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Department of Psychology
Utah State University
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**A SURVEY OF PERCEIVED CONTROL AND DOMESTIC ENVIRONMENT
ASPECTS OF EARLY ADOLESCENT BOYS WITH AND WITHOUT
IDENTIFIED EXTERNALIZING BEHAVIOR PROBLEMS**

by

Gary W. Mauk

**A dissertation submitted in partial fulfillment
of the requirements for the degree**

of

DOCTOR OF PHILOSOPHY

in

Psychology

Approved:

**UTAH STATE UNIVERSITY
Logan, Utah**

1996

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ABSTRACT

**A Survey of Perceived Control and Domestic Environment
Aspects of Early Adolescent Boys With and Without
Identified Externalizing Behavior Problems**

by

Gary W. Mauk, Doctor of Philosophy

Utah State University, 1996

**Major Professor: Richard N. Roberts
Department: Psychology**

Two demographically congruous groups of early adolescent boys, one group with identified externalizing behavior problems (EBP) and one group enrolled in regular education (RED), were surveyed using anonymous self-report questionnaires that assessed academic, social, and general domains of perceived control and aspects of familial experiences. Data from EBP and RED boys' extant scholastic archival records were also collected. Also, using anonymous self-report questionnaires, the parents of EBP and RED boys were surveyed regarding their levels of satisfaction regarding aspects of parenting.

This study found that EBP boys had statistically significantly lower reading, math, and language achievement scores and grade point averages

than RED boys. The general ability level of EBP boys was more similar to, than different from, the RED boys. Regarding perceived control in the academic domain, EBP boys (a) perceived themselves as having substantially less general control over academic success than RED boys, (b) endorsed luck as an effective strategy for academic success more than RED students, and (c) reported statistically significantly greater influence of unknown sources of academic successes and failures than RED boys. Socially, EBP boys reported statistically significantly greater beliefs about unknown sources for social (peers, adults) interaction success and unknown sources for social (peers, adults) interaction failure than RED boys. In the general environment, EBP boys reported significantly greater beliefs about unknown sources for general failure in their daily lives and imputed adults (powerful others) in their environment with great power with respect to preventing them from engaging in general activities. No statistically significant differences were found between the EBP and RED boys on self-reported aspects of parental care, social control/protection, or personal control/protection. Regarding parents' self-reported levels of satisfaction, no statistically significant differences were found between parents of boys in the EBP group and parents of boys in the RED group for spouse/ex-spouse support nor parent performance. Mothers, but not fathers, of EBP boys reported a statistically significantly lower level of satisfaction with the parent-child relationship than mothers of RED boys.

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Gary W. Mauk

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CHAPTER I

INTRODUCTION

The real voyage of discovery consists not in seeking new landscapes, but in having new eyes. (Marcel Proust, as cited in Wilson, 1995, p. 20).

Popper (1972) stated, "All growth of knowledge consists in the improvement of existing knowledge which is changed in the hope of approaching nearer to the truth" (p. 71). The study of dysfunction in childhood and adolescence is significant because of the need to understand and to ameliorate types and severities of impairment that youth experience (Achenbach, 1990, 1993; Kazdin, 1989a, 1993a, 1993b, 1995a, 1995b). The term behavior disorders, encompassing both emotional and conduct problems, best describes the host of affective conditions and related actions emanating from a child's inability to behave and learn in appropriate ways (Bower, 1988; Kauffman, 1989).

Youth who exhibit the symptoms of their disorders externally (directed outwardly at others in the environment; e.g., hurting others, destroying property, throwing objects, swearing, name calling, stealing) are most noticed by the schools and society (Achenbach, 1985; Diener, 1993; Hinshaw, 1992a, 1992b; Kazdin, 1995a; Short & Brokaw, 1994). Diener (1993) has noted, with respect to externalizing behavior problems, that "there is a victim as well as the child who is exhibiting these behaviors" (p. 247). Recently, Walker, Colvin, and Ramsey (1995), in a recent text on strategies and best practices

for addressing the antisocial behavior of children and adolescents in schools, observed the following:

Antisocial behavior is felt pervasively and profoundly in literally all school districts in this country....Student aggression, antisocial behavior, delinquency, and violence are strongly linked dimensions of an unfortunate behavior pattern that students in our schools are adopting in droves (American Psychological Association, 1993; Reid, 1993; Schorr, 1988). The pressures and social effects resulting from these behavioral manifestations are threatening to overwhelm the process of school for all of our students. School safety, for staff and students alike, has risen to a level of great importance and excruciating national concern. (p. 2, emphasis in original)

The youth served in special education as seriously emotionally disturbed (SED) or behaviorally disordered (BD) are a heterogeneous group whose personal and social difficulties range from mild to severe (Castanon, 1995; Kazdin, 1987a, 1995a, 1995b; Leone, Fitzmartin, Stetson, & Foster, 1986; Marcus & Betzer, 1996; Moffitt, 1993a; Pont, 1995; Reiher, 1992) and who "present a challenging complex of problems and conditions" (Swicegood & Linehan, 1995, p. 335). Some youth manifest very serious disturbances, along with other developmental or neurological impairments; other youth disrupt classrooms and are frequently off task (Knitzer, Steinberg, & Fleisch, 1990; Safran & Safran, 1987). Many terms are used to describe such youth, including students with "serious emotional disturbance" (SED), the term used in federal legislation for special education (U.S. Department of Education, 1994, p. 109). Other descriptive terms are behaviorally disordered (BD), emotionally disturbed (ED), and emotionally handicapped (EH).

Serious emotional disturbance (SED) was first defined under the Education of the Handicapped Act (U.S. Office of Education, 1977), and continues to have the same definition under its Congressional reauthorization, the Individuals with Disabilities Education Act (IDEA; U.S. Department of Education, 1991), as follows:

- (i) The term means a condition exhibiting one or more of the following characteristics over a long period of time and to a marked degree that adversely affects educational performance:
 - (a) an inability to learn which cannot be explained by intellectual, sensory, or health factors;
 - (b) an inability to build or maintain satisfactory interpersonal relationships with peers and teachers;
 - (c) inappropriate types of behavior or feelings under normal circumstances;
 - (d) a general pervasive mood of unhappiness or depression;
 - or (e) a tendency to develop physical symptoms or fears associated with personal or school problems.
- (ii) The term includes children who are schizophrenic. The term does not include children who are socially maladjusted, unless it is determined that they have a serious emotional disturbance (U.S. Office of Education, 1977, p. 42478).

The issue of exclusion of students considered socially maladjusted from SED classification is explicated further in Chapter II. Also, it is important to note that the preceding definition only refers to school-based behavior, and does not allow consideration of behavior outside the school for special education classification or service provision (Bowe, 1995). A new proposed definition of SED would permit consideration of youths' behavior external to the school setting for special education classification purposes (U.S. Department of Education, 1993b). Issues related to exclusion of students who are socially maladjusted from special education services and aspects of the new proposed definition of SED are explicated in Chapter II.

Youth Who Manifest Externalizing Behavior Problems

The findings from many studies reveal high rates of externalizing behavior problems among youth classified as SED (Epstein, Kauffman, & Cullinan, 1985; Knitzer et al., 1990; Mattison & Gamble, 1992; Mattison, Humphrey, Kales, & Wallace, 1986; Mattison, Humphrey, Kales, et al., 1986; Mattison, Morales, & Bauer, 1991, 1992, 1993; McConaughy & Achenbach, 1996; McConaughy, Mattison, & Peterson, 1994; Stephens, Lakin, Brauen, & O'Reilley, 1990). Youth with behavior disorders, particularly those with externalizing (outwardly directed) problems, trigger frustration, anger, or helplessness in the educators who work with them (Forness & Knitzer, 1992; Ninness, Glenn, & Ellis, 1993). Such youth are aptly described by other special education professionals as "mad, bad, sad, and can't add" (Knitzer et al., 1990, p. 9), and, as a group, often present the greatest challenge to the knowledge and skills of special educators and related services personnel (DeBaryshe, Patterson, & Capaldi, 1993; Knitzer et al., 1990).

