, depression and anxiety (Walker et al, 1994). Alternatively, teachers may believe they have a far greater probability of inducing positive and enduring behavior changes among students with externalizing behaviors (Brophy & Rohrkemper, 1981). Another explanation is suggested by Kehle, Cressy and Owen (1990), that children with internalizing problem behaviors do not present a disruptive threat to class activities. They do not challenge the teacher's management and instructional routines and the teacher hopes to remediate the student problems in the general classroom setting.

### School Archival Records

School archival records as a review process satisfy the special education law requirement to use school history in the screening and review process of students with special needs (Walker, et al., 1991). There are many advantages to the use of these data. Every student has school records and the cost of maintaining archival records is low. The records accumulate over time as part of the daily routine of schooling. This information is less likely to be subject to current reactive biases (which students with problem behavior are prone to cause) than are behavior rating data supplied by peers and parents. The



elementary records are less formally kept and include many kinds of anecdotal data. The systematic use of this information was shown to have a stable correlation over a one-year period from grade 5 to grade 6 (Walker, Stieber, & O'Neill, 1990).

Despite the advantages, school records are under-utilized to provide information about students for school service provision or placements. The use of archival records has traditionally been used in a binary ( go or no go) decision-making process to validate other data (Walker, Block, 1988). Rarely are the archival data considered systematically or quantitatively. The systematic use of archival school records has received only limited attention in the regular or special education literature. Historically, few studies have been done using school records to screen, validate or describe student status. Yet, the records have proven to be sensitive in discriminating the more academically skilled and socially competent students from those who are less skilled or socially well adjusted (Giesbrecht & Routh, 1979).

Research on the identification of potential school dropouts has relied successfully on the use of school records to discriminate factors that are strongly associated with early school leaving (Howard & Anderson, 1978; Stroup & Robins, 1972). Bloom (1964) estimated that 50% of future achievement patterns had been set by the third grade as evidenced in school records. Background characteristics, school performance and achievement test data were analyzed for 788 third-grade boys and 774 third-grade girls who later became high school dropout statistics by Lloyd (1978). He began to study third-grade records because the standardized tests were given in that grade. He also saw the third-grade as the point at which basic reading skills have already been taught. As early as third grade, the dropout students differed significantly from graduates in age, IQ level, grade reports, parents' occupational and educational level, family size, marital status of parents and academic skill test achievement scores. Lloyd (1974) also found that a substantial prediction of dropout versus graduation could be made solely from data available in sixth-grade records. Later research by Block-Pedego (1990), confirmed that it

is possible to predict high school dropouts from third grade school records. Using school records, Walker et al. (1990) has done research and found that fifth-grade school files predict arrest status in young males, up to five years later.

### Summary

What emerged from the literature is a description of school failure for students with problem behaviors. There is evidence to support that these students are not a homogenous group. Variables influencing the student with problem behaviors are multi-faceted (Wood, 1985). It is clear that no single set of characteristics can be used to describe all of the population with behavior problems (Hallahan & Kauffman, 1991). The two-factor behavioral constructs of externalizing and internalizing problem behavior underlying student maladaptation has a respected following in the studies of human behavior. Gender bias is documented in the research concerning students with problem behaviors in the school setting. The students with problem behaviors have academic deficits and disruptive behaviors. The support services provided to this school population challenge educators to meet their diverse needs. Within this context, it is relevant to seek information describing these students with problem behavior. Demographic measures of the students will assist in interpreting the research question results. The variables of gender and problem behavior will be investigated on three useful school characteristics: disruption, academic achievement, and school service provision. The use of school archival records as a quantitative measure is also a relatively new tool for educators.

## CHAPTER THREE

### METHODOLOGY

The chapter described the subjects, procedures, instruments, and data analyses in this study. The influence of gender and the externalizing or internalizing problem behavior of students attending a public-school behavior day-treatment program on disruption, academic achievement and school service provision was examined. The characteristics of disruptive behavior, academic achievement and school service provision were assessed using a quantitative archival school record search instrument.

#### Subjects

The population for this study was 8th and 9th grade students enrolled in a public school who were identified as students with problem behavior. They were enrolled in a behavior day-treatment school program by their parents, schools or community agencies. This was a shared responsibility of educational and mental health professionals collaborating services, with one-half of the day involved in classroom educational coursework and one-half of the day receiving psychological counseling. These students were referred to this unique setting for global problem behavior. The behaviors treated in the programs were broad-based psychological problems causing the student to be temporarily unable to attend a traditional public school setting.

The average length-of-stay in these school programs was approximately twelve to sixteen weeks. The day-treatment school served categorical special education students as well as noncategorical students with behavior problems. Eighth and 9th grade students in these programs were recruited because these grade levels had a high national rate of school failure and were high-risk grade levels for not graduating from high school (Howard & Anderson, 1978).

The study population was located in three behavior day-treatment programs in a public school system of approximately 40,000 students. All potential subjects were students in attendance at a behavior day-treatment school program for at least two months prior to the invitation to participate in the study. The subjects' identity was anonymous except to the researcher, in a manner that subjects could not be identified directly or through identifiers linked to the student. Code numbers were used for identification purposes on the data collection materials. The Oklahoma State University Institutional Review Board approved the use of human subjects in this study (Appendix A).

### Procedures

With university and school district approvals (Appendix A), 205 parents were sent a letter to invite participation of their children in this research project (Appendix B). The parental letter of invitation explained the purpose of the study, the procedures, and the information to be collected from the school records (Appendix B). Two copies of the written parental/guardian consent form allowing students to participate in the study and permission to assess student school records (Appendix C) were mailed with the invitation letter to parents. An addressed stamped envelope was enclosed for return of the signed consent form to the researcher. The parent/guardian was asked to retain a copy of the release in their files. One follow-up phone call was made to the parent if no response was received in one week. At this time, the researcher was available to orally explain or clarify the research process and project to parents and students. Forty-two follow-up phone calls were made by the researcher. These phone calls were believed to have improved the parental consent form return rate to 77%.

Invitational letters were mailed to parents of potential eighth and ninth grade subjects in three phases (May, July, and October of 1994) at each of the three school day-treatment sites. There was no charge to the family to participate. Participation was

completely voluntary. Participants were able to withdraw from the study at any time. One student was over 18 years of age, and his/her signed permission was obtained to access the school records.

Upon receipt of 168 returned signed consent forms, each student was rated by two of their public school teachers on the Teacher Report Form (TRF) of the Child Behavior Checklist (Achenbach & Edelbrock, 1991). This widely-used behavior rating scale differentiated externalizing and internalizing problem behavior as an adaptive behavior measure based on teacher observation. The English and Math teachers were the two teachers asked to complete the assessment, because each student was enrolled in these courses. Each teacher had observed the student in class daily for at least two months. The researcher met at each school site with English and math teachers to explain the project, to instruct concerning the ratings form completion, to provide TRF forms and to leave self-addressed mailers for return of the forms. All site teachers contacted agreed to participate in the project. Each teacher spent approximately fifteen minutes completing the scale on an individual student and returned the protocol to the researcher by mail.

The researcher scored the TRF data to determine the individual behavior score of the student. The average score of the two teacher behavior rating scales was used to assess the student into clinical ranges of either an externalizing or internalizing problem behavior. Only students whose (1) average scores were in the clinical range of one of the problem behaviors, externalizing or internalizing; and (2) externalizing and internalizing scores differed more than 10 points, were part of the potential study population.

Only students without overlapping behavior scores were considered for the study. Seventy-eight students were determined to have overlapping behavior scores indicating mixed externalizing and internalizing problem behaviors were observed in the school setting. Due to this co-morbidity issue, 78 subjects were dropped from the study population. The researcher was aware that the TRF had a .34 Pearson coefficient between externalizing and internalizing problem behavior and expected a one-third loss of subjects.

It was a surprise to lose approximately one-half of the potential study subjects to the overlapping nature of the problem behaviors. The differentiation between externalizing and internalizing problem behavior was basic to three research questions of the study. In order to have two levels of distinctive behavior represented in the groups, the overlapping TRF averaged scores eliminated subjects from the potential subject pool. The subject screening process in the research procedures was expected to be labor and time intensive, but clarified the students with problem behavior by two distinct types of behavior. This problem behavior differentiation position was substantiated in the literature and also currently differentiated in the special education Seriously Emotionally Disturbed (SED) categorization definition. The remaining potential subjects included 90 students: 26 male externalizing, 21 female externalizing, 20 male internalizing, and 23 female internalizing problem behavior students.

A medium-effect sample size of 20 subjects per cell had been determined (Cohen, 1988). The researcher included the 20 potential subjects with the highest severity score in each of these groups: male-externalizing, female-externalizing, and female-internalizing. The male-internalizing group included all qualifying research participants for that group as only 20 potential subjects were available. The study population now included 80 subjects, with 20 subjects in each problem behavior and gender cell, forming four research groups.

The researcher served as the coder and gathered all the data from records located at the school sites or in the administrative office of the school district. The subjects' school cumulative folders, attendance records, behavioral records and special education service folders (if any) were assessed using the School Archival Records Search (SARS) (Walker & Severson, 1991) instrument. The coder had experience with school records and was familiar with the specific public school system records being reviewed. The location of the information in the school record, the specific forms, the special education folders, the disciplinary sources of information (including verbal), and district personnel policies unique to the district were familiar to the coder. The researcher followed the

SARS training manual in a systematic manner. While most of the data was objective in nature, the one subjective item, 'negative comments', was practiced by the researcher. The training in the SARS manual was conducted with practice exercises by the researcher until the practice scores were 80% or better to insure the collection of accurate information. The data gathering time for the researcher varied, but averaged about thirty minutes per subject.

Using the SARS assessment instrument, data from student records were collected on 21 specific items. Information was collected on the grade level, ethnicity, specific school site of the subject (A, B, or C), the number of days missed in the recent school year, the number of schools attended in the school career, the number of grade levels repeated in the school career, the special education category (if any) and the existence of a current Individualized Education Plan (IEP) for special education services. Intellectual measures were recorded from the Wechsler Intelligence Scale for Children-Third Edition (WISC-III) (Wechsler, 1991) with Verbal, Performance, and Full Scale scores for each subject. Academic achievement measures were collected on overall achievement score as well as reading, math, and spelling grade level equivalency information from the Wide Range Achievement Test: 3rd Edition (WRAT3) (Jastak, 1993). These reading, math and spelling data were reported as achievement by grade level relative to grade level expectation. An example was an 8th grade subject, with a reading level reported at the 4th grade level, as -4, or achieving 4 years below grade level in reading. In addition to the demographic information above, data on Chapter I services, non-regular classroom placements, discipline contacts, in-school and out-of-school referrals for services, and the number of negative comments in the records were gathered. Descriptive statistics of the demographic data were calculated for each subgroup and reported by measures of variability and central tendency. The SARS manual was followed to calculate the SARS items into aggregate raw scores for the characteristics of Disruption, Achievement and Needs Assistance.