Gabel and Shindledecker (1991) and Offord and Bennett (1994) have observed that externally directed behavior in youth, whether defined as oppositional, antisocial, or conduct disorder, is among the pressing concerns facing contemporary U.S. society and is one of the most economically onerous disorders to society (Kazdin, 1987a, 1987b; Loeber, Green, Keenan, & Lahey, 1995; Phelps & McClintock, 1994; Robins, 1981;

Walker et al., 1995).¹ Cambone (1995) observed that troubled students, such as those with externalizing behavior disorders,

are massively difficult to manage and to teach; they present themselves to the world in ways that often make them difficult to even like, much less to engage in any depth; and their chances of improving to the point of self-sufficiency are slim. (p. 14)

Many researchers (e.g., Fredericks, 1994; Kazdin, 1987a, 1990; Neel, Meadows, Levine, & Edgar, 1988; Offord & Bennett, 1994; Short & Shapiro, 1993; Verhulst, Eussen, Berden, Sanders-Woudstra, & van der Ende, 1993; Wolf, Braukmann, & Ramp, 1987) have painted a bleak picture for these youth. Because of their entrenched negative patterns of behavior and functional skill deficits, the futures of these youth frequently include a high probability of life-long maladjustment (Bornstein, Schulberg, & Bornstein,

¹Kazdin (1995a) recently published the second edition of a book entitled, Conduct Disorders in Childhood and Adolescence, in which he stated:

The term conduct disorder will be used to refer to instances when the children or adolescents show a pattern of antisocial behavior, when there is significant impairment in everyday functioning at home or school, or when the behaviors are regarded as unmanageable by significant others. Thus conduct disorder is reserved here for antisocial behavior that is clinically significant and clearly beyond the realm of normal functioning....The term Conduct Disorder also refers to a specific constellation of behaviors in psychiatric diagnosis. The generic and specific uses of these terms overlap. The proper noun will be used when the specific diagnostic category is delineated. (Kazdin, 1995, pp. 1, 20)

This manuscript will employ the same pattern of usage of the term conduct disorder as Kazdin (1995a), except for direct quotations of material in which cases the exact language of the author(s) will be used.

1987; Center, 1993a; Epstein, Foley, & Cullinan, 1992; Kauffman, 1989, 1991; Knitzer et al., 1990; Loeber, 1991; Martin & Hoffman, 1990; Neel et al., 1988; Nelson & Rutherford, 1990; Robins & Price, 1991; Rutherford, Nelson, & Wolford, 1985; Steinberg & Knitzer, 1992). This is a staggering loss of human potential, a human tragedy of immense proportions (Fredericks, 1994; Hathaway, Sheldon, & McNamara, 1993; Kazdin, 1987b; Nelson & Pearson, 1991). Hunt, Mayette, Feinberg, and Baglin (1994) recently observed that

the presence of behavioral problems can be one of the greatest obstacles to the normalization and education of disabled individuals. Behavior problems can severely stress the parent-child relationship and other relationships in the immediate and extended family....[and] can impede progress in educational and therapy programs. As problems become more difficult to manage, the risks for the child and the costs of providing intervention increase. (p. 62)

Offord and Bennett (1994) asserted that the payoff of discovering successful prevention programs, ideally, and intervention programs, unquestionably, for externalizing behavior problems, such as Conduct Disorder, "will not only be reduced levels of antisocial behavior in childhood and adolescents, but lower frequencies of adult criminality and probably also of a wide array of psychosocial disturbances" (p. 1076). In addition to the financial costs to society of externalizing behavior disorders in youth (Kazdin, 1987a, 1987b, 1995a; Robins, 1981; Toth, 1990), there are serious implications for affected youth and others in their orbit (Bornstein et al., 1987; Martin & Hoffman, 1990; Walker et al., 1995). For example, Toth (1990),

speaking specifically about clinically diagnosed conduct disorders but with relevance to all externalizing behavior disorders, observed:

Severe disturbances of conduct are disruptive not only to a child's normal development, but also to the child's home, family, school, and community. The impact that conduct disorders have is widespread and not always fully recognized. Husbands and wives fight about the child with problem behaviors....Schools may spend more time disciplining than teaching. (p. 2)

Beliefs Systems of Youth Who Manifest Behavioral Problems

It is widely accepted that multiple factors (e.g., child, parent, family, and school-related factors) contribute to the development and maintenance of child and adolescent behavioral problems and to inauspicious personal and societal outcomes (Adams, Bosley, & Cooper, 1995; Bernes, 1993; Dodge, 1990; Feehan, McGee, Williams, & Nada-Raja, 1995; Fergusson & Horwood, 1995; Fergusson, Horwood, & Lynskey, 1994; Franklin & Streeter, 1995; Frick, 1993; Gibbs, Potter, Goldstein, & Brendtro, 1996; Glaser, Sayger, & Horne, 1992; Hinshaw, 1992a, 1992b; Kazdin, 1995a, 1995b; Lytton, 1990a, 1990b; Margolin, 1981; Offord & Boyle, 1988; Reed & Sollie, 1992; Sayger, Horne, & Glaser, 1993; Simon & Johnston, 1987; Susman, 1993; Wahler, 1990; Webster-Stratton & Herbert, 1994). Dadds (1995) has observed that "the causes of childhood disorders are best seen as a set of systems, subsystems, and components of systems interacting at the biological, interpersonal, family and social levels" (p. 46).

Noting the history of unsuccessful attempts by special education teachers and school psychologists to effect change in students with externalizing behavior disorders, notably Conduct Disorder (e.g., Braaten & Wrobel, 1991; Kazdin, 1987b, 1995a), Center (1993a) recently stated that "I suspect that a major contributor to our failure is an inadequate understanding of this behavior disorder. I would suggest that we need a better understanding of antisocial behavior in order to plan appropriate services" (p. 1).

Because of the poor educational and personal outlook for youth with externalizing behavior disorders, Apter (1982), Dodge (1993b), Gibbs et al. (1996), Kauffman (1991), Kazdin (1987b, 1990, 1995a), McLaughlin (1987), McMahon (1994), Rhodes (1967, 1970, 1990), and Swap, Prieto, and Harth (1982), among others, asserted astutely that exploration of new, more broad-based intervention and treatment models is needed for youth with externalizing behavior disorders. Many educators and researchers (e.g., Apter, 1977, 1982; Csikszentmihalyi, 1993; Csikszentmihalyi & Larson, 1984; Dickson, 1996; Feagans & Bartsch, 1993; Fine, 1983, 1985; Furby & Beyth-Marom, 1990; Gibbs et al., 1996; Greene, 1988; Kelly, 1992; Lerner, 1986, 1989, 1993; Millstein, 1993; Molnar & Lindquist, 1989; Phelan, Yu, & Davidson, 1994; Ryan, Millstein, & Irwin, 1988; Swisher, 1993) have suggested that more attention be paid to the phenomenological aspects of

normal adolescent development and maintenance of problem behavior such as externalizing behavior disorders (Kelly, 1992; Moffitt, 1993a).

Phenomenological thought sets forth the importance of understanding an early adolescent's direct experience of the world (Amatea & Sherrard, 1995; Feagans & Bartsch, 1993). For adolescents with externalizing behavior disorders, such an approach would examine behavioral difficulties and other domains from the adolescent's perspective, exploring the meaning, motivations, interpretations, and experiences within identified areas of research and intervention interest, such as perceived controllability of events in their lives (Arbuthnot, 1992; Farrington, 1993; Feagans & Bartsch, 1993; Lerner, 1989; Millstein, 1993).

It is a well-accepted axiom that chronic antisocial behavior is notoriously difficult to change (Castanon, 1995; Kazdin, 1995a). Wood (1995), for example, concluded that traditional behavioral control interventions have been conspicuously ineffective for antisocial youth, particularly aggressive, noncompliant students, and offered two key reasons why youth resist adults' efforts to change their behavior. First, antisocial youth believe their current coping behaviors serve them better than the alternatives adults are urging, and second, they believe that their situation is so hopeless that their only choices are to fight or to give up. Wood (1995) asserted that "in either case, they view much of what we are trying to do to them as irrelevant" (p. 2).

Compas, Phares, Banez, and Howell (1991) have noted the importance of assessing adolescents' perceptions in distinct domains (e.g., academic, social) and have pointed out the weaknesses of global or general assessments of adolescents' perceptions (e.g., Cohen, Gottlieb, Kershner, & Wehrspan, 1985; Schneider & Leitenberg, 1989). Global or general assessments of perceptions can mask underlying real differences among subgroups.