## Instruments

### Teacher Report Form of the Child Behavior Checklist (TRF)

The students were assessed on the Teacher Report Form of the Child Behavior Checklist (Achenbach & Edelbrock, 1991) by two of their teachers. Teachers and school psychologists have been reported to have significant correlation on rating the severity of behavior of children with emotional disturbances (Morris & Arrant, 1978). Teachers are the main referral source and information source for children with behavior problems getting assistance with their problems (Achenbach & Edelbrock, 1981). The Teacher Report Form provided a teacher rating on the behavior problems of students, including a scale for academic performance, four adaptive characteristics, eight cross-informant syndromes, internalizing, externalizing and total behavior problems. The TRF was normed on 1,391 boys and girls, ages five to eighteen years old and renormed in 1991. This instrument was designed to compare a teacher's rating score of a particular student with those obtained for normative groups of students. The forms were scored by the researcher with the internalizing, externalizing, and the total behavior problem scores calculated.

The use of the TRF differentiated the students' problem behaviors into two broad factors of externalizing or internalizing behaviors. While there was some overlap for externalizer and internalizer factors, there was also considerable divergence between them. The internalizing and externalizing groupings reflected contrasting types of behavior problems, but were not mutually exclusive. The average of the Pearson correlations between total externalizing and total internalizing scores in the normative samples was .34. It was suggested by Dr. Thomas Achenbach that students not be classified as internalizers or externalizers unless their total behavior problem score exceeded the 89th percentile and there was a difference of at least 10 points between their internalizing and externalizing



score. This placed the behaviors in the clinical range. This guarded against the fact that the two scores are correlated with one another. Only students who had scores on the TRF which sorted them into the high-range cut-off scores were selected to participate in the research. The behaviors had non-overlapping patterns on the TRF scores from two teachers, to be included in the research population. The TRF norming data provided the cut-off student scores, sorting externalizing and internalizing problem behaviors.

The TRF test-retest reliability for one week was reported at .90. The TRF stability scores on a test-retest two-month interval reliability was .74. The teacher/aide agreement reliability was .57. Correlations between the TRF and the corresponding scales on the Conners Revised Teacher Rating Scale (Conners, 1985; Goyette, Conners & Ulrich, 1978) were found to range from .62 to .90, which were as large as the correlations typically found between well-standardized ability tests.

The teacher evaluated the student on 113 specific behaviors observed in the classroom setting on a 0-3 scale from 'not true' to 'very true'. Examples of behaviors in the Internalizing Problem Behavior scale were 'cries a lot, secretive, feels worthless, afraid of making mistakes, underactive, somatic complaints, sulks, worries, lonely.' Examples of behaviors in the Externalizing Problem Behavior scale were 'argues, defiant, disturbs, screams, explosive, attacks, steals, swears, demanding, destructive.'

### School Archival Records Search (SARS)

The School Archival Records Search (SARS) (Walker & Severson, 1991) was designed to overlay existing school records, to code and systematically quantify the historical school information about a student. It was developed as part of the Systematic Screening for Behavior Disorders (SSBD) (Walker et. al., 1988) system for the standardized screening of students at risk for problem behavior. This assessment tool provides the school professional with a way to facilitate decision making based on

cumulative data in the school records and is growing as a research tool. The student status on archival measures includes:

demographics--includes sex, grade, ethnicity, special education status, and number of schools attended since kindergarten.  
attendance--number of days missed in the most recent school year.  
achievement test information--for reading, spelling and math; as well as an overall test percentage.  
school failure--total number of retentions in grade level  
disciplinary contacts--records number of contacts with someone other than the teacher.  
within-school referrals--number of academic or behavioral referrals, including speech/language referrals (except Chapter I service).  
certification for special education--lists IEP existence and 10 categories.  
placement out-of-regular classroom--yes or no response.  
receiving chapter I services--yes or no response.  
out-of-school referrals--children's protective services, private counseling, medical, and other.  
negative narrative comments--total count of negative comments in the last 12 months

The SARS data were combined, according to the assessment instrument manual, to calculate raw scores for each of the SARS domains: Disruption, Achievement, and Needs Assistance. The author reports that during the development of the SARS, the use of factor analyses loaded the measures listed above on three domains as:

Disruption--the student acted out against adult-imposed school rules governing learning and behavior.

- (a) referrals within-school for behavioral problems
- (b) disciplinary contacts with the principal
- (c) referrals to outside agencies
- (d) negative narrative comments

Achievement--the student displayed below-average achievement for grade level expectations.

- (a) receives Chapter I services
- (b) achievement test total score

Needs Assistance--the student needed special assistance to meet the normal behavioral performance demands of the school setting.

- (a) placement in non-regular classroom
- (b) current IEP
- (c) within-school referral for speech and language
- (d) within-school referral for academic help

The three domain SARS scores make it possible to profile a student's school record. The domain scores, as reported in the assessment manual, have shown to powerfully discriminate normal control students from those with externalizing (acting out) and internalizing (phobic, withdrawn) behavior disorders. The mean scores for intermediate level (grades 4 and 5) students in the norming sample, indicated that the normal (or control) students had low scores in each of the three record search domains. Externalizing students at these same grade levels, in contrast, had high scores on the Disruption and Achievement domains. Internalizing students tended to (a) be placed part-time in non-regular classroom settings, (b) had a current IEP, and (c) had written school referrals for speech and language therapy and academic assistance. The total profiles of externalizers and internalizers in these two domains indicated at-risk status for serious conduct disorders and school adjustment problems. Both groups appeared to be seriously and equally at-risk for low achievement and academic problems.

The interrater agreement reliability indices for the total SARS form was reported at .96. For each SARS measure, interrater agreement was calculated by dividing the number of items on which both coders recorded the same information divided by the total number of items and multiplying by 100 to obtain a percentage agreement score. The authors reported that the results of the reliability studies on the SARS, indicated that the measures could be coded reliably and within a reasonable amount of time period of about 30 minutes per search. The information sampled and coded by the SARS was objective in nature with the exception of the 'narrative comments' variable. Additional effort was invested in this measure to achieve acceptable levels of interrater agreement. Additional

clarification of narrative comments and testing resulted in a mean agreement level of 85% among the coders.

The normative and psychometric characteristics of the SARS were investigated as part of an on-going study evaluating the Systematic Screening for Behavior Disorders (SSBD) procedure (Walker & Severson, 1990). Factorial, discriminant, and concurrent validity were estimated on the SARS as part of that research. The overall factor structure of the SARS appeared robust given the amount of variance accounted for (approximately 60%) and its replicability (three studies). Discriminant validity in distinguishing profiles for externalizing, internalizing and normal students were significantly different from each other across the three domains except for externalizers vs. internalizers on Needs Assistance. The results suggested that the SARS domains and the measures comprising them powerfully discriminated among the three student groups. The current data base on the SARS approximated 1200 record searches from student files in the Midwest and Northwest sections of the United States. As the SARS increases usage as a research instrument, Dr. Hill Walker and his staff continue to expand the normative data.

#### Reliability of SARS Data Collection for This Study

Reliability checks of data collection on the individual SARS variables for this study were derived by collecting information from the same student file on two separate occasions, both coded by the investigator. Four student records, which is 5% of the research population, were selected at random for reliability checks. These two reliability coding checks were done in the last two collection phases, two records were reassessed in July, 1994, and two in November, 1994. The test-retest reliability correlations are presented in Table 1. As noted in the table, all values are high (.89, .99, .99), providing evidence of stability in data collection on the SARS in the three characteristics for this investigation.

Table 1

Test-retest Correlations of Student Records on the SARS in the Characteristics of Disruption, Academic Achievement and School Service Provision

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Characteristics	First SARS*	Second SARS*	Pearson Correlation
	Scoring n=4 Mean	n=4 Mean	
Disruption	5.37	4.01	0.89
Academic Achievement	3.77	3.75	0.99
School Services Provision (Needs Assistance)	5.53	5.33	0.99

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\*School Archival Records Search (Walker, 1991).

The three characteristics, calculated from specific information collected from student files, were derived from the SARS. Each characteristic was calculated according to the SARS manual (Walker & Severson, 1991) and each was used as a dependent variable in this three-part inquiry.

### Wechsler Intelligence Scale for Children-Third Edition (WISC-III)

The Wechsler Intelligence Scale for Children-Third Edition (WISC-III), is a 1991 restandardization edition of the widely used and accepted 1949 WISC test of general intelligence for children aged 6 through 16 years. David Wechsler defines intelligence as an overall capacity of an individual to understand and cope with the world around him or her. Intelligence is multifaceted and must be inferred from the way abilities are manifested under different circumstances and conditions. To assess the many forms of intelligence, the WISC-III calculates the Full Scale Intelligence Quotient (FS-IQ score) and two subdivisions, the Verbal (V-IQ) and the Performance (P-IQ) Scales. The WISC-III consists of thirteen subtests assessing varied aspects of human ability. No one subtest is intended to reflect all intellectual behavior. The Third Edition added four factor-based index scores which can be calculated: Verbal Comprehension Index, Perceptual Organization Index, Freedom from Distractibility Index, and Processing Speed Index.

The WISC-III norms are derived from stratified random samplings of 2200 cases including 200 children in each of eleven age groups, which are representative of the United States population of children. For each of the three IQ Scales, the mean and the standard deviation of the corresponding sum of scaled scores were set equal to 100 and 15, respectively, and the IQ was assigned to each sum of scaled scores. An IQ of 100 on any of the Scales defines the performance of the average child of a given age on that Scale. The Verbal, Performance, and Full Scale IQs have high reliabilities across the entire age range, the average coefficients being .95, .91, and .96 respectively. The internal consistency reliabilities for the individual tests are quite satisfactory. The average coefficients range from .77 to .87 for the Verbal tests, and from .69 to .87 for the Performance tests. The administration and scoring of the WISC-III must be done by professionally trained and regulated examiners.

This study reported the WISC-III scores from school records, as a descriptor of the research population. The intellectual measure was important information to report as the disruption, academic achievement, and school service provision characteristics, all relate to this measure in a meaningful way. The intellectual ability of a student will have implications on the school expectation: behaviorally, academically and services needed.

#### Wide Range Achievement Test: 3rd Edition (WRAT3)

The Wide Range Achievement Test: 3rd Edition is a 1993 restandardization, by G. S. Wilkinson, of the individual assessment of intelligence developed by Dr. Joseph Jastak while at Columbia University in the 1930's. The WRAT3 is a measurement of the basic academic coding skills of reading, spelling and arithmetic based on a national stratified sampling involving nearly 5000 individuals. Absolute Scores, Standard Scores and Grade Scores were provided for each of the subtest areas which were used to compare the achievement levels of one person to another through the grade levels. There are two alternate forms of the test and can be used with all individuals from age 5 to 75. The grade and age level ratings on the WRAT3 subtests were used to give a general indication of the instructional level of the individual. The test was designed to eliminate, as totally as possible, the effects of comprehension on results when skill level was the focus of the achievement score. The grade equivalent academic achievement scores describe test results in a way to make the information most helpful to classroom practitioners in planning curricular needs for an individual student.

The WRAT3 overall achievement scores and grade instructional level scores were reported from the student files. The information was used to describe the research population. Overall academic achievement scores were used in calculating the SARS characteristic score in academic achievement. The grade level instructional scores were reported to describe the students in reading, arithmetic, and spelling achievement. This

descriptive information provided a rich framework to define the research population by specific academic areas as the three characteristics were assessed.

### Research Design

This study explored students with problem behavior, considered their gender, and compared the scores from school records on three characteristics. These characteristics were disruption, academic achievement and the school service provision of students with externalizing and internalizing problem behavior. Extensive demographic information about the students provided a rich background to fully consider the areas of interest. The demographics included grade level, ethnicity, site location, attendance, grade retentions, special education services, intellectual and academic achievement measures. The demographics of the students were described using measures of central tendency and variability.