Control Beliefs in Early Adolescents With Externalizing Behavior Disorders

Beliefs about the self's ability to exercise control, to have influence, over aspects of one's world and in relation to others in the environment are central concepts in many theories of human behavior. Weikart (1994) observed that when youth develop control and self-discipline through education and socialization processes,

this control is real power, not over people, or things, but over oneself. Understanding what is happening in our environment, realizing that those around us are genuinely interested in what we say and do, and knowing that our work and effort will often lead to success is the kind of control that promotes personal satisfaction and motivates us to be productive. While no single factor assures success in life, the sense of personal control is certainly a major factor. (p. 234, emphasis in original)

Halmhuber and Paris (1993) recently stated:

Developmental and educational research has shown that by adolescence children have developed stable beliefs about themselves that can affect their achievement levels and self-concept. (p. 93)

They also noted that adolescents form theories about themselves "based on the connections among beliefs, desires, and actions" (Halmhuber & Paris, 1993, p. 94) that are consistent with clinical models of coping skills (Rothbaum, Weisz, & Snyder, 1982), developmental models of youths' theories of mind (Wellman, 1988), theories of causality (Heider, 1958), and action theory (Skinner, Chapman, & Baltes, 1988a). Considered together, the adolescent's comprehensive organization of beliefs about the self and the self in relation to others is much like a cognitive map or theory for engaging in all types of mental activities culminating in action (Arbuthnot, 1992; Epstein, 1994; Guerin, 1994; Kendall, 1993; Lewis, 1992; Rokeach, 1984). Thus, the ultimate purpose of an adolescent's belief system is to maintain and enhance self-conceptions, particularly of competence and satisfactory social interactions (Masten et al., 1995; Rokeach, 1973; Weikart, 1994). Fecser and Martin (1995) recently observed the following with respect to students with behavioral disorders:

Many troubled students organize their worlds around rigid ways of perceiving, thinking, feeling, and behaving. Unable to integrate new paradigms, they become stuck, well beyond logic, in patterns that have brought some success in the past. For example, a youngster who grows up hearing that he is "weak and worthless" is likely to believe it. Yet the human spirit is strong, and he may fight against his innermost belief by using every opportunity to prove to himself and others that he is a force to be reckoned with, someone not to be discounted or written off. Under conditions of emotional persecution, this tactic may temporarily boost his low self-concept; and it is safer to stay with the old, reliable beliefs and patterns of behavior than to risk better ways of living.... These irrational beliefs trigger a cascade of feelings--embarrassment, dread, fear--that can be expressed through so many of the

behaviors of youth that adults find puzzling: withdrawal, giving up, and aggression. (pp. 45, 50)

For many adolescents with externalizing behavior problems, their lifetime of experiences may have forged a worldview that they cannot abandon easily. However, once these patterns of belief are identified and deciphered, targeted interventions might be designed and implemented for these youth (Wood, 1995). Such interventions, while they may swim upstream against a strong current of adolescent resistance and may seek to unearth and reframe untold tons of worldview-cementing life experiences, they have the potential to be effectual and to generate "a spark which, if carefully tended, can grow into a flame" (Fecser & Martin, 1995, p. 50).

Possible Linkages Between Control Beliefs and Psychological Problems

Patrick, Skinner, and Connell (1993) noted that control "refers to the connection between behaviors and outcomes; it is the extent to which a person feels capable of producing desired and preventing undesired events; the opposite of control is helplessness" (p. 782). Psychologists of diverse persuasions have posited connections between control beliefs and perceptions and psychological problems and behavioral problems (e.g., Bandura, 1977a, 1977b, 1978, 1981, 1982, 1985, 1989a; Brehm & Brehm, 1981; Erikson, 1963; Rothbaum & Weisz, 1989; Rotter, 1966; Seligman, 1975; Skinner, 1990).

Data accumulated from more than 30 years of research have established that control beliefs are an integral link in individual systems of action and emotion regulation, particularly under conditions of challenge. Pearce, Martin, and Wood (1995) have asserted that "an individual's perceptions of their world are as important (if not more important) as what actually happens" (p. 166). Sproul (1994) observed that different levels of reality exist in that people believe that events occur in certain ways and for certain reasons which frequently are contrary to the perceptions of others in the environment. Yet, although individuals may perceive the same event or situation differently, and may disagree about what the "truth" is, "this does not negate the truth that both parties really believe or perceive that they are right" (Sproul, 1994, p. 119).

Attending to the viewpoints, perceptions, and beliefs of adolescents with externalizing behavior disorders may provide us with important information for use in implementing or improving interventions (Duplass & Smith, 1995; McConaughy & Achenbach, 1996). Kelly (1992), arguing for a holistic approach to externalizing behavior disorders in youth, an approach that emphasizes the critical importance of subjective self-perceptions in social interactions, has stated that early adolescents' perceptions of self, and self in relation to others, their relative ability to bond empathically with others, their acceptance or denial of, compensation for and mastery over their various traits and physical limitations, and so forth, can only be fully understood in

subjective terms, incorporating the individual's perspective of and beliefs about his or her environment (Duplass & Smith, 1995; Fabrega & Miller, 1995). Finally, Boggs and Eyberg (1990) noted that

because what the child thinks and feels about current problems can sometimes illuminate major influences on his or her behavior, it is imperative for the psychologist to assess his or her perceptions of relevant issues. (p. 86)

One of these areas or issues is perceived attachment or bonding to parents (Greenberg, Speltz, & DeKlyen, 1993; Marcus & Betzer, 1996).

Domestic Aspects of Behavior Problems Among Youth

Youth-Perceived Attachment and Bonding to Parents and Behavioral Problems

An attachment generally refers to a close, enduring affectional bond or relationship between two persons (Ainsworth, 1989). Lopez and Gover (1993) noted that the presence of these bonds or relationships is presumed to foster an individual's development throughout his or her life span by providing him or her with emotional support and a sense of closeness and continuity. Thus, the nature of the parent-adolescent attachment is considered a primary context for understanding adolescent development (Lopez & Gover, 1993). Mallinckrodt (1992) has asserted that both "theory and research suggest that parental emotional responsiveness and control in childhood may significantly influence adult social competencies" (p. 455).

Peterson and Rollins (1988) noted that "the parent-child bond is the basic association of the human experience" (p. 499). With respect to the affective nature of the parent-child relationship, there is considerable evidence that a warm and positive bond between a parent and a child or adolescent leads to more positive communication and parenting strategies, and a child or adolescent who possesses greater social competence and positive psychological well-being (Armsden & Greenberg, 1987; Baumrind, 1971, 1989; Burke & Weir, 1979; Doane, 1978; Hirschi, 1969; Jacob, 1975; Mallinckrodt, 1992; Marcus & Betzer, 1996; McCormick & Kennedy, 1994; Raja, McGee, & Stanton, 1992; Rey, 1995; Rogosch & Cicchetti, 1994; Rohner, 1986; Rossi & Rossi, 1990; Sroufe & Fleeson, 1986; Steinberg & Elmen, 1986; Vuchinich, Wood, & Vuchinich, 1994). Researchers have also found that adolescents' attachment to their parents has a greater association with adolescents' psychological well-being relative to the contribution made by peer attachment (Armsden & Greenberg, 1987; Burke & Weir, 1979)

Henggeler and his colleagues (Henggeler, 1982, 1989; Henggeler & Borduin, 1990; Mann, Borduin, Henggeler, & Blaske, 1990) have reported that parents of youth who exhibit severely antisocial behaviors, compared with parents of youth who do not manifest such problems, demonstrate less acceptance and support of, less warmth and affection toward, and less attachment (bonding) to their children. Recently, Raja et al. (1992), in a large study of adolescents' perceived attachments to parents, reported:

An important relationship between mental health and attachment to parents was observed in this study. Generally, low perceived attachment to parents was associated with greater problems of conduct, inattention, depression, and the frequent experience of negative life events....The strongest effect of low parent attachment occurred for conduct and inattention problems. This provides some support for the idea that too great an independence from parents may be associated with problems in developing self-reliance in early adolescence. As a result, adolescents may be more vulnerable to peer pressure especially in antisocial activity. (Raja et al., 1992, pp. 483-484)

Maccoby (1992) noted that the affective aspects of relationships between parents and children (e.g., love, hate, fear) have continued "to occupy a central place in most conceptions of the socialization process" (p. 1006). She observed that youth internalize, from their attachment experience, the quality of a relationship with each parent, "not the personality characteristics of a parent" (p. 1011). Mallinckrodt (1992) has noted that "the consistency of attachment figures' responses to the child's emotional needs may have far-reaching consequences for adult functioning" (p. 454).

With respect to aggressive, noncompliant, and antisocial youth (e.g., youth identified with serious emotional disturbance [SED] or externalizing behavior disorders [BD]), Brendtro and Ness (1995) asserted that, because "social bonding is programmed in our genes, something has gone very wrong when children attack those responsible for nurturing and protecting them" (p. 2). The control theory perspective on the development of disruptive and delinquent behavior proffered by Hirschi (1969) suggests that externalizing behavior problems and delinquent behavior "are more likely to result when an

individual's bonds to society (including the family, the school system, and the community as a whole) are significantly weakened or broken" (Coie & Jacobs, 1993, p. 268). Jones (1987) noted that several developmental factors exist among students with emotional and behavioral difficulties. He observed that

they are not merely students with behavior problems; these behavior problems are a response to serious deficits in self-concept, social cognition, moral development and personal relationships. (Jones, 1987, p. 95)

When youths' working models of attachment (Ainsworth, 1989; Bowlby, 1969, 1973; Main, Kaplan, & Cassidy, 1985) are derived from and maintained over time on the basis of insecure and inadequate attachment relations (Canter, 1982; Cernkovich & Giordano, 1987; Collins & Read, 1990; Doane, 1978; Hinde, 1992; Hirschi, 1969; Jacob, 1975; Maccoby, 1992; Mallinckrodt, 1991, 1992; McCormick & Kennedy, 1994; Sroufe & Fleeson, 1986; Tolan & Lorion, 1988; Turner, 1991),

it can be expected that relationships with significant others will tend to reflect patterns of insecurity the child carries with him into relationships with others, in terms of social cognition, perceptual biases, affective relations, and interpersonal behavior. (Vondra & Belsky, 1993, p. 19)

Thus, one of the most important of the many factors that affect child and adolescent development is attachment to and interactions with parents (Ainsworth, 1989; Bowlby, 1973; Brewin, 1988; Canter, 1982; Cernkovich & Giordano, 1987; Collins & Read, 1990; Dadds, 1987; Doane, 1978; Emery & Tuer, 1993; Greenberg et al., 1993; Hawkins & Weiss, 1985; Henggeler, 1989; Hirschi, 1969; Jacob, 1975; Maccoby, 1992; Main et al., 1985; O'Leary

& Emery, 1984; Robin & Foster, 1984; Sroufe & Fleeson, 1986; Tolan & Lorion, 1988; Turner, 1991).