Differences between students with externalizing problem behavior and students with internalizing problem behavior, in each characteristic (disruption, academic achievement, and school service provision) were investigated. It was acknowledged by the researcher that the three characteristics might be related as represented by various subscores from one instrument. Yet, the higher-order theoretical proposition is that students with problem behavior are all the same. The conceptual hypothesis is that these students are different in ways describing the school setting. The characteristics are three univariate questions. The characteristics, disruption, academic achievement and school service provision in the school setting, are believed to be distinct descriptors of students with problem behavior. These characteristics were viewed as independent constructs representing unique characteristics describing this population. Each research question was considered separately with an intent to provide a specific descriptor about a student with problem behavior in the school setting. The students were grouped according to gender



and problem behavior, and compared in the amount of disruption reported in school records. The students were grouped by gender and problem behavior and compared on low academic achievement as reported in school records. The students were grouped by gender and problem behavior and compared on the number of school services provided by the school for the student.

### Statistical Design and Data Analyses

Data analyses of the problem behavior variable (externalizing or internalizing) and the gender variable (male and female) on each of three characteristics (disruptive behavior, academic achievement, and school service provision) were conducted using a two-factor between-subjects design analysis of variance (ANOVA) format. The gender variable was built into the experimental design to control for systematic influence in the problem behavior variable. Three separate two-factor between-subjects design analyses of variance (ANOVAs) were conducted to explore differences between students with externalizing and internalizing problem behaviors on disruption, academic achievement, and school service provision. In the statistical analysis on each characteristic, the subjects were nested in the two independent variables of behavior and gender. The problem behavior of students was the focus of this study as it influenced disruption, academic achievement, and school service provision. Gender was a variable included in the design due to the possible intertwined influences on behavior as evidenced in the literature (Cohen, 1989; Epstein et al., 1985; Walker et al., 1990).

The statistical or linear model for this design representing all sources of variance:

$$Y_{ijk} = M + \alpha_i + \beta_j + \alpha\beta_{ij} + E_{ijk}$$

$Y_{ijk}$  = specific SARS characteristic scores of all subjects

i = problem behavior levels

j = gender levels

k = individual subject

M = overall population mean on SARS characteristic scores

$\alpha_i$  = The effect of problem behavior treatment level

$\beta_j$  = The effect of gender treatment level

$\alpha\beta_{ij}$  = The joint or interaction effect of problem behavior and gender variables of levels

$E_{ijk}$  = This error in the experiment as a source of variance expressed by each variable level associated with individual subject SARS characteristic scores.

The specification table, block diagram and source table for this experimental design are presented in Table 2. This is the design used for each univariate characteristic: Research Question One--Disruption; Research Question Two--Academic Achievement; and Research Question Three--School Service Provision.

Table 2

Specification Table, Block Diagram, and Source Table for Each Characteristic Using a Two-Factor Between-Subjects Design

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Dependent Variable: Research Question One: Disruption SARS score  
 Research Question Two: Academic Achievement SARS score  
 Research Question Three: School Service Provision SARS score

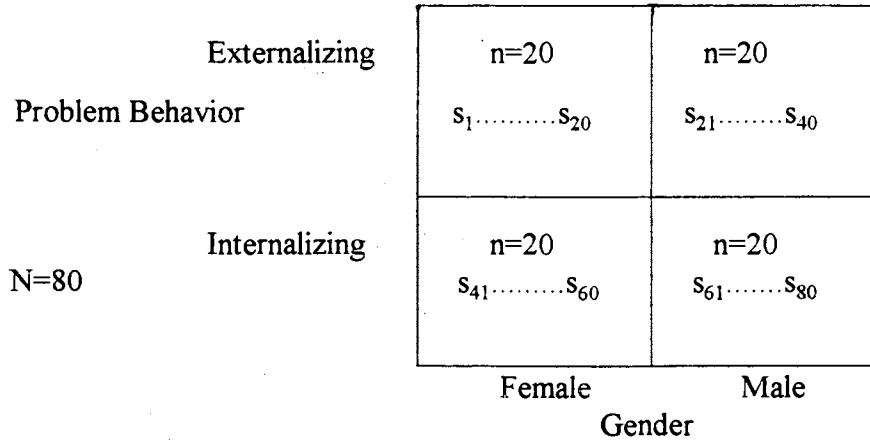
Independent Variable: Problem behavior (2 levels)

Independent Variable: Gender (2 levels)

Specification Table:

<u>Variable</u>	<u>Levels</u>
Behavior (B)	2
Gender (G)	2
<u>Student/BG</u>	<u>20</u>
Total # scores	80

Schematic Block Diagram Using SARS scores:



Source Table:

<u>variable</u>	<u>df</u>
Behavior (B)	1
Gender (G)	1
B x G	1
<u>S/BG</u>	<u>76</u>
Total df	79

---

The ANOVA design assumptions of independence, normality, and homogeneity of variance were considered. The scores of the subjects represented unique information about the students in a school setting. All 8th and 9th grade students, with completed consent forms, in one of three school day-treatment programs had equal opportunity to participate. The research population size of 80, with 20 subjects in each cell is considered to be a moderate sample size (Cohen, 1988) for meeting the normality assumption. From this projected pool of 205 students, the research population was selected and assigned to the study from students qualified using the averaged TRF scale score for either externalizing or internalizing behavior. The robust quality of the study was increased by using an equal number of subjects per cell in the research design, while realizing a loss of power in this decision. The homogeneity of variance assumption was validated by equal variances in each cell of scores. The Hartley F-max test was calculated and determined that the homogeneity of variance assumption in each of the three characteristics, was not violated in the research population. These calculations failed to reject the hypotheses of homogeneity of variance in disruption scores, academic achievement scores or school services provision scores. All the experimental design assumptions were examined.

Due to the strong apriori theory surrounding disruption and low academic achievement in students with behavior problems, the statistical significance level was specified at .01. The school service provision theory relating to problem behavior students was untested, therefore needed to be more sensitive to group differences, so the statistical significance level was shifted to the .05 level. The research population was tested with ANOVA, which is unidirectional due to the need for sensitivity to all differences between groups.

The following hypotheses were tested at a significance level of .01:

1. The combination of problem behavior and gender do not differentially affect disruption in a public school day-treatment student population, or  $H_0 = \text{all } \alpha\beta_{ij} = 0$ .

- A. Externalizing or internalizing problem behavior does not affect disruption in a public school day-treatment student population, or  $H_o = \text{all } \alpha_i = 0$ .
  - B. Gender does not affect disruption in a public school day-treatment student population, or  $H_o = \text{all } \beta_j = 0$ .
2. The combination of problem behavior and gender do not differentially affect academic achievement in a public school day-treatment student population, or  $H_o = \text{all } \alpha\beta_{ij} = 0$ .
- A. Externalizing and internalizing problem behavior does not affect academic achievement in a public school day-treatment population, or  $H_o = \text{all } \alpha_i = 0$ .
  - B. Gender does not affect academic achievement in a public school day-treatment student population, or  $H_o = \text{all } \beta_j = 0$ .

The following hypotheses were tested at a significance level of .05:

3. The combination of problem behavior and gender do not differentially affect school services provided in a public school day-treatment population, or  $H_o = \text{all } \alpha\beta_{ij} = 0$ .
- A. Externalizing and internalizing problem behavior does not affect school services provided in a public day-treatment population, or  $H_o = \text{all } \alpha_i = 0$ .
  - B. Gender does not affect school services provided in a public school day-treatment population, or  $H_o = \text{all } \beta_j = 0$ .

### Summary

Subjects in this study were 80 students in the 8th or 9th grade, attending school in a day-treatment program for students with behavior problems. The 205 potential subjects were recruited to participate voluntarily with parental consent. Parental consent forms for 168 students were returned to the researcher. Two teachers completed the TRF of the Children's Behavior Checklist (Achenbach, 1991) on each of the 168 students. The two TRF scores were averaged to determine the student's average score on the externalizing

and internalizing scales. Seventy-eight students with overlapping externalizing or internalizing problem behavior scores were dropped from the study population. From the remaining 90 potential subjects, subjects were sorted by the highest behavior severity score in each problem behavior and by gender group to create equal groups of 20 subjects. The four research groups were: externalizing males, externalizing females, internalizing males and internalizing females. Descriptive statistics were used to describe the research population by group, using measures of central tendency and variability. Three two-factor between-subjects design ANOVAs were utilized to investigate the effects of problem behavior and gender on disruption, academic achievement and school service provision.

## CHAPTER FOUR

### RESULTS OF THE STUDY

Demographics, descriptive statistics and the results of the statistical analyses of the three research hypotheses are presented in this chapter. The summary statistics of central tendency and variance are examined. The means, standard deviations, and score ranges by student gender and problem behavior are presented in table format. The ANOVA on each characteristic was considered separately using a 2x2 factorial between-subjects statistical analysis. The groups were divided according to gender (male, female) and problem behavior (externalizing, internalizing) with three separate characteristic scores as the dependent variable: (1) disruption, (2) academic achievement, and (3) school service provision.

#### Demographic Descriptive Statistics

Demographic information describing the research subjects was grade level, ethnicity, school site, attendance (school days missed in the most recent school year), schools attended, grade retentions in the school career, special education category, Individualized Education Plan (IEP) status, intellectual and academic achievement measures. This extensive information provided a rich description of the study subjects to be considered in the context of the research questions being investigated. It was valuable to define the uniqueness of students with behavior problems by personal qualities and historical information. Students with problem behaviors have only recently been the focus of school characteristics inquiry, apart from mental illness research. Cooperative educational/mental health systems of care are now opening this area. Demographics for the subjects in the study population are presented in Table 3 through Table 8.

Table 3 describes the 80 study subjects by the problem behavior variable on grade level, ethnicity, and school site. The students with externalizing problem behavior were equally divided in the 8th and 9th grades, while approximately two-thirds of the students with internalizing problem behavior were in the 9th grade. The total research population consisted of 56.25% in the 9th grade, with 43.75% of the students in the 8th grade.

The ethnicity of the study population was recorded as 56.25% of the Caucasian race, 31.25% of the Afro-American race, 7.5% of Native American descent, and 5% of Hispanic ethnic origin. The students with externalizing problem behavior were approximately two-thirds (65%) of the Caucasian race, one-fourth (25%) of the Afro-American race, and 5% each of Native American and Hispanic origins. The students with internalizing problem behavior in the study population were 47.5% Caucasian, 37.5% Afro-American, 10% Native American, and 5% Hispanic.

Subjects were represented from the three day-treatment school sites as shown in Table 3. Site A provided almost half of the subjects (48.75%). Site B (28.75%) and Site C (22.5%) equally contributed about one-fourth of the subjects in the study. The variance in participation was attributable to size of the school sites. Site A had slightly more internalizing subjects (52.5%) with Site B represented by slightly more externalizing subjects (32.5%).



Table 3

Grade Level, Ethnicity, and School Site of Students by Behavior in Numbers and Percentages

	Students with Externalizing Problem Behavior n=40 (50%)	Students with Internalizing Problem Behavior n=40 (50%)	Total n=80(100%)
<b>Grade Level:</b>			
8th	20 (50%)	15 (37.5%)	35 (43.75%)
9th	20 (50%)	25 (62.5%)	45 (56.25%)
<b>Ethnicity:</b>			
Caucasian	26 (65%)	19 (47.5%)	45 (56.25%)
Afro-Amer.	10 (25%)	15 (37.5%)	25 (31.25%)
Native Amer.	2 (5%)	4 (10%)	6 (7.5 %)
Hispanic	2 (5%)	2 (5%)	4 (5%)
<b>School Site:</b>			
A	18 (45%)	21 (52.5%)	39 (48.75%)
B	13 (32.5%)	10 (25%)	23 (28.75%)
C	9 (22.5%)	9 (22.5%)	18 (22.5%)

Table 4 delineates the 80 sampled students by the gender variable on grade level, ethnicity and school site. The grade level of the male and female students each reflected a slightly larger number of students in the 9th grade (56.25%). The females had 60% of the subjects of the Caucasian race, with 30% of the Afro-American race, and 5% each of Native American and Hispanic origin. The males had a 10% Native American representation in the study population, with 52.5% Caucasian, 32.5% Afro-American and 5% Hispanic.

The school site of the subjects was described. The percentage of study population male students from Site A was 45%, Site B was 35%, and Site C was 20%. The percentage of study population female students from Site A was 53%, Site B was 25%, and Site C was 23%. The school Site A was represented by more female subjects (53%) and Site B was represented by slightly more male subjects (32.5%). Coincidentally, the percentages from Site A from Tables 3 and 4, reflected similarity in numbers of subjects with externalizing problem behaviors (Table 3, 45%) and the number of males (Table 4, 45%). Likewise, the number of internalizing subjects (Table 3, 52.5%) and the number of females (Table 4, 53%) was similar. This may be coincidence or may support the literature that gender and problem behavior are associated (Achenbach et. al., 1991; Walker, Severson, 1988).

Table 4

Grade Level, Ethnicity, and School Site of Students by Gender in Number and Percentages

	Males n=40 (50%)	Females n=40 (50%)	Total n=80(100%)
<b>Grade Level:</b>			
8th	17 (42.5%)	18 (45%)	35 (43.75%)
9th	23 (57.5%)	22 (55%)	45 (56.25%)
<b>Ethnicity:</b>			
Caucasian	21 (52.5%)	24 (60%)	45 (56.25%)
Afro-Amer.	13 (32.5%)	12 (30%)	25 (31.25%)
Native Amer.	4 (10%)	2 (5%)	6 (7.5%)
Hispanic	2 (5%)	2 (5%)	4 (5%)
<b>School Site:</b>			
A	18 (45%)	21 (53%)	39 (48.75%)
B	14 (35%)	9 (25%)	23 (28.75%)
C	8 (20%)	10 (23%)	18 (22.5%)

Additional descriptive data on attendance, schools attended, and grade retentions of the research subjects are displayed in Table 5. The mean and standard deviation of the number of non-attended school days during the prior school year, the number of schools attended and the number of grade level retentions in the school career are specified by gender and problem behavior. The mean number of school days missed in the prior school year by externalizing males in the study population was 11. This was the least number of school days missed by any group. The externalizing male and female groups in the study population attended school more regularly than the internalizing male and female groups. The internalizing male and female groups each had missed 28 days in the prior school year.

The mean number of schools attended in the school career by externalizing males and females in the research groups was 4 schools, while the internalizing males had attended 3 schools and internalizing females had attended a mean of 2 schools in their school career. The externalizing male and female groups had attended more schools in their school career than internalizing male and female groups in this study population. No information was obtained to discriminate the reason for the school moves.

Grade level retention data collected (in years) from student records indicated that the female and male externalizing student groups in the research population had more grade retentions in their school career than the female and male internalizing student groups. Both male (0.70) and female (0.75) students with externalizing problem behavior had been retained in a grade level more often than male (0.45) and female (0.55) students with internalizing problem behavior.

Table 5

Means and Standard Deviations Describing Students with Externalizing and Internalizing Problem Behavior on Attendance, Schools Attended and Grade Retentions

	Students with Externalizing Problem Behavior				Students with Internalizing Problem Behavior			
	n=40				n=40			
	Male n=20		Female n=20		Male n=20		Female n=20	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Attendance (School days missed in recent year)	11.0	4.8	19.0	16.1	28.7	10.4	28.0	10.9
Number of Schools Attended	4.15	1.6	4.35	1.7	3.0	1.7	2.4	1.1
Grade Retentions (in years)	.70	.80	.75	.71	.45	.76	.55	.75

The intellectual and academic achievement measures of the student research population of 80 subjects sorted into four equal groups, are described by behavior and gender in Table 6. The means and standard deviations are reported.

The intellectual measure was the Wechsler Intelligence Scale for Children--Third Edition (WISC-III) with a mean of 100, with three reported scores: Full Scale, Verbal and Performance. All four research groups, externalizing males, externalizing females, internalizing males, and internalizing females, had mean scores in the average range of intelligence, as expected. The female internalizing group had the highest mean score of 98.25. The male internalizing mean scores were the lowest at 91.90. The Performance mean scores were slightly lower than the Verbal scores, in all groups except the male internalizing group.

The academic achievement measure was the Wide Range Achievement Test: 3rd Edition (WRAT3) with data reported as an overall mean percentile score. Also, a 'years below or above grade level' academic achievement measure in reading, spelling and arithmetic was recorded and reported by research grouping. Overall academic achievement scores were very low for all groups compared to national averages. This is in agreement with results in previous research (Epstein et al., 1989; Foley & Epstein, 1992; Wagner & Shaver, 1989). The academic achievement was lowest in the female internalizing group in the student research population with a mean percentile academic achievement of 29.3. Females in the externalizing and males in the internalizing problem behavior groups had academic achievement mean percentiles of 31.9 and 31.25 respectively. The male externalizing student group had the highest mean percentile academic achievement of 32.25.

The 'years below or above grade level' measure for the four research groups ranged between -0.75 and -2.0, with all groups reflecting academic achievement deficits in reading, spelling and math. The female internalizing group reported a two year deficit in math and the male externalizing group reported a two year deficit in reading. These data

were similar to prior research information describing academic achievement delay in students with emotional disturbance (Epstein et al., 1989).

Table 6

Means and Standard Deviations Describing Students with Externalizing and Internalizing Problem Behavior on Intellectual\* and Academic Achievement\*\* Measures

	Students with Externalizing Problem Behavior n=40				Students with Internalizing Problem Behavior n=40			
	Male n=20		Female n=20		Male n=20		Female n=20	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
<b>Intellectual Measure (IQ score)* (M=100)</b>								
Full Scale	96.30	11	96.50	13.44	91.90	11.48	98.25	10
Verbal	96.05	11	96.95	11.94	90.95	9.76	98.00	10
Performance	95.35	10	95.25	13.63	91.25	12.04	96.95	10
<b>Academic Achievement** (total overall score in mean % ile)</b>								
	32.25	14.19	31.90	19.11	31.25	16.96	29.30	17.3
<b>Academic Achievement** (years below grade level)</b>								
Reading	-2.05	1.82	-1.75	2.51	-0.75	2.71	-1.65	1.98
Spelling	-1.50	1.91	-1.30	2.37	-1.30	2.07	-1.10	2.27
Math	-1.70	1.17	-1.10	2.07	-1.65	2.0	-2.0	1.75

\*Wechsler Intelligence Scale for Children --Third Edition (WISC-III)

\*\*Wide Range Achievement Test: 3rd Edition (WRAT3)

The special education categories of the research population are reported in Table 7. This educational service descriptor provided one part of the rich background information to appreciate in the context of the research questions. The students with externalizing problem behavior present at 50% of the research population without a special education category in the school setting. Also, 40% of the female internalizing problem behavior subjects were not in a special education category. Then, 25% of the male internalizing problem behavior students were not under a special education category for service. The male externalizing problem behavior student data reported that 35% of that research group carried a current Seriously Emotionally Disturbed (SED) special education category. Male and female internalizing problem behavior student data showed that 35% in each group were served by schools under a Learning Disability special education category. The percentages reflect that nearly half of the research population receiving services in a public school day-treatment population were not currently served in special education.



Table 7

Special Education Categories of Students with Problem Behavior by Behavior and Gender in Number and Percentages

Special Education Category	Students with Externalizing Problem Behavior n=40 (50%)		Students with Internalizing Problem Behavior n=40 (50%)	
	Male n=20 (25%)	Female n=20 (25%)	Male n=20 (25%)	Female n=20 (25%)
Seriously Emotionally Disturbed (SED)	7 (35%)	3 (15%)	5 (25%)	4 (20%)
Learning Disability (LD)	2 (10%)	6 (30%)	7 (35%)	7 (35%)
Mentally Retarded (MR)	1 (5%)	1 (5%)	1 (5%)	1 (5%)
Speech Impaired (SI)	0	0	2 (10%)	0
No Category (regular education)	10 (50%)	10 (50%)	5 (25%)	8 (40%)

Table 8 describes the four research population groups' mean behavior scores on the Child Behavior Checklist on the Teacher Report Form on the Externalizing, Internalizing, and Total Score Problem Behavior Scales. Only students with problem behavior scores in the clinical range of severity were used in this study. The clinically severe cut-off was a score of more than 64. The males and females had similar behavior severity mean scores, with the Total Score Problem Behavior Scale calculated at 68.8 and 68.6 for males; 68.45 and 69.4 for females. The female internalizing total severity score was the highest of any subgroup at 69.4. Both female groups had higher specific problem behavior scores than the males in the Externalizing and Internalizing Behavior Factor Scores (Ext-males=76.10, Ext-females=77; Int-males=75.35, Int-females=76.7). It is of note that all subjects had restricted range in the severity of behavior scores. The subjects represented in each research group were similar in clinical severity level for problem behavior, thus providing an equality for each group, as differences were investigated in behavior on school characteristics.

Table 8

Mean Scores\* of Students with Problem Behavior on the TRF\*\*

	Students with Externalizing Problem Behavior n=40		Students with Internalizing Problem Behavior n=40	
	Ext Beh Score mean score	Total Score mean score	Int Beh Score mean score	Total Score mean score
Male	76.10	68.80	75.35	68.60
Female	77.0	68.45	76.70	69.40

\*Clinically severe score >64;

\*\*Teacher's Report Form of the Child Behavior Checklist (Achenbach & Edelbrock, 1991).

Research Question One: Influence of Problem Behavior and Gender  
on Disruption

Descriptive Statistics

Males with externalizing problem behavior (see Table 9), had higher mean scores on disruption than any other group ( $M=64.15$ ,  $SD=18$ ,  $Range=65$ ). Females with an externalizing problem behavior had greater variance of scores ( $M=56.95$ ,  $SD=20.3$ ,  $Range=76$ ). The males with internalizing problem behavior ( $M=45.9$ ,  $SD=16$ ,  $Range=65$ ) and females with internalizing problem behavior ( $M=44.65$ ,  $SD=16.9$ ,  $Range=61$ ) had lower group mean scores and similar variance of scores. Based on the problem behavior, the externalizing problem behavior student group appeared to have more reported disruptive documentation in the school setting as reflected in the higher mean scores on disruption than the students with internalizing problem behavior.