Parent Satisfaction and Behavior Problems

Rossi and Rossi (1990) have observed that parents of adolescents in general, let alone parents of adolescents who exhibit externalizing behavior disorders, are desperate and anxious. Webster-Stratton and Herbert (1994) noted that the parenting problems of the parents of a child with an externalizing behavior disorder can stem from having to cope with a more difficult and unresponsive child. They observed that children with EBD, compared to children who do not manifest EBD, (a) engage in higher rates of aberrant behaviors and parental noncompliance, (b) exhibit fewer positive verbal and nonverbal behaviors (e.g., smiles, laughs), (c) exhibit more negative nonverbal gestures, expressions, and voice inflections in parental interactions, (d) have less positive affect (e.g., seem depressed), and (e) are less reinforcing to their parents. They observed that these behaviors on the part of youth with EBD set in motion "the cycle of aversive parent/child interactions" (Webster-Stratton & Herbert, 1994, p. 17). Also, Frick (1993) noted that, although child conduct problems have multiple origins (e.g., biological factors, social-cognitive deficits, school environment variables), understanding the influence of the family context and family functioning "is essential to understanding child conduct problems" (p. 376).

Umberson (1989) stated that "the parent-child relationship is one of the strongest social ties available to individuals" and that "it carries important implications for the parent's behavior, attitudes, values, and adjustment" (p. 999). From her research on the effects of dimensions of the parent-child relationship on parents' psychological well-being, she concluded that "the content of parent-child relationships, particularly positive relational content, is strongly associated with parents' well-being" (p. 1009) and that "relationship content may constitute a pivotal mechanism through which parenting can exert a powerful effect on parents' psychological well-being" (p. 1009).

Hauser, Powers, and Noam (1991) observed that an adolescent's general psychosocial adjustment is related to the adolescent's experiences in his or her family as well as to his or her perception of their family and, in turn, their family's perception of them. Collins (1991) noted that for parent-adolescent and adolescent-parent relationships, in particular, understanding the nature of various perceptions offers a distinctive perspective on aspects of family processes, and that the "task of understanding perceptions and cognitions in the context of adolescents' family relationships is part of a growing effort to understand relationships and their role in human functioning in general" (p. 108).

Rae-Grant, Thomas, Offord, and Boyle (1989) noted that, because poor family functioning, including a poor parent-child relationship, is an important

factor in the development and maintenance of adolescent emotional and behavioral disorders,

greater efforts need to be made to identify families that function poorly, and interventions that improve functioning need to be implemented and evaluated. This means that more emphasis needs to be placed on evaluation of family functioning in the health, social service, and educational assessment of children who are disordered. (p. 265)

Thus, in concert with previous research on youth with externalizing behavior disorders, it is important to have some measure of the parents' perception of the quality of or their satisfaction with the parent-child relationship, as well as satisfaction with the level of spousal support and their own performance in the parental role (Cooper, Holman, & Braithwaite, 1983; Dadds, 1995; Ferguson & Allen, 1978; Forehand, McCombs, & Wierson, 1988; Henggeler & Borduin, 1990; Horne & Sayger, 1990; Kaslow, Rehm, Pollack, & Siegel, 1990; Larson & Myerhoff, 1967; Lutzer, 1987; Mann, Borduin, Henggeler, & Blaske, 1990; Mowder, Harvey, Moy, & Pedro, 1995; Noller, Seth-Smith, Bouma, & Schweitzer, 1992; Novak & van der Veen, 1968; Prange et al., 1992; Robin & Foster, 1984; Sayger et al., 1993; Simons, Lorenz, & Wu, 1993; Steinberg & Elmen, 1986; Vuchinich et al., 1994; Webster-Stratton & Herbert, 1994).

Purposes of This Study

With respect to research on the provision of services to children with various needs and disabilities, Kutash and Rivera (1995) recently stated, "[I]t

is only through the examination of what we do know that we can begin to understand what it is we do not know" (p. 469, emphasis in original). For many years, through the documentation of the behavioral difficulties of early adolescent boys with externalizing behavior problems, we know a great deal about what early adolescents with externalizing behavior problems do (Ashbaker & Roberts, 1994; Braaten & Wrobel, 1991; Compas et al., 1991; Dice, 1993; Gabel & Shindledecker, 1991; Hinshaw, 1992a, 1992b; Kauffman, 1989, 1991; Mattison, Humphrey, Kales, & Wallace, 1986; Ninness et al., 1993). However, we know very little about what they believe with respect to (a) aspects of self-perceived personal control in the academic, social, and general domains and (b) self-perceived aspects parental bonding. As La Greca (1990) pointed out, although researchers have focused on and collected a wealth of self-report information from youth with internalizing disorders (e.g., depression),

much less attention has been accorded to obtaining self-reports from children with externalizing types of problems, such as inattention, hyperactivity, and aggressive behavior, yet the need for systematic input from these youngsters may be critical as well. (La Greca, 1990, p. 10)

We also know a great deal about what the parents of youth with externalizing behavior problems do and do not do (e.g., Patterson, Reid, & Dishion, 1992), but less about (a) the perceived levels of satisfaction possessed by the parents of such youth with respect to perceived support from the current or ex-spouse, the parent-child relationship, and parent

performance or efficacy; and (b) early adolescents' self-reported perceptions of bonding to their parents. This study provides self-report information in all of these areas. Through the analysis and interpretation of these data on the control beliefs and parental perceptions of early adolescent boys with and without externalizing behavior disorders, we can, in one sense, "put on the glasses" of these students and view certain aspects of the world as they do, obtaining, in a small way, a snapshot of what they report perceiving (Amatea & Sherrard, 1995).

Recently, the Peacock Hill Working Group (1991) and Foley and Epstein (1992) underscored the need for such basic research with students exhibiting behavior problems. As Cullinan, Epstein, and Lloyd (1991) recently observed: "In theory and in practice, what is known about behavior disorders is far less than what is not known. To change this imbalance must be a major activity of our profession" (p. 155).

Utilizing a sample of early adolescents classified by the public schools as exhibiting primarily externalizing behavior problems (EBP; Utah State Board of Education, 1993) and their parents, and a sociodemographically congruent sample of early adolescents in regular education (RED) and their parents, the three primary objectives of this descriptive comparison study (Caudill & Hill, 1995; Harris, 1993) were to describe and to explicate:

1. The differences and commonalities in self-reported, control-related beliefs in the academic, social, and general domains between early

adolescent boys with externalizing behavioral problems (EBP) and early adolescent boys enrolled in regular education (RED).

2. The differences and commonalities in self-reported perceptions of parental bonding between early adolescent boys with externalizing behavioral problems (EBP) and early adolescent boys enrolled in regular education (RED).

3. The differences and commonalities in self-reported parent satisfaction between parents of early adolescent boys with externalizing behavioral problems (EBP) and parents of early adolescent boys enrolled in regular education (RED).

CHAPTER II

REVIEW OF THE LITERATURE

This chapter is structured in the following manner:

1. A discussion of conceptualizations of behavior disorders among youth is presented.
2. The psychiatric or clinical approach to the identification of externalizing behavior problems among youth is delineated, including descriptive overviews of the clinical conditions of attention deficit/hyperactivity disorder, conduct disorder, and oppositional defiant disorder.
3. The statistical-inductive approach to the identification of externalizing behavior problems among youth is reviewed.
4. A discussion is presented on youth with emotional disturbance and behavior disorders in the public schools.
5. The contributing and maintaining factors of externalizing behavior problems are reviewed in the contexts of child factors, family factors, and school factors.
6. Prevalence estimates of adolescents with behavior problems are then presented.
7. The characteristics of and prospects for youth with externalizing behavior problems are examined and a review of the findings of the recent National Longitudinal Transition Study of Special Education Students is

presented, with specific focus on youth with emotional disturbance and behavior disorders.

8. The preponderance of externalizing behavior problems among boys is discussed.

9. Based on the foregoing eight sections, a composite of characteristics of youth with externalizing behavior problems is constructed.

10. The rationale for seizing the early adolescent period as an intervention opportunity window for youth with externalizing behavior disorders is tendered.