Table 9

Means, Standard Deviations and Ranges of Student Scores by Behavior and Gender on the SARS Score for Disruption

Gender	Students with Externalizing Problem Behavior			Students with Internalizing Problem Behavior		
	Mean	SD	Range	Mean	SD	Range
Male	64.15	18	65	45.9	16	65
Female	56.95	20.3	76	44.65	16.9	61

The marginal mean scores of the research groups are presented in Table 10. The marginal means show a pattern change across the problem behavior (60.5 for Externalizing Behavior to 45.3 for Internalizing Behavior). The marginal means for gender are not as great (55 for males and 50.3 for females). The marginal means pattern show that there may be differences due to externalizing or internalizing problem behavior on disruption. This result was expected.

Table 10

Marginal Means of Student SARS Scores by Gender and Behavior on Disruption

Gender and Behavior	Marginal Mean Scores
Males At Behavior	55
Females At Behavior	50.3
Externalizing Behavior At Gender	60.5
Internalizing Behavior At Gender	45.3

Tests of Research Hypotheses Exploring Differences on Disruption

Hypothesis 1: The influence of problem behavior on student disruption reported in school records for males and females depends on externalizing and internalizing problem behavior.

Sub-Hypothesis 1-A: The reported amount of disruption in school records is the same for students with externalizing problem behavior or internalizing problem behavior.

Sub-Hypothesis 1-B: Disruption reported in school records is not affected by gender.

A two-way analysis of variance was conducted in which the SARS raw score on disruption was the dependent variable. Problem behavior (externalizing, internalizing) and gender (male, female) were the nested independent variables. The summary table for this analysis is presented in Table 11. The interactional effect of problem behavior and gender was not statistically significant at the .01 level,  $[F(1, 76)=0.553, p=.329]$ , and Hypothesis 1 was not rejected.

Using a simple main effect analysis, the main effect of the independent variable, problem behavior, was statistically significant at the .01 level  $[F(1,76)=14.575, p=.000]$ , and Sub-Hypothesis 1-A was rejected. The main effect of gender was not statistically significant at the .01 level,  $[F(1, 76)=1.115, p=.306]$ , and Sub-Hypothesis 1-B was not rejected. The main effect of behavior was found to be statistically significant differentiating between the externalizing problem behaviors and the internalizing problem behaviors at the .01 significance level.

Students with externalizing problem behavior cause more disruption in the school setting than students with internalizing problem behavior.

Table 11

Summary Table of Analysis of Variance of Student Scores on Disruption  
by Behavior and Gender (N=80)

Source	SS	DF	MS	F	P
Behavior (B)	4666.516	1	4666.516	14.575	.000*
Gender (G)	357.016	1	357.016	1.115	.306
B x G	177.016	1	177.016	0.553	.329
S/ B x G	24333.851	76	320.182		
Total	29534.40	79			* p < .01

To determine the strengths of the effects in this analysis, omega squared was calculated. The values indicated that 15% of the variance in school records of disruption were accounted for by problem behavior, whereas 0% of the variance in school records of disruption were accounted for by gender, and 5% of the variance in school records of disruption were accounted for by the combination of problem behavior and gender. According to Cohen (1988) problem behavior had a strong effect on disruption, whereas gender and the behavior x gender interaction effects were quite small.

## Disruption Summary

Means, standard deviations, and score ranges for disruption scores by behavior and gender group were described. The mean disruption scores of the two groups, males and females with an internalizing problem behavior, were lower than the mean scores of the two groups, males and females with an externalizing problem behavior. Based on the problem behavior, the students with externalizing problem behaviors appeared to have more reported disruptive situations recorded in the school files than students with internalizing problem behavior. In the research hypotheses exploring differences, the two-way interactional effect (behavior x gender) was not statistically significant at the .01 level in affecting the student disruption scores. The main effect of behavior was found to have statistical significance on school disruption scores, as expected. Interestingly, the effect of gender was not statistically significant on the scores with this particular research population. The simple main effect analysis of behavior was statistically significant on differentiating the externalizing behavior and the internalizing behavior at the .01 level of significance. The strength of association on the disruption scores as indexed by the omega squared calculation indicated a large effect, 15%, of the variability in school file scores reporting disruption were accounted for by problem behavior. Also, 5% of the variance in the disruption scores was accounted for by the interactional effect of problem behavior and gender.

### Research Question Two: Influence of Problem Behavior and Gender on Academic Achievement

## Descriptive Statistics

Males with an externalizing problem behavior (Table 12), had higher mean scores and less score variance on academic achievement than any other group of research subjects ( $M=48.15$ ,  $SD=15.9$ ,  $Range=52$ ). Both females with externalizing problem

behavior ( $M=43.95$ ,  $SD=17.8$ ,  $Range=63$ ) and the internalizing female group ( $M=39.45$ ,  $SD=17.2$ ,  $Range=66$ ) appear to have slightly higher variance of scores than the males. Females with internalizing problem behavior in the research population have the lowest scores in the academic characteristic. Based on problem behavior, the students with internalizing problem behaviors appeared to be associated with lower academic achievement scores as recorded in school records than students with externalizing problem behavior.

Table 12

Means, Standard Deviations and Ranges of Student Scores by Behavior and Gender on the SARS Score for Academic Achievement

Gender	Students with Externalizing Problem Behavior			Students with Internalizing Problem Behavior		
	Mean	SD	Range	Mean	SD	Range
Male	48.15	15.9	52	40.45	16.5	67
Female	43.95	17.8	63	39.45	17.2	66

Tests of Research Hypotheses Exploring Differences on Academic Achievement

Hypothesis 2: The influence of problem behavior on academic achievement for males and females depends on externalizing and internalizing problem behavior.

Sub-Hypothesis 2-A: Academic achievement is the same for students with externalizing or internalizing problem behavior.

Sub-Hypothesis 2-B: Academic achievement is not affected by gender.



A two-way analysis of variance, using the academic achievement score as the dependent variable was calculated to determine differences in the study population groups. Behavior and gender were the independent nested variables in the design. The summary table for this analysis is presented in Table 13.

Table 13

Summary Table of Analysis of Variance of Student Scores on Academic Achievement by Behavior and Gender (N=80)

Source	SS	DF	MS	F	P
Behavior (B)	708.047	1	708.047	2.483	.115
Gender (G)	151.250	1	151.250	0.530	.358
B x G	42.047	1	42.047	0.147	.999
S/ B x G	21672.199	76	285.161		
Total	22573.543	79			

The effect of problem behavior and gender combining to influence academic achievement was not statistically significant at the .01 level. Hypothesis 2 was not rejected. This was the expected result of this investigation. All research groups in this study of students with problem behavior scored in the low academic achievement range as reported earlier. The effect of behavior or gender did not differentiate the academic achievement scores in a research population of students with clinically severe problem behaviors.

The main effect of the independent variable, problem behavior, was not statistically significant at the .01 level and research Sub-Hypothesis 2-A was not rejected. The main

effect of gender in the design was also not statistically significant at the .01 level and research Sub-Hypothesis 2-B was not rejected. As seen in Table 13, this design had no statistical significant differences between groups on scores of academic achievement as reviewed in school records.

The strength of association or practical significance in this analysis was indexed by an omega squared calculation. The values indicated that 2% of the variability associated with scores of academic achievement as recorded in school records, was accounted for by problem behavior. Gender accounted for 1% of the variability in the academic scores. The influence of the interaction of problem behavior and gender accounted for 1% of the variability in the academic scores in the school records. According to Cohen (1988) academic achievement had a quite small effect on problem behavior, gender and the behavior x gender interaction. This research population of students with problem behavior did not differ significantly in the academic achievement reported from school records. All groups were low academic achievers in the study population.

#### Academic Achievement Summary

The descriptive measures of central tendency were described for the four groups of students on behavior at two levels and gender at two levels. Although the groups did not differ on the variables at a statistically significant level, observations about the group mean academic achievement scores for the study groups are interesting. Males with externalizing problem behavior had higher group mean scores in overall academic achievement and less score variance than any other group of students in the research population. Females in both externalizing and internalizing problem behavior groups appeared to have lower group mean overall academic achievement scores than males. The female group of students with internalizing problem behavior had the lowest academic achievement scores. Based on the problem behavior, the students with internalizing

problem behavior had lower mean scores on academic achievement than students with an externalizing problem behavior. In the research hypotheses exploring differences in the academic achievement characteristic, the two-way interactional effect of problem behavior and gender, the main effect of behavior and the main effect of gender were found to be not statistically significant at the .01 level on academic achievement scores. The practical significance omega squared index in this analysis indicated that 2% of the variability associated with scores of achievement in school files, was accounted for by behavior. Gender accounted for 1% of the variability in the academic scores in the population. The combination of behavior and gender accounted for 1% of the variability in the academic achievement scores. The mean group scores of the research population on academic achievement was considered very low compared to national averages.

### Research Question Three: Influence of Problem Behavior and Gender on School Service Provision

#### Descriptive Statistics

The mean scores, standard deviations of the scores, and the range of scores in the school service provision are listed in Table 14. As evidenced by the summary statistics, the greatest difference in the standard deviation and variability of the four research groups' scores was between the externalizing male group ( $M=36.1$ ,  $SD=13.8$ ,  $Range=50$ ) and internalizing female group of students ( $M=37.7$ ,  $SD=19.3$ ,  $Range=69$ ). Females with externalizing problem behavior had a greater range of scores, while the male students with externalizing problem behavior had the smallest score range difference. The female internalizing problem behavior ( $M=38.6$ ,  $SD=16.1$ ,  $Range=60$ ) and the male students with internalizing problem behavior ( $M=39.6$ ,  $SD=16.5$ ,  $Range=66$ ) showed similar variance and higher service provision group mean scores as recorded in school files. This suggested that study subjects with internalizing problem behavior had more special services provided

to them above the regular services in the school. Males and females with externalizing problem behaviors varied in the group mean raw score on the number of services the school provided to them, with externalizing students showing a lower mean score than internalizing students for school service provision. Based on problem behavior, the externalizing problem behavior research groups appeared to have fewer services provided to them based on the lower group mean score in school service provision.

Table 14

Means, Standard Deviations and Ranges of Student Scores by Behavior and Gender on the SARS Score for School Service Provision

Gender	Students with Externalizing Problem Behavior			Students with Internalizing Problem Behavior		
	Mean	SD	Range	Mean	SD	Range
Male	36.1	13.8	50	39.6	16.5	66
Female	37.7	19.3	69	38.6	16.1	60

Tests of Research Hypotheses Exploring Differences on School Service Provision

Hypothesis 3: The influence of problem behavior on school service provision for males and females depends on externalizing and internalizing problem behavior.

Sub-Hypothesis 3-A: The number of school services provided is the same for students with externalizing or internalizing problem behavior.

Sub-Hypothesis 3-B: School service provision is not affected by gender.

A two-factor between-subjects design analysis of variance (ANOVA) was done using the SARS raw score for needs assistance which quantifies the number of services the school provided to a student for special needs, as the dependent variable. Behavior and gender were the independent variables. The summary for this analysis is located in Table 15. The interactional effect or combination of behavior and gender on the school service provision score from the school record search was not statistically significant at the .05 level. Hypothesis 3 was not rejected.

Table 15

Summary Table of Analysis of Variance of Student Scores on School Service Provision by Behavior and Gender (N=80)

Source	SS	DF	MS	F	P
Behavior (B)	94.609	1	94.609	0.344	.730
Gender (G)	1.508	1	1.508	0.005	.999
B x G	35.117	1	35.117	0.128	.999
S/ B x G	20913.75	76	275.181		
Total	21044.984	79			

The main effect of the independent variable, problem behavior, was not statistically significant at the .05 level. The analysis failed to reject Sub-Hypothesis 3-A. Gender was also not statistically significant at the .05 level and failed to reject Sub-Hypothesis 3-B. Omega squared was calculated to determine practical strength of association. The values indicated the strength of association for problem behavior x gender interactionally, problem behavior alone, and gender alone on the school service

provision characteristic were 1% respectively. According to Cohen (1988) problem behavior, gender, and the behavior x gender interaction effects were small on school service provision.

### School Service Provision Summary

The measures of central tendency and variance were computed and reported on the scores of school service provision for students with behavior problems at two levels, with gender influences. The effect of problem behavior and gender on school services did not find statistical significance, although the group mean scores were very interesting. The variability in the scores recorded from the school files on the school service provision, was greatest in the externalizing problem behavior students. Males and females with externalizing problem behaviors in the study showed the largest range of scores and largest amount of variance in the scores. Female and male students with internalizing behavior problems had higher group mean scores on the number of services the school provided to them than male and female students with externalizing problem behaviors. Based on the behavior, the subjects with externalizing problem behavior appeared to have fewer school services provided to them. In the research hypotheses exploring differences on the characteristic of school service provision by gender and behavior, the interactional effect of behavior x gender, the main effect of behavior and the main effect of gender were not statistically significant at the .05 level. All statistical hypotheses were not rejected.

The size of the relative-strength measure, the omega squared, in the study indicated that a small effect size of .01, or 1% of the variability in the combination of behavior and gender was accounted for in the scores on school service provision. The 1% strength of association was also noted for behavior effect on the scores and 1% gender effect on the scores.

### Research Group Mean Scores on the Three Characteristics

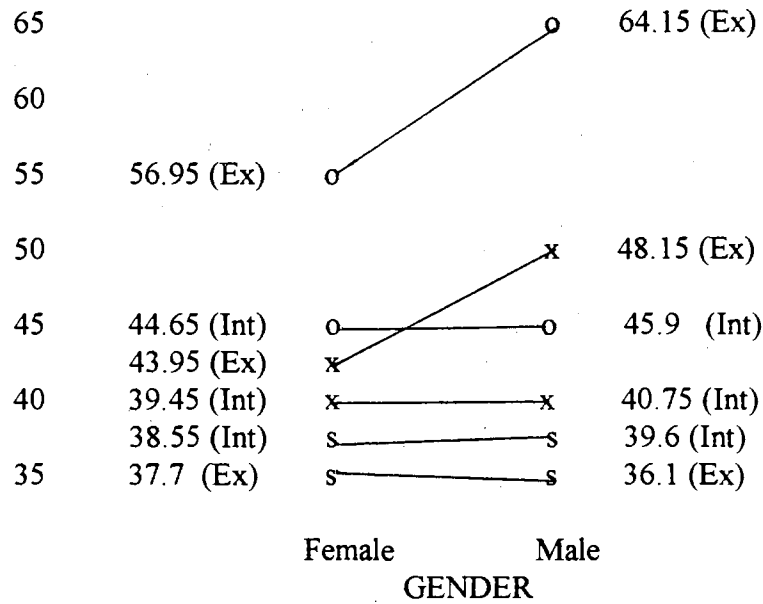
The group mean scores on the three characteristics, by research grouping, is shown in Table 16. This information is descriptive and comparative to the other research groups in this study. It is very interesting. Although the data did not produce statistically significant results except in the main effect of problem behavior on the characteristic of disruption, the group mean scores on the characteristics for these subjects is worth viewing. Each research group is briefly outlined and graphed.

Male Externalizing Group	highest group mean scores on disruption. highest (of national low) academic achievement group mean scores. lowest school service provision group mean scores.
Male Internalizing Group	low disruption group mean scores. low academic achievement group mean scores. highest school service provision group mean scores.
Female Externalizing Group	high disruption group mean scores. high (of national low) academic achievement group mean scores. low school service provision group mean scores.
Female Internalizing Group	low disruption group mean scores. lowest academic achievement group mean scores. low school service provision group mean scores.

Table 16

Research Group Mean Scores on the Characteristics of Disruption.

Academic Achievement and School Service Provision



Disruption scores = o  
 Achievement scores = x  
 Services scores = s

Externalizing Problem Behavior (Ex)  
 Internalizing Problem Behavior (Int)



## CHAPTER FIVE

### SUMMARY, DISCUSSION AND RECOMMENDATIONS

#### Summary and Discussion

The purpose of this study was to investigate students with clinically severe problem behaviors (externalizing or internalizing), considering gender influence, on disruption, academic achievement, and the school's service provision. The four research groups were: externalizing males, externalizing females, internalizing males, and internalizing females.

The study population consisted of eighty 8th and 9th grade students who were receiving public school instruction in day-treatment programs for students identified as having emotional and behavioral problems. Parents of students in three public school day-treatment sites were sent letters inviting participation in the study. The participating students were screened into either an internalizing or externalizing problem behavior based on the average score of two teacher behavior rating scales. Only students scoring in the clinical range in one of the problem behaviors was assigned to the study population by problem behavior and gender. Three characteristics were quantitatively assessed using school files: school disruption, academic achievement and educational services provided by the school to assist the students. Two assessment instruments were used: (1) The Teacher Report Form (TRF) of the Child Behavior Checklist (Achenbach & Edelbrock, 1991) was used to differentiate the problem behavior. (2) The School Archival Record Search (SARS), published by Walker & Severson (1991), assessed and quantified the school records on the three characteristics. Descriptive and inferential statistical information about the three characteristics were reported.

## Demographics

The general demographic information about ethnicity, attendance, and school mobility of this research population is similar to the information describing students with behavior problems from prior research (Cullinan et al., 1992; Walker et al., 1991). There were 56.25% Caucasian, 31.25% Afro-American, and 12.5% Native American or Hispanic students as reported in this study. This was reflective of the local racial demographics of the research school system. This study population had 56.25% students in the 9th grade and 43.75% in the 8th grade. The 9th grade has been reported to be the grade level with the highest school dropout rate in the nation (Block-Pedego, 1990). Kortering and Blackorby (1992) reported a 80% school dropout rate for students with behavioral disorders in their sample of 102 students. While the dropout rate was not reported for this research population, many indicators of high-risk school dropout factors were present: poor school attendance, increased school mobility rates, grade retentions, and academic achievement performance below expected grade level.

Poor school attendance for students with internalizing problem behaviors in the research population was reported at a group mean score of 28 missed school days in the prior school year. Female students with externalizing problem behaviors had a mean group score of 19 missed school days. The local state department of education considers 20 absent school days per year as reason for possible school failure or dropout status. The research population missed school day mean scores agree with results described by Walker et al. (1990) in their data surrounding the development of a systematic screening tool for behavior disorders in the school setting.

The number of schools attended in the school career, not counting normal school grade progression, has been associated with school difficulty (Kortering & Blackorby, 1992; Walker et al., 1994). The research subjects had from 2 to 4 school placements in their school career by the 8th or 9th grade. The students with externalizing problem

behavior had attended an average of 4 schools, with the internalizing groups attending an average of 2 schools. The externalizing students experienced more movement in their school careers. This could be attributed to the disruptive nature of the externalizing problem behavior student in the school setting and the inability to form relationships that endure.

There was a greater incidence of grade retentions in the school career of the students with externalizing problem behavior (three-fourths) over the internalizing groups (one-half) in the research population. The students with problem behavior had more grade retentions than the students without problem behaviors. This could be viewed as a first attempt by educators to address or service the school difficulties of students with problem behaviors.

Based on the literature review and findings in this study, discussions on the characteristics of disruption, academic achievement, and school service provision as they relate to student behavior and gender are provided. This day-treatment study population was disruptive in the school setting due to problem behavior (differentiating externalizing and internalizing problem behavior), was very low in overall academic achievement (with average ability intelligence measures), and varied in the number of school services provided, although not at a statistically significant level.

#### Research Question One: Disruption

The finding of a difference due to problem behavior on the characteristic of disruption in this research population was expected and supports the literature (Achenbach & Edelbrock, 1981; Cessna, 1993; Hops et al., 1985; Horn & Packard, 1985; Walker et al., 1994). The main effect of behavior was statistically significant in affecting student disruption scores. Both the externalizing and internalizing problem behaviors were statistically significant in affecting the disruption scores.

Students with externalizing problem behavior had higher group mean disruption scores than students with internalizing problem behavior. Students with externalizing problem behavior were more disruptive at school than students with internalizing behavior as reflected in school records. This study supports the literature describing the difference in disruptive behavior of students with externalizing and internalizing behaviors (Achenbach & Edelbrock, 1978; Hale & Zuckerman, 1981; Walker et al., 1994). There was a large effect of practical significance when 15% of the variability in the disruption scores was accounted for by behavior. A medium effect of association, per Cohen's (1988) omega squared criterion, was specified when 5% of the variability in disruption scores was accounted for by the combination of gender and behavior. This finding in this day-treatment research population supported past research differentiating the groups by behavior in other service delivery settings (Percy et al., 1993; Singh et al., 1994).

The current definition of the special education category, Seriously Emotionally Disturbed (SED), includes a socially maladjusted clause to exclude students from receiving special education services. The issue of school disruption by reason of social maladjusted behavior, or acting out (externalizing) behaviors, often excludes the students with externalizing problem behavior from SED services, unless it is determined the student meets other SED criterion as well (Forness, 1992; Maag & Howell, 1991). This study in a day-treatment population found 50% of the students with clinically severe externalizing problem behaviors were not being served in the school setting under a current special education Individualized Education Plan, while 32.5% of the students with clinically severe internalizing problem behavior were not currently identified as a special needs student under IDEA (Federal Register, 1990). Interestingly, the underservice of students with problem behavior by schools was validated in this research (Forness, 1992; Kauffman, 1992; Knitzer, 1993). The societal implications of not educating the behavior disordered population has the potential of America developing an underclass of citizens. Some form of academic training must be created by schools and other institutions to

provide for the student with behavior problems who fails in school and drops out of society.

Complex interactions that occur between students with behavioral disorders and their environment suggest that, in order to be understood, their problems cannot be considered in isolation from the school environment (Kauffman, 1992; Leone, 1990). Such a view leads to appreciation of the notion that the behaviors which characterize the student with a behavior disorder are likely to be discordant with the norms of a traditional school environment. This source of discordance is described by Goodlad (1984) as the implicit curriculum. This curriculum includes the expectations and rules governing social and interpersonal behavior, and places the student with problem behavior unable to conform. These students are at risk of being unwanted and alienated by administrators, teachers and peers. It is only fair to note that students with problem behaviors have always presented public education with one of its most formidable challenges which is how to deal with students whose intense needs (often nonacademic) interfere with the education of others (Neel & Cessna, 1993; Stein & Merrell, 1992). The continued development of public alternative school programming which includes varied support systems is imperative for schools to serve students with emotional and behavioral problems. Support services may include counseling services, strong social skill curriculum, and community resource ties for families.