11. A discussion of personal cognitions among youth who manifest behavior problems is presented.

12. Highlights from the psychological literature regarding personal perceptions of control and plausible linkages between personal control beliefs and behavioral problems among youth are reviewed.

13. Possible connections between youth-perceived attachment and bonding to parents and behavioral problems of youth are examined.

14. A discussion of parent satisfaction, the parent-child relationship, and their possible roles in the development and maintenance of externalizing behavioral problems is presented.

15. The building of a self-reported experiential worldview of early adolescents with externalizing behavior problems and their families is presented.

Conceptualizations of Behavior Disorders Among Youth

Bowe (1995) noted that conduct or behavior disorders among youth include a range of emotional conditions causing limitations in social or emotional development, particularly with respect to socially approved behavior. He observed:

One could say that the problem is one of undersocialization: The child has not internalized, or has not made habitual, the kinds of behaviors and attitudes that society tries to instill in all of us. Children with conduct disorders use aggression as a routine means of getting their way. Children who respond to authority figures by doing what they are told not to do, and refusing to do it when they are asked to do, may also be socially or emotionally delayed....Aggressive behavior in particular is more common among boys than among girls. (pp. 351-353)

Discussion of deviant modes of behavioral functioning, such as externalizing behavior problems (EBP) in youth, is impossible without reference to popular and professional language used to describe individuals and actions that conflict with an established social order. Our choice of terms reveals a great deal about how we construct and define the concept of deviant behavior and the underlying assumptions we make about youth or behavior under consideration (Leone, 1990). Typically, terms are used to reflect the contexts within which we observe or experience specific behaviors.

Clinicians or therapists use a wide range of terms to describe youths who exhibit deviant behavior. Labels range from general terms such as client and substance abuser to terms based on clinical nomenclature, such as the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-

IV; American Psychiatric Association, 1994), that label particular clusters of behavior with terms such as overanxious disorder or oppositional defiant disorder. Likewise, educators, for instance, employ terms such as truant, dropout, and disruptive to characterize patterns of behavior that interfere with or are at variance with the functioning of the school (Franklin & Streeter, 1995). Special educators, in keeping with federal regulations and their state interpretations governing identification and provision of services to exceptional students, use terms such as "serious emotional disturbance" and "behavior disorder" to refer to troubling students from their perspective.

Youth who have behavior disorders are generally as heterogenous as those youth who do not have behavior disorders in many ways, but some characteristics discriminate between disordered and nondisordered individuals, such as extreme aggression, hyperactivity, and withdrawn or immature patterns of behavior (Hechinger, 1992; Institute of Medicine, 1989; Kazdin, 1987a, 1995a; Pont, 1995; Reiher, 1992; Slate & Saudargus, 1986). Although many youths may display some of these problems from time to time, youths with behavior disorders are more often and more extremely in conflict with others and more likely to show more extreme levels of personal distress (Cullinan, Epstein, & Dembinski, 1979; Cullinan, Epstein, & Kauffman, 1984a; Cullinan, Epstein, & Lloyd, 1983; Grieger & Richards, 1976; McCarthy & Paraskevopoulos, 1969; Moffitt, 1993a; Slate & Saudargus, 1986; Speer, 1971). To obtain a clearer understanding of how behavior problems

of youth are conceptualized, two perspectives of youth with behavior problems which dominate the literature are reviewed: the psychiatric or clinical perspective and the statistical-inductive perspective.

**The Psychiatric/Clinical Approach to the Identification
of Externalizing Behavior Problems
Among Youth**

Clinical classification systems of problem behaviors of youth are based mainly on two influences: (a) a medical/psychiatric perspective that, like physical disorders, behavior disorders are often caused by either body pathology (i.e., damage or dysfunctioning of the brain or some other body system) or "psychopathology"—disturbances of mental functioning that produce behavior disorders; and (b) ideas put forward in psychoanalysis and other psychodynamic theories of maladjustment.

Clinical classification approaches also rely on the observations and experiences of psychiatrists and other clinicians. These diverse influences are often combined by means of an elaborate committee process. Although clinical-deductive classification systems for emotional and behavior disorders of adults have been available since the late 1800s, childhood disorders have only recently received much attention. The latest revision of the American Psychiatric Association's (1994) Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) reflects much more attention to this issue.

A triad of externally directed behavioral difficulties in youth is outlined in the DSM-IV (American Psychiatric Association, 1994). This triad is comprised of: (a) Attention-Deficit/Hyperactivity Disorder (ADHD); (b) Conduct Disorder (CD), child-onset type and adolescent-onset type; and (c) Oppositional Defiant Disorder (ODD). The diagnostic features, subtypes (if any), associated descriptive features, and prevalence/sex differentiation of each of these DSM-IV disorders are outlined below briefly.

Attention Deficit/Hyperactivity Disorder (ADHD)

Diagnostic feature. The essential diagnostic feature of ADHD is a persistent pattern of inattention and hyperactivity-impulsivity that is more frequent and severe than is typically observed in youth at a comparable level of development (American Psychiatric Association, 1994; Barkley, 1990).

Subtypes and associated descriptive features. Although most youth have symptoms of both inattention and hyperactivity-impulsivity, some youth have one pattern or the other predominant. Associated features vary depending on age and developmental stage and may include low frustration tolerance, temper outbursts, bossiness, stubbornness, rejection by peers, and poor self-esteem (American Psychiatric Association, 1994; Campbell, 1990). Academic achievement often suffers (Campbell, 1990; Epstein, Kinder, & Bursuck, 1989; Hinshaw, 1992b; Mastropieri, Jenkins, & Scruggs, 1985; Moffitt, 1990; Scruggs & Mastropieri, 1986; Walker, Shinn, O'Neill, & Ramsey,

1987). Lack of engagement or sustained effort on academic tasks is often interpreted by teachers as indicating laziness, a poor sense of responsibility, and oppositional behavior (American Psychiatric Association, 1994; Campbell, 1990; Hirsh & Walker, 1983; Toth, 1990).

Prevalence. The prevalence of ADHD is estimated at 3%-6% in school-age-children (Barkley, 1990; DuPaul, Guevremont, & Barkley, 1991). ADHD is much more frequent in males than in females, with male-to-female ratios from 4:1 to 9:1, depending on the setting (i.e., general population or clinics; Barkley, 1990; Reeves, Werry, Elkind, & Zametkin, 1987).

Conduct Disorder

Diagnostic feature. The essential diagnostic feature of Conduct Disorder (CD) is a repetitive and persistent pattern of behavior in which the basic rights of others (e.g, fighting, stealing) or major age-appropriate societal norms or rules are violated (e.g., destruction of property by setting fires; Bornstein et al., 1987; Lahey et al., 1995; Loeber et al., 1995). In other words, the youth is not behaving as expected for his or her age, developmental level, and environment (Toth, 1990). In a recent longitudinal study of CD youth, Loeber et al. (1995) reported that, of all CD symptoms, "only physical aggression was significantly related to the onset of CD" (p. 507).

Subtypes. Two subtypes of CD are provided based on the age at onset of the disorder (American Psychiatric Association, 1994). The first subtype,

childhood-onset, is defined by the onset of at least one criterion characteristic of Conduct Disorder prior to 10 years of age. These individuals are usually male, frequently display physical aggression toward others, have disturbed peer relationships, and may have had oppositional defiant disorder (see below) during early childhood (Lahey et al., 1995; Loeber et al., 1995; Martin & Hoffman, 1990). The second subtype, adolescent-onset, is defined by the absence of any criteria characteristic of CD prior to 10 years of age. In contrast with youth with the childhood-onset subtype, the youth are less likely to display aggressive behaviors and tend to have more normal relationships with peers (although they often display conduct problems in the company of others). The ratio of males to females with CD is lower for the adolescent-onset subtype than for the childhood-onset subtype.

Associated descriptive features and prevalence. Youth with CD may have little empathy and little concern for the feelings, wishes, and well-being of others (Ellis, 1982; Rotenberg, 1974). Aggressive youth with CD may erroneously perceive the intentions of others as hostile, and respond justifiably, they feel, with aggression (Dodge, 1993a; Dodge, Price, Bachorowski, & Newman, 1990; Dodge & Somberg, 1987). These youth may be callous, lack appropriate feelings of guilt or remorse, and reason at lower levels of emotional maturity than nondisordered peers (Smetana, 1990; Toth, 1990). Self-esteem in these youth is usually low, although the person may project an image of toughness. Poor frustration tolerance, impulsivity,

irritability, temper outbursts, and recklessness are frequent associated features (Martin & Hoffman, 1990; Toth, 1990).

Prevalence estimates of CD vary widely. Costello (1989) reported a general population prevalence rate of 1.0% to 5.5%, with a median of 3.4%. Kazdin (1989b) cited figures of 4% to 10%, and Constantino (1992) stated that CD affects "anywhere from 3% to 7% of the general population" (p. 29). The American Psychiatric Association (1994) reported rates of 6% to 16% for males under age 18, and 2% to 6% for females. In any case, the American Psychiatric Association noted that CD is one of the most frequently diagnosed conditions in outpatient and inpatient mental health facilities for children. Also, Constantino (1992) reported that CD "is 2.5 to 4.0 times more common in boys than in girls for reasons that are as yet not entirely clear" (p. 30).

Oppositional Defiant Disorder (ODD)

Diagnostic features. Oppositional Defiant Disorder (ODD) is characterized by a pattern of defiant, negativistic, and noncompliant (disobedient, hostile) behavior that is characterized by the frequent occurrence of at least four of the following behaviors: losing temper, arguing with adults, actively defying or refusing to comply with the requests or rules of adults, deliberately doing things that will annoy other people, blaming others for his or her own mistakes or misbehavior, being touchy or easily annoyed by others, being angry and resentful, or being spiteful or vindictive (American Psychiatric Association, 1994; Blau, 1996).

Associated descriptive features and prevalence. Associated features and disorders vary as a function of the individual's age and the severity of the ODD. In males, the disorder has been shown to be more prevalent among those who, in the preschool years, have problematic temperaments (e.g., high reactivity, difficulty being soothed) or high motor activity. During the school years, there may be low self-esteem, mood lability, low frustration tolerance, swearing, the precocious use of alcohol, tobacco, or illicit drugs. There are often conflicts with parents, teachers, and peers (American Psychiatric Association, 1994). Other research has indicated that some boys become oppositional during middle adolescence (Cohen, Cohen, & Brook, 1993).

Oppositional behavior is contrasted to conduct-disordered behaviors in that symptomatology associated with ODD typically does not violate the rights of others (Blau, 1996). However, some individuals receive dual diagnoses of CD and ADHD and ODD (Blau, 1996; McConaughy & Ritter, 1995; Short & Brokaw, 1994). In fact, 65% of children diagnosed as ADHD are likely to exhibit symptoms of ODD as sufficient levels to receive a comorbid diagnosis (Barkley, Fischer, Edelbrock, & Smallish, 1990).

Although prevalence estimates for ODD are difficult to construct, Costello (1989) stated that the prevalence of ODD is between 5.0% and 10.0%, with a median of 6.6%. The American Psychiatric Association (1994) reported that rates of ODD from 2% to 16% have been reported, depending on the nature of the population sample and methods of data collection.

**The Statistical-Inductive Approach to
the Identification of Externalizing
Behavior Problems Among Youth**

Statistical-inductive approaches begin by measuring the behavior and occasionally other characteristics of many youth to determine which characteristics covary or cluster together in groups of attributes. Subjective judgment is involved in selecting the samples and attributes to be analyzed, the analytic methods, and the mathematical criteria. Once these choices are made, however, multivariate analyses assess the covariation among attributes in a reliable way. In addition to detecting covariation among behavioral attributes, multivariate methods can also be used to construct typologies of individuals (Achenbach, 1985, 1993).

Two of the statistical-inductive classification systems for behavior disorders in youth are Herbert Quay's system, based largely on the Behavior Problem Checklist (BPC; Quay, 1977, 1979, 1986, 1987; Quay & Peterson, 1987), Thomas Achenbach's system, based largely on the Child Behavior Checklist (CBCL; Achenbach, 1978, 1985, 1993; Achenbach & Edelbrock, 1978, 1981, 1983; Achenbach & McConaughy, 1987), and the system developed by Achenbach and his colleagues (Achenbach, Howell, Quay, & Conners, 1991), the Achenbach-Conners-Quay Behavior Checklist (ACQ-BC).

Quay's system views "conduct disorder" and "personality problem" as fundamental dimensions of problem behavior, in part, because these factors

are identified regardless of whether behavior-disordered or nondisordered youth are studied (Quay, 1979, 1987). This view is compatible with the idea that youth with behavior disorders differ from nondisordered children in that they exhibit the same problems but to an extreme extent (Cullinan et al., 1979; Cullinan et al., 1984a).

Achenbach's system and instrumentation has several advantages, including (a) the assessment of specific symptom domains (e.g., aggression and depression), (b) broad types of dysfunction (internalizing vs. externalizing disorders), and (c) prosocial or adaptive behavior (e.g., participation in social activities and peer interaction). Another advantage of Achenbach's framework and instrumentation is that developmental base rates and behavioral patterns are considered in evaluating individual youth (Kazdin, 1989a). The ACQ-BC (Achenbach et al., 1991) includes: 23 competence items; three competence scales; 216 problem items; eight syndrome scales; and internalizing, externalizing, total competence, and problem scores. The authors reported that most scales and items discriminated substantially between referred and nonreferred samples of children and adolescents (Achenbach et al., 1991). For the past 15 years, statistical-inductive and empirically based measures, such as the BPC, CBCL, and ACQ-BC, as components of multimethod approaches to assessment of SED, have been increasingly recommended and utilized for assessing the behavioral and emotional problems of children and adolescents (McConaughy et al., 1994).

**Youth with Emotional Disturbances and Behavior
Disorders in the Public Schools**

The youth served in special education as emotionally or behaviorally disordered are a heterogeneous group (Kazdin, 1987a, 1995a, 1995b; Leone et al., 1986; Moffitt, 1993a; Pont, 1995; Reihner, 1992). Some youth manifest serious disturbances, either alone or concomitantly with other developmental or neurological impairments (Pennington & Bennetto, 1993). Other youth are those who disrupt classrooms, are frequently off task, and make a teacher's life, and sometimes that of peers as well, difficult (Hirsh & Walker, 1983; Hocutt, 1996; Knitzer et al., 1990; Mullin & Wood, 1986; Safran & Safran, 1987; Walker et al., 1995). Many terms are used to describe them, including seriously emotionally disturbed (SED), the term used in federal legislation for special education (U.S. Department of Education, 1994), behaviorally disordered (BD), emotionally disturbed (ED), or emotionally handicapped (EH). Mattison et al. (1993) have noted that "the spectrum and diagnostic complexity (comorbidity) of SED students' conditions can prove very challenging to SED teachers" (p. 1227).

Federal Regulatory Definition

As indicated previously, seriously emotionally disturbed (SED) was defined under the Education of the Handicapped Act (EHA; U.S. Office of Education, 1977) and continues to have the same definition under its

Congressional reauthorization, the Individuals with Disabilities Education Act (IDEA; U.S. Department of Education, 1991), as follows:

- (i) The term means a condition exhibiting one or more of the following characteristics over a long period of time and to a marked degree that adversely affects educational performance:
 - (a) an inability to learn which cannot be explained by intellectual, sensory, or health factors;
 - (b) an inability to build or maintain satisfactory interpersonal relationships with peers and teachers;
 - (c) inappropriate types of behavior or feelings under normal circumstances;
 - (d) a general pervasive mood of unhappiness or depression; or
 - (e) a tendency to develop physical symptoms or fears associated with personal or school problems.
- (ii) The term includes children who are schizophrenic. The term does not include children who are socially maladjusted, unless it is determined that they have a serious emotional disturbance (U.S. Office of Education, 1977, p. 42478).

For a child to meet the criteria for SED according to the above definition, he or she must exhibit one or more of the five characteristics ([a] through [e] above) or have a diagnosis of schizophrenia. In addition, all three of the qualifying conditions listed in paragraph (i) must apply to at least one of the five characteristics: "That is, the characteristic(s) must exist over a long period of time, to a marked degree, and must adversely affect educational performance" (McConaughy & Ritter, 1995, p. 868, emphasis in original). However, as Bower (1988) has stated:

Unfortunately, conduct [behavior] disorders come in all shapes and sizes. Ecologically speaking, conduct is only disordered if it does not fit the setting. It is conceivable that a child may be a problem in school and not at home or vice versa. It is also possible for a child or adolescent to have clinical signs of severe emotional problems without exhibiting one of the five characteristics. (p. 303)

In any case, youth who are most easily identified as in need of assistance by the public school system are those relatively few who are basically out of touch with reality, or whose behavioral problems are rooted in neurological impairments (Forness & Knitzer, 1992; Knitzer et al., 1990; Moffitt, 1993b; Ninness et al., 1993; Pennington & Bennetto, 1993; Wolf, Braukmann, & Ramp, 1987). However, the vast majority of youth with behavior problems do not fall into this category. Rather, they are youth who do poorly in school, who cannot get along with peers, who are rude and disrespectful to teachers, who evidence a lack of motivation, who frequently do not pay attention in academic settings, and who, stated succinctly, find school extremely aversive (DeBaryshe et al., 1993; Forness & Knitzer, 1992; Gunter, Denny, Jack, Shores, & Nelson, 1993; Institute of Medicine, 1989; Knitzer et al., 1990; Parker & Asher, 1987; Shores, Gunter, Denny, & Jack, 1993; Short & Brokaw, 1994).