#### Research Question Two: Academic Achievement

The characteristic of academic achievement was not differentially affected by behavior and gender in this research day-treatment population. All research groups had very low overall academic achievement (under the 33rd percentile) without respect to gender or problem behavior. The interactional and both main effect analyses were not statistically significant at the .01 level, indicating all of the research groups were failing in

school. The total overall academic achievement of the groups ranged from the 29th percentile to the 32nd percentile, which is in the lower one-third of the population. There was a small practical effect, when 2% of the variability of achievement scores was accounted for by behavior.

Looking at the mean group academic achievement scores, the students with internalizing problem behaviors had lower group mean scores than students with externalizing problem behavior. Female students with internalizing problem behaviors had the lowest academic achievement mean scores in the study population. This research group also had the highest mean group score on the severity behavior scale (total score on the TRF=69.4). This may be an indicator of the severity level with which behavior was debilitating the female students with internalizing problem behavior to function in school and life. This supports prior research that the majority of students with problem behavior experience extreme academic failure, low achievement, and are failing in school (Cullinan et al, 1983; Foley & Epstein, 1992; Wagner & Shaver, 1989).

The intelligence measures of the study population reported Wechsler Intelligence Scale for Children (WISC-III) Full Scale IQ scores between 91.9 and 98.25, in the average range of ability. This was similar to IQ scores of students with serious emotional disturbance reported by Foley and Epstein (1992), although their sample was primarily males. This was an equal gender population and may have affected the slightly higher average IQ scores in this population. The national survey by Cullinan, Epstein and Sabornie (1992) reported the mean WISC full scale IQ score of 269 subjects at 92.6.

The reading, spelling and math achievement levels were one to two years below grade level for all groups in this study. The group mean of academic achievement level in 'years below grade level' showed that the males with externalizing problem behavior were over two years behind classmates in reading skills, and females with internalizing problem behavior were 2 years below grade level in math skills. The males with internalizing behavior were closer to grade level than the other groups in reading.

In the practical significance of the study, 2% of the variability in achievement scores was accounted for by the behavior. It appeared that all groups in the study had low academic achievement as expected. Despite their average ability intellectual measures, these day-treatment students with behavior problems were academic underachievers. The educational history of these students gives clear predictors to educators for early intervention at school. Multiple schools attended, attendance issues (excessive days missed), and academic failure can alert educators to the imperative for school interventions before the 8th or 9th grade. The Ruhl and Berlinghoff (1992) survey pointed to the lack of school-based academic teaching strategies for the behavior disordered population which were successful without the addition of a social skills curriculum. The social skills curriculum implementation may be a key element in early intervention with students with problem behaviors before the emotional disability cripples student school success.

### Research Question Three: School Service Provision

The research groups did not differ at a statistically significant level in the number of school services provided to them. However, some interesting observations about the group mean scores were noted. If student success is the mission of most schools, then to seek information about school services is valuable. When the students with behavior problems are failing miserably, the cause and remediation of this school failure with improved service is essential (Kauffman et al., 1991). This study has described the school service provision in a quantitative score from the school records and considered two variables which differentiate the population. School services were not affected by the behavior or gender in this study population at a statistically significant level. The practical effect of behavior on school service provision was small with 1% of the variability in the services provided accounted for by behavior.

The finding that males with externalizing problem behavior had a lower group mean score on school service provision and males with internalizing problem behavior had the highest group mean score is worthy of note. The group mean scores in school service provision overlapped gender, with problem behavior held as a constant. Males with externalizing behavior received fewer school services than males with internalizing behavior in this study population. More services were provided to the withdrawn male students than the aggressive male students, but the academic achievement was similar (very low) in this one specific research population.

The school service provision scores reflected the special education status of the research population. Fifty percent of the male students with clinically severe externalizing problem behavior were previously categorized as a special education student by the school. Thirty-five percent of the male externalizing group were receiving school services with an SED plan. The internalizing male group had 75% receiving special education services, with 25% receiving SED services, and 35% receiving services under the learning disabled category. Female externalizing group descriptive statistics indicated that 50% were not in a special education status, with 25% under an SED provision, and 30% receiving school services in a learning disability plan. The female internalizing students showed that 40% of the students were not receiving special education services, 20% had SED classification services, and 35% had school services under a learning disability plan. In all, 50% of the female externalizing group were not receiving special education services, and 60% of the female internalizing group were not currently under a special education plan.

To clarify, perhaps the students not receiving special education services may have been in Chapter I programs or receiving community-based counseling services. Although these percentages acknowledge the differences between students receiving special education services and regular education students, all research subjects were currently receiving counseling services for behavior problems in a special school setting. Their



emotional and behavioral problems were perceived by teachers, parents, mental health professionals and the courts as serious and complex enough to warrant admission to a day-treatment school setting. The prevention implication is that students with problem behaviors need a continuum of services that includes early identification, a social skill curriculum and comprehensive treatment services.

The services schools provide to help students become academically successful are at the heart of education. These services are limited by resources of the school district. The importance placed on specific programs may also be influenced by outside monitors of the school (IDEA, drop-out status reports, judicial reviews). The special education and alternative programming for students with problem behavior in the school setting continues to be a challenge for educators. The results of this research may suggest that although the academic achievement group mean scores of the study population were very low, the students (externalizing males) who received the fewest number of school services had the highest academic achievement scores. Why do the students with the least number of school services have the highest (of low) academic achievement in the research population? Why do students (internalizing males) with the most school services continue to have low academic achievement?

### Implications of the Study

This study posed three questions to describe the influence of gender and problem behavior in the school setting. (1) As expected, there were significant differences in behavior on disruption. The problem behavior students were not homogenous and there were differences in the number of recorded problem behaviors in the school records. Do these different behaviors need different interventions for success in the school setting? (2) As anticipated there were no differences in the groups on academic achievement. The students were found to be low achievers in the lower one-third of the national academic

achievement percentiles. This information adds to the data which provided a sense of urgency to the way schools provide for the problem behavior student population (Passell, 1991). (3) One focus of the study was the number of services the schools were providing to the problem behavior population. This research found no significant difference in the number of services provided to the groups, but mean group scores in this research population showed that males and females with externalizing problem behaviors received fewer school services. Females and males with internalizing problem behaviors had higher group mean scores on school services received. This information may indicate that schools responded to these research population groups in different ways.

An important step in better programming for students with behavioral disorders was made by the willingness of school districts like the one in this study to open their doors for educational research. This research was conducted with the intent to bring information that will allow schools to improve programs and services to students with behavior problems and continually re-evaluate services.

#### Limitations of the Research

Adolescents with emotional and behavioral problems have many variables influencing their lives and these variables confound research in this area. This complexity is a frustration for schools and researchers seeking to serve this diverse population of students. Although there is strong evidence to support differences between externalizing and internalizing problem behavior, this research is limited in only addressing one aspect of problem behavior. The loss of almost half of the potential research subjects due to the overlapping nature of externalizing and internalizing problem behavior is a major limitation. Similarly, as special educators work within the law in the implementation of the current SED definition and service delivery, services are limited to students by the

exclusionary clause for social maladjustment. The individuality of all students stands as a constant reminder of the complexity in human studies.

The volunteer status of the participants was a limitation in this research. Although no student, to the researcher's knowledge, questioned the teachers about the study or asked about results, the parental and guardian permission required a trust between the school and the parent which may have limited the response. The invitation response rate was 77% only after three phases of invitations and follow-up phone calls. A larger subject pool would have provided more power to the study design.

The co-morbidity of problem behavior types was an issue faced by the researcher and limited the number of subjects available for the project. The overlap of existing externalizing and internalizing problem behaviors was projected by Thomas Achenbach (1991) as a mean correlation of .52 across normative samples of each sex/age group. This increased the need for a large population base to recruit study participants and accounted for the attrition of 168 possible subjects to 90 subjects in the final research population pool. A larger research population size on the characteristic of school service provision may have provided schools more generalizable information.

Using three school sites in one midwestern public school system only provided information specific to that school district. The school district's record procedures and reporting techniques directly affected the amount of disruption documented. The standardization of school records was limited beyond the basic information, by school site location and policy. The researcher was familiar with the school district forms and procedures, but noted variances in specific school record keeping among the sites. This may have affected the data collection process, specifically in unique classroom behavior supports that teachers provide which were not always reflected in the screened records. School climate and various site administrative styles were variables not discerned in school records. It would be difficult to generalize the research findings to other school districts.

Research is strong documenting the reliability of teacher rating scales to determine specific problem behaviors. Yet, it should be noted that the teachers in this study were administratively assigned, not volunteers, to these day-treatment school sites. The training or experience-level of the teachers was not surveyed beyond their current certification as a teacher in the state. The specific professional training of the teachers was not assessed, other than by assignment to teach English or math. How professional training may have influenced the teacher completing the behavior rating scale is a research limitation.

One of the limitations of this research was the high mobility rate of the students in the public school day-treatment programs. These sites were time-limited school accommodations and were school sites for short-term intervention for students with problem behaviors. The teachers did not have long-term associations with the students beyond the temporary time the student attended the special school programming. The length of stay in the day-treatment program was not assessed, beyond the two months required for administering the TRF of the Child Behavior Checklist. Involvement with a day-treatment school program indicated that school provisions were being made for the student, thus affected the school service provision scores.

## Recommendations

### Recommendations for Schools

Based on the literature review and results of this research, several recommendations are provided for schools as they struggle to educate students with behavior problems.

1. Increase counseling service for students: School personnel, including teachers, would benefit by staff development, coursework, or a mental health cooperative in improving counseling techniques for students with behavior problems. The staff ability to

accept and build a trust with students with problem behaviors will ground the school relationship for the student. To recognize the urgency of need for students with problem behavior, demonstrated by the commonality of low academic achievement within the context of average intellectual ability in this research population cannot be overstated. The importance of teachers receiving knowledge of social skill development and academic remediation competency training is imperative to reach these students.

2. Individualize school services to accommodate specific behavioral and academic problems: School punitive attitudes toward students with behavior problems in the clinically severe range may be caused by the fact that this complex group of students are so varied in their social skills that school support services must be individualized. Academic remediation is a priority to improve the student sense of accomplishment. As demonstrated in this study, the students with emotional and behavioral problems are not a homogenous group except in that they are failing academically. They put demands on school personnel to meet their needs. Special education services should be only one level of intervention by schools to meet the needs of students with behavior problems. The externalizing or internalizing problem behavior students may respond to different stimuli for school success.

3. Move toward assisting, involving and including parents as partners not adversaries in the education of the student: Changing the historical premise, that mental illness and problem behavior are caused by family factors should be a school goal. Many school professionals place unrealistic expectations on families to control the student's behavior. Parents are not viewed as valuable participants in the student's service planning and treatment, limiting their role to either an informant or scapegoat. The sense of respect and equality that comes from a feeling of empowerment by parents can be an asset to schools in the planning of programs for students with behavior problems.

4. Form teams of school professionals and families to collaborate with community agencies: The creation of regularly updated information banks listing community services

is vital for schools to meet the educational needs of students with behavior problems. Creating individualized plans that address important life domains for youth transitioning into adulthood is especially important to the students with behavior disorders as their future prognosis is currently poor. The demographic data from this study indicated poor academic achievement, high school mobility rates (especially in the externalizing problem behavior groups), and disruptive behavior. These indicators promote the need to get students with problem behavior connected with community resources.

5. Implement a social skills curriculum: Social competence is crucial for students. Lack of social competence contributes to repeated contacts with law enforcement and school dropout rates. Social skills training refers to direct teaching of social skills and incorporates the components of skill identification, modeling, role playing, feedback and transfer of training. The preventive implications of a social skills curriculum on peer acceptance and school success will benefit the educational process of students with behavior problems.

6. Create a procedure for reintegrating students into the regular school program: The individualized behavior management program for each student, including student input, will address the unique qualities of the student and the plan for the continued integration into the traditional school setting as possible. The examination of environmental factors that can be altered to successfully keep students in the mainstream of education is necessary.

7. Coordinate the systematic effort between school and mental health interventions: The day-treatment school settings have emerged as a place where education and mental health services are provided in a somewhat integrated and cooperative way. Collaboration between the two agencies should be an equally shared responsibility. This balance is difficult to achieve but has many advantages for students with problem behaviors when it works. The common goal may be to keep students in the community setting and home environment while addressing behavior and academic concerns.

### Recommendations for Future Research

This study suggests a number of implications for future research considerations. The data gathered in this study have relevance because knowledge about students with behavior problems is increased. The information can be used to provide a better match between the student needs and available services. One strength of this study was that the data were gathered in an education/mental health school setting (day-treatment) currently serving students with clinically severe problem behaviors. The externalizing problem behavior research group was disruptive, all groups were failing in school, and the number of school services to these groups varied. The heterogeneity of students with problem behaviors, and the impact of that fact on their lack of school success has continued implications for educators for school service provision. The theory that students with problem behavior can be described by unique behavior syndromes was examined and found to be true in the characteristic of disruption. Perhaps the use of a MANOVA research design could detect more variance among the research variables on the school service provision and clarify that characteristic.

No one technique or program will serve all the needs of the behavior disordered population. More studies that report on programs in use around the nation will give the educator new information to implement changes for students with emotional and behavioral problems. The survey reporting on specific programs by Epstein et al. (1992) is an example of the kind of information educators need. The more options the educator is aware of, the better the school services.

A common theme among public school educators is the aggressive change in the behavior of the students over the last decade. The increased difficulty of working with problem behavior students, combined with the reported decrease in the national academic achievement scores, indicate the need for information about problem behaviors in the schools is growing. Research using qualitative case studies to assess the cause behind the

differences in students with externalizing or internalizing problem behavior would increase the understanding of educators about this population.

It is recommended that more research be conducted on the specific characteristics of students with externalizing and internalizing problem behaviors in various classroom settings and programs. The day-treatment school setting, special day school, partial hospitalization, residential schools, regular classes, special education classes, alternative school programs and other creative programs and curricula for students with problem behaviors have successful services that need to be studied. A continuum of services for students with behavioral disorders, recognizing their differences, will help schools match need and services. This study with a school day-treatment population reflects a cooperative service model, but long-range or follow-up information is lacking about the effectiveness of this school environment.

Attention to the specific types of services that schools are providing to the students with internalizing problem behaviors even though they continue to have lower academic achievement could save schools time and resources in nonproductive support services. This study showed higher group mean scores in disruption for males with externalizing problem behavior and lower group mean scores in school service provision. Are schools denying services to students who act out?

Research about students with behavior problems who continue to fail in school has societal implications. The continued emphasis on treatment and remediation over prevention, a lack of recognition and appreciation regarding the progressive nature of emotional-behavioral problems, the absence of genuinely collaborative school-mental health programs, and the ill-defined special education categorical boundary are serious obstacles to the development of a comprehensive continuum of care for students who are seriously emotionally-behaviorally disturbed. Without more knowledge of the characteristics and services provided to students with externalizing or internalizing



problem behavior, research is likely to continue to have mixed results with little or no increase in our understandings of how to best serve these students.

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## APPENDIXES

**APPENDIX A**  
**INSTITUTIONAL REVIEW BOARD APPROVAL**

OKLAHOMA STATE UNIVERSITY  
INSTITUTIONAL REVIEW BOARD  
HUMAN SUBJECTS REVIEW

Date:04-14-94

IRB#:ED-94-094

Proposal Title:THE INFLUENCE OF GENDER AND STUDENTS'  
EXTERNALIZING OR INTERNALIZING PROBLEM BEHAVIOR ON THE DOMAINS OF  
ACADEMIC ACHIEVEMENT, DISRUPTIVE BEHAVIOR AND SCHOOL SERVICE  
PROVISION

Principal Investigator(s):Diane Montgomery, Suza VanTuyl

Reviewed and Processed as:Expedited

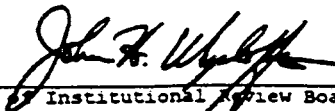
Approval Status Recommended by Reviewer(s): Approved

APPROVAL STATUS SUBJECT TO REVIEW BY FULL INSTITUTIONAL REVIEW BOARD AT NEXT  
MEETING.  
APPROVAL STATUS PERIOD VALID FOR ONE CALENDAR YEAR AFTER WHICH A CONTINUATION OR  
RENEWAL REQUEST IS REQUIRED TO BE SUBMITTED FOR BOARD APPROVAL.  
ANY MODIFICATIONS TO APPROVED PROJECT MUST ALSO BE SUBMITTED FOR APPROVAL.

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Comments, Modifications/Conditions for Approval or Reasons for  
Deferral or Disapproval are as follows:

Signature:

  
Chair of Institutional Review Board

Date: May 12, 1994



**PUBLIC SCHOOLS**

*Department of Research, Evaluation and Testing*

May 19, 1994

Suza VanTuyl  
3621 E. 85th St.  
Tulsa, OK 74137-1732

Dear Ms. VanTuyl,

I am pleased to inform you that our Research Review Committee has approved your dissertation request, subject to the privacy and consent requirements you described.

We are interested in the results and hope that you will share a copy with us at the conclusion of your study.

Sincerely,

Jerry

cc: Dr.  
Dr.  
Dr.

*"Educating for Excellence in the 21st Century"*

**APPENDIX B**  
**INVITATION LETTER**



Date  
Parents  
Address

RE: Student's Name

Dear

I am currently a doctoral student at Oklahoma State University. I am doing a research project investigating students attending a public school day treatment program. Your student is invited to participate with your permission in the research study. The project is titled, "The Influence of Gender and Students' Externalizing or Internalizing Problem Behavior on the Domains of Disruption, Academic Achievement and School Service Provision." The purpose of the study is to describe the student enrolled in a public school day-treatment program by gender, academic achievement, disruptive behavior level, and the number of services the school has provided in the past to the student to assist her/him in the school setting.

Your participation in the study would be greatly appreciated. If you agree to participate, a teacher behavior rating scale will be done by the student's teacher and I will screen the school records including confidential files on the above characteristics at the school site. The characteristics from the student's school history will be recorded to describe a student enrolled in a public school day-treatment program, including her/ his school needs and what services the school has historically provided to the student.

All information will be held confidential and a subject code number will be assigned to school record data collection sheets. There will be no names or other identifying information on the record screening form. Participation in the study is voluntary and there is no penalty for refusal to participate. The benefits of participation include information gained by the teachers from the behavior rating scale about your student to use in planning activities. Also, being a part of this study will help researchers in education understand the relationship of gender, academic achievement, disruptive behavior and school service provisions on the success of students with problems in the school setting.

Enclosed you will find 2 copies of the research consent form. Please fill them out and return one to me in the enclosed stamped envelope. The other copy is for you to keep for your files. Thank you for your help in this project to better understand students experiencing problems. The ultimate goal of this project is to provide better school services for students with problems.

Sincerely,

Suza VanTuyl

**APPENDIX C**  
**RESEARCH CONSENT FORMS**

## RESEARCH CONSENT FORM

I, \_\_\_\_\_ (parent/guardian) hereby authorize participation of my child, \_\_\_\_\_ in a research investigation entitled "The Influence of Gender and Students' Externalizing or Internalizing Problem Behavior on the Domains of Disruption, Academic Achievement, and School Service Provision". The purpose of this study will be to gather data from teacher observation in behavior rating scales, and from student school records for the doctoral dissertation of Suza VanTuyl through Oklahoma State University.

The procedure will include:

1. Parent/guardian signing a release of information to allow the researcher to (1) provide the student's teachers with a teacher behavior rating scale (Teacher Report Form of the Child Behavior Checklist) to be completed about the student, and to (2) access the student's school records including confidential files in the school office in the public school system to collect data on school information using the School Archival Record Search instrument.

2. Data collection procedure:

- a. The teacher rating scale is completed in fifteen minutes in non-class time by the student's teachers regarding the teacher's observational perception of the student's behavior in school.
- b. The historical school data collected will be recorded without names, with only code numbers on the forms. The school data collection will take approximately thirty minutes by the researcher.
- c. All school record information collected on the student will be coded to assure privacy and anonymity of the student and family.
- d. There will be no charge to the family for these assessments.
- e. All information will be held confidential, in a coded form, in the possession of the researcher.

"I understand that participation is voluntary, that there is no penalty for refusal to participate in this study, and that I am free to withdraw my consent and participation in this project at any time without penalty after notifying the project director.

I may contact Suza VanTuyl (918) 492-9514 or Diane Montgomery (405) 744-6036, should I wish further information about the research. I may also contact Beth McTernan, University Research Services, 001 Life Sciences East, Oklahoma State University, Stillwater, Oklahoma 74078; Telephone: (405) 744-5700.

I have read and fully understand the consent form. I sign it freely and voluntarily. A copy has been given to me."

Name of Subject: \_\_\_\_\_  
(A minor child)

Date: \_\_\_\_\_ Time: \_\_\_\_\_ (am/pm)

Signed: \_\_\_\_\_

Relationship To Subject: \_\_\_\_\_

"I certify that I have explained all elements of this form to the subject or his/her representative to sign it."

Signed: \_\_\_\_\_

## VITA

Suza Anita VanTuyl

Candidate for the Degree of

Doctor of Philosophy

**Dissertation:** THE INFLUENCE OF GENDER AND STUDENTS' EXTERNALIZING OR INTERNALIZING PROBLEM BEHAVIOR ON THE CHARACTERISTICS OF DISRUPTION, ACADEMIC ACHIEVEMENT AND SCHOOL SERVICE PROVISION

**Major Field:** Applied Behavioral Studies

**Biographical:**

**Personal Data:** Born in Tulsa, Oklahoma, on March 3, 1947, the daughter of Jay and Marie (Girdner) VanTuyl. Currently residing in Tulsa, Oklahoma. Children: Jason VanTuyl Hicks, Colby VanTuyl Hicks, and Travis VanTuyl Hicks.

**Education:** Graduated from Memorial High School, Tulsa, Oklahoma; Bachelor of Science Degree in Elementary Education from The University of Tulsa in May 1968; Studied Western Civilization and German at Pepperdine University campus in Heidelberg, Germany; Master of Arts Degree with a major in Guidance and Counseling from The University of Tulsa in May 1971; Doctor of Philosophy Degree from Oklahoma State University in December, 1995.

**Professional Experience:** Teacher in the Tulsa Public Schools. Volunteer in community, church and schools, serving as chairperson of various committees on issues concerning youth. Teaching assistant at Oklahoma State University. Administrator of a public school program for students with behavior problems, 1986 to present.