Walker et al. (1995) have observed the following:

As a rule, antisocial students make relatively poor adjustments to the demands of schooling and instructional environments that are controlled by teachers. They can put extreme pressures on the management and instructional skills of classroom teachers and often disrupt the instructional processes for other students. (p. 13)

In a study of early adolescents (13-year-olds) conducted by Stanger and Lewis (1993), the researchers found that teacher ratings of externalizing behavior problems were the best predictor of referral for mental health services.

From a family research project on treatment of Conduct Disorder and Oppositional Defiant Disorder, Horne and Sayger (1990) provided an assortment of youth behaviors that they label disruptive/aggressive: out of seat often; disruptive noises; does not listen; hits, kicks, shoves; takes something from another child; defies teacher; throws an object at someone; refuses to share; curses; speaks out of turn; interrupts; giggles in a silly way; cries over small matters; argues in an angry way; repeatedly asks the same question; makes fun of another; forces someone to do something they do not want to do; and destroys property.

These are the youth who trigger frustration, anger or helplessness in their teachers and at times exhibit either great rage, great sadness, great anxiety, or all three (Forness & Knitzer, 1992; Ninness et al., 1993). In response to the query, "Who are they?" with respect to youth with externalizing behavior disorders, veteran special educator Eleanor Guetzloe responded:

They are the children who are most difficult to manage in the classroom. Aply described as aggressive, violent, mouthy, impulsive, disruptive, alienated, threatening, destructive, antisocial, and dangerous, they are the rule-breakers and authority-defiers. They are the bane of the existence of parents, teachers, school administrators, and mental health professionals. They are often labeled as "socially maladjusted" or diagnosed as having conduct disorders, and they are historically and currently in danger of being excluded from school programs. (Guetzloe, 1991, p. 74)

Dishion (1990) observed that the antisocial behavior of these youth "produces child conflict and causes personal distress to the youngster, his or her intimates, and society in general" (p. 128).

Definitional Controversies

Weinberg (1992) recently noted, "There is an ongoing, sometimes emotionally charged, debate in the field of special education over which students are socially maladjusted and which students are truly seriously emotionally disturbed (SED)" (p. 99, emphasis in original). The exclusion of youth who are "socially maladjusted" from the classification of SED continues to meet with opposition from many special education professionals (McConaughy & Skiba, 1993; Short & Shapiro, 1993; Skiba & Grizzle, 1991, 1992; Wood, 1990). Because many investigators (e.g., Epstein et al., 1985; Forness, 1991; Knitzer et al., 1990; Mattison & Gamble, 1992; Mattison et al., 1991, 1992, 1993; Stephens, Lakin, Brauen, & O'Reilly, 1990) have found high prevalence rates of disruptive, externalizing behavior disorders among youth classified as SED (U.S. Department of Education, 1994), McConaughy et al. (1994) asserted that such findings "argue against the exclusionary position regarding social maladjustment" (p. 94).

Although federal legislation regarding the education of students with disabilities for the past 20 years has required that a differentiation be made between the socially maladjusted student and the SED student (U.S. Department of Education, 1989, 1994), there is no guidance in the law "as to

what constitutes social maladjustment and how it differs from being seriously emotionally disturbed" (Weinberg, 1992, p. 99). One view of social maladjustment that continues to pervade the literature is that students with social maladjustment choose their maladjusted behaviors or emotions while students with SED have no control over their disturbed behaviors or emotions (e.g., Kelly, 1992). Some professionals oppose this position, throwing up their hands and questioning "whether there can be an adequate distinction made between serious emotional disturbance and social maladjustment" (Weinberg, 1992, p. 105), or proffering that social maladjustment for the purpose of special education "be interpreted to mean socialized aggression (socialized delinquency) but not unsocialized aggression" (Center, 1990, p. 147), following the differentiation made between these two categories by Achenbach (1985, 1990) and Quay (1986, 1987). Finally, it is important to note that the clinical diagnosis of Conduct Disorder (American Psychiatric Association, 1980, 1987, 1994) "is not a formal classification associated with either regular or special education" (Short & Shapiro, 1993, p. 368).

Some professionals, by stating that externalizing behavior disorders, particularly conduct disorders, constitute social maladjustment, argue for linking conduct disorders and social maladjustment and excluding students so identified from classification as SED or behavior disordered (Benson, Edwards, White, & Rosell, 1986; Cheney & Sampson, 1990; Kelly, 1992; Slenkovich, 1992a, 1992b). Again, the position held by this group of

professionals is contested by others (Forness, 1991; Pullis, 1991; McConaughy & Skiba, 1993; Skiba & Grizzle, 1991, 1992; Weinberg, 1992), and the debate still rages (McConaughy & Ritter, 1995). Short and Shapiro (1993) observed that, given the national scope and magnitude of externalizing behavior problems among today's youth and the societal costs of such problems, arguments regarding inclusion/exclusion of students who are socially maladjusted and exhibit disorders of conduct "may obscure the importance of providing services to this population" (p. 369).

A Proposal for a New Definition

As indicated above, professionals and advocacy groups have criticized the definition of SED outlined in federal legislation (U.S. Department of Education, 1994) as being overly restrictive and not supported by legal precedent or educational and clinical research (Forness, 1991; Forness & Knitzer, 1992; Skiba & Grizzle, 1992). Accordingly, the U.S. Department of Education (1993b) in response to a proposition by the National Mental Health and Special Education Coalition (Forness, 1988, 1989, 1991; Forness & Knitzer, 1992; McConaughy & Ritter, 1995; Sweeney, 1993) has proposed the following new definition of SED recently as a substitute for the current federal definition contained in the IDEA:

- (1) The term "serious emotional disturbance" [or consideration of an alternate term such as "emotional or behavioral disorder" (Dice, 1993, p. 6; McConaughy & Ritter, 1995, p. 868)] means a disability characterized by behavioral or emotional responses in school programs so different from appropriate age, culture, or

ethnic norms that they adversely affect educational performance, including academic, social, vocational, or personal skills; more than a temporary, expected response to stressful events in the environment; consistently exhibited in two different settings, at least one of which is school-related; and unresponsive to direct intervention applied in general education, or the condition of a child is such that general education interventions would be insufficient. The term includes such a disability that co-exists with other disabilities. The term includes a schizophrenic disorder, affective disorder, anxiety disorder, or other sustained disorder of conduct or adjustment, affecting a child, if the disorder affects educational performance as described in paragraph (1). (2) The term "seriously emotionally disturbed" means, with respect to a child, that the child has a serious emotional disturbance. (U.S. Department of Education, 1993, p. 7938)

Contributing and Maintaining Factors of Externalizing Behavior Problems

Recently, Gibbs et al. (1996), in an explication of a new psychoeducational treatment model for antisocial youth, the EQUIP Model (Gibbs, Potter, & Goldstein, 1995), made the following observations:

Throughout the second half of the twentieth century, professionals in work with troubled children and youth have encountered a cacophony of competing theories and methodology....Therapists debated whether the dynamics of the individual or the group were most important. Psychologists divided into camps advocating behavioral, affective, or cognitive interventions. Fortunately, as this field matures, there is growing recognition by both scholars and practitioners that no single method is powerful enough to meet the diverse needs of troubled and troubling youth. Researchers from various traditions all face a similar challenge: there is a lack of "goodness of fit" between tidy theories and the messy world of practice. (p. 24)

As such, many researchers and clinicians have asserted that multiple factors (e.g., child, parent, family, and school-related factors) contribute, to varying

degrees and in various ways, to the development and maintenance of child and adolescent behavior problems or disorders (Bernes, 1993; Bower, 1988; Dadds, 1995; Fergusson & Horwood, 1995; Fergusson et al., 1994; Frick, 1993; Glaser et al., 1992; Hinshaw, 1992a, 1992b; Kazdin, 1995a, 1995b; Loeber et al., 1995; Margolin, 1981; Masten, 1988; Offord & Boyle, 1988; Reed & Sollie, 1992; Simon & Johnston, 1987; Susman, 1993; Webster-Stratton & Herbert, 1994).

Simon and Johnston (1987) noted that problems of youth are always in relation to the immediate contexts and social systems of the child or adolescent. Contexts of youth include the family, school, peer group, and society, and these systems operate in relation to and interaction with one another in a circular fashion (Coie & Jacobs, 1993; Simon & Johnston, 1987). Consequently, in working with youth, particularly youth with emotional and behavioral problems,

the school cannot afford to ignore cultural or societal impact, the peer influences, and particularly, the effect of the family system upon the child (Textor, 1983). Shifting from a linear mode of thinking to a systemic or circular model of behavior disorder interventions has the opportunity for changing not only the behaviorally disordered student's misperceptions, but those of the home and school as well....A systemic approach to programming for the behaviorally disordered impacts on dysfunctional cycles of behavior and focuses attention on the need for shared change among students, their peers, their parents, and teachers. (Simon & Johnston, 1987, pp. 89-90)

Adelman (1995) recently observed that any student can be viewed as bringing to a situation capacities and attitudes accumulated over time as well

as current states of being and behaving. These "person" variables transact with each other and with the student's environments. Concomitantly, the situation in which the student is expected to function consists not only of instructional processes and content, but also the physical and social context in which didactic interchange occurs.

Adelman (1995) noted that, at any given time, adults who note a student's outcomes (with respect to change in the student) may judge the outcomes as positive, negative, or some combination of both: (a) desired functioning (with possible changes and extension of capacities and attitudes in "approved" ways; (b) deviant functioning (with possible changes and expansion of capacities and attitudes but not in "approved" ways); (c) disrupted functioning (interference with ability to function, including distorted attitudes and possibly a decrease in capacities); and (d) delayed and arrested functioning (with little change in capacities and, perhaps, in attitudes) (Adelman, 1995). He asserted that

any specific outcome (e.g., deviant functioning) may primarily reflect the contribution of personal variables, environmental variables, or both. Similarly, subsequent changes in functioning (e.g., amelioration of problems) may require interventions that focus primarily on person, environment, or both. (p. 30, emphasis in original)

Kazdin (1995a) recently made the following observation regarding conduct disorders in youth:

Conduct disorder can be conceived as a dysfunction of children and adolescents. The accumulated evidence regarding the symptom constellation, risk factors, and course over childhood,

adolescence, and adulthood attests to the heuristic value of focusing on individual children. At the same time, there is a child-parent-family-context gestalt that includes multiple and reciprocal influences that affect each participant (i.e., child and parent) and the systems in which they operate (i.e., family, school). The gestalt poses challenges for developing models of dysfunction as well as for identifying effective treatments. (p. 18, emphasis in original)

Thus, it is important to review some of the factors that contribute to this "gestalt" briefly, because of their ecumenical implications for understanding externalizing behavior problems (EBP) in youth and designing interventions (Coie & Jacobs, 1993; Franklin & Streeter, 1995; Grizenko & Pawliuk, 1994; Hinshaw, 1992b; Stice & Barrera, 1995).

Child Factors

Cognitive deficits. Kazdin (1995a) stated that academic deficits and lower levels of intellectual functioning are correlated with conduct disorder, and that this relationship "has been demonstrated with diverse measures of intellectual and school performance (e.g., verbal and nonverbal intelligence tests, grades, achievement tests) and measures of conduct disorder" (p. 53). He also noted that, although academic and intellectual functioning are related to other variables such as SES and family size, "even when these variables are controlled, educational and intellectual functioning serve as predictors of conduct disorder" (Kazdin, 1995a, p. 53).

Recently, Constantino (1992) made the following assertion: Conduct disorder has also been associated with slightly below-average intelligence quotient (IQ) in a number of studies, but this association seems linked to other risk factors and is not well

understood....[T]here is now a wealth of evidence that correlates socioenvironmental risk factors with intellectual impairment. (p. 31)

In a recent national sample, Cullinan, Epstein, and Sabornie (1992) found that the average intellectual ability of adolescents (ages 12-17) with serious emotional disturbance and behavior disorders, as assessed predominantly by the Wechsler Intelligence Scale for Children-Revised (WISC-R; Wechsler, 1974), was in the low average range [\bar{I} score = 45], with males, on average, having "higher IQ [intelligence quotient] scores than the females [\bar{I} score = 46]" (Cullinan et al., 1992). In a recent study that included fifty-seven 6- to 12-year-old children with identified emotional and behavioral disorders (EBD), McConaughy and Achenbach (1996) reported IQ scores in the average range for these children (mean \bar{I} score = 49).

With respect to the academic and intellectual deficiencies of troubled youth, such as students with externalizing behavior disorders, Cambone (1995) noted:

The oft-cited studies on the intellectual, academic, and psychosocial functioning of behaviorally disordered children also found that they perform in the low-average range....Although it is undeniable that troubled students, taken together, fail in public schools, it is a mistake to conclude that academic failure is due to their intellectual deficiencies. Even if one accepts the use of IQ tests as true indicators of intellectual capacity....these students are not deficient --- they are low-average. And if IQ is a good indicator of school success, then these students ought to be doing low-average work and achieving at it. They are not....Clearly, other factors are at work beyond student intelligence or lack thereof. (p. 13)

Moffitt (1990), in a longitudinal analysis of a birth cohort of 435 boys classified at age 13 on the basis of both self-reported delinquent behavior and diagnoses of attention deficit disorder, found that boys who exhibited exclusively delinquent behavior demonstrated no early risk from family adversity, low intellectual ability, or reading deficits until they initiated delinquency at age 13. Finally, Feehan et al. (1995) observed that, although cognitive impairment has been associated with aggressive behavior and conduct disorder and although IQ has been implicated as a predictor of delinquency (Bachman, Johnston, & O'Malley, 1978; Dishion, Loeber, Stouthamer-Loeber, & Patterson, 1984; Farrington, 1991; Henggeler, 1989; Loeber, 1990; Moffit, 1993a; Wolf et al., 1987), "the strength of the relationship between cognitive impairment and the development of disorder (particularly affective disorder) remains unclear" (p. 671).

Deficiencies in social skills and social problem-solving skills. Walker et al. (1995) have observed that, in general, the behavior of students with EBP deviates too far from expected normative levels to be considered appropriate or acceptable by either peers or teachers. They have asserted:

Teacher ratings of antisocial students' social skills are highly predictive of a host of future adjustment problems....We find in our longitudinal research that year after year, regular teachers rate our antisocial students as very deficient in their social skills, particularly those skills that support a successful classroom adjustment (for example, cooperates with others, is personally organized, listens carefully to instructions, and so forth). (Walker et al., 1995, p. 13, emphasis in original)

Milich and Dodge (1984) have suggested that youth with EBP or conduct disorders distort social cues during interactions with peers. Such distortions include attribution of hostile intent to neutral social encounters. Asarnow and Callan (1985), Gibbs et al. (1995), Lochman and Dodge (1994), Pont (1995), Richard and Dodge (1982), and Slaby and Guerra (1988) have provided information that highlights the possibility that deficits in social problem-solving skills contribute to poor peer and adult interactions. Children with such deficits may define problems in hostile ways, seek less information, generate fewer alternative solutions to problems, and anticipate fewer consequences for aggressive acts. However, from this body of research it is "unclear whether aggressive children's processing of social information is a result of negative experiences with parents, teachers or peers, or is defective a priori" (Webster-Stratton & Herbert, 1994, pp. 15-16).

Temperament/neurological difficulties. In addition to cognitive distortions and social skills deficits, proponents of the "child deficit" hypothesis argue that some abnormal aspect of the child's internal organization at the physiological, neurological, and neuropsychological level is at least partially responsible for the development of externalizing behavior problems (Moffitt, 1993a, 1993b; Pennington & Bennetto, 1993). Temperament refers to aspects of the personality that show consistency across time and situations and are identified as constitutional in nature (e.g.,

the child's activity level, emotional responsiveness, quality of mood, social adaptability; Thomas & Chess, 1977).

Kazdin (1995a) noted that the basis for these characteristics is considered to be genetic or part of the child's constitution, "a view attributed in part to the fact that differences can be identified among children very early in life" (p. 51). One dimension of temperament used to differentiate children is "easy" (e.g., positive mood, low reactivity to novel stimuli) to "difficult" (e.g., negative mood, high reactivity to change) (Plomin, 1983).

Temperament has been one of the most researched factors with respect to EBP (Bates, 1990; Bates, Bayles, Bennett, Ridge, & Brown, 1991; Caspi, Henry, McGee, Moffitt, & Silva, 1995; Maziade, Cote, Bernier, Boutin, & Thivierge, 1989; Reitsma-Street, Offord, & Finch, 1985). In general, the research findings support the almost 20-year-old assertion of Thomas and Chess (1977) that "no temperamental pattern confers an immunity to behavior disorders, nor is it fated to create psychopathology" (p. 4).

Likewise, neurological abnormalities (e.g., deficits in cognitive processes, language and speech, motor coordination, impulsivity) have been shown to be positively correlated to varying degrees with conduct disorders (Caspi et al., 1995; Gorensten & Newman, 1980; Moffitt, 1993a, 1993b; Pennington & Bennetto, 1993; Schmidt, Solanto, & Bridger, 1985) and general behavioral maladaptation (Levine, 1988). Several years ago, Kazdin (1987b) noted that such associations may exist more generally with childhood

dysfunction than with conduct disorders in particular. More recently, Kazdin (1995a), citing research by Moffitt (1993a, 1993b), stated that "early neuropsychological dysfunctions predict subsequent conduct disorder (e.g., in adolescence and adulthood" (p. 52). Pennington and Bennetto (1993) argued that early damage to or dysfunction in the frontal lobes of the brain may be a plausible main effect on externalizing behavior problems such as conduct disorder. The results of a recent longitudinal study by Caspi et al. (1995) suggest that early temperament may have predictive specificity to the development of later behavior problems, particularly behavioral difficulties of an externalizing nature in boys.

Academic deficits. Although there is a historical and extant disagreement among special educators about the extent of the problem of academic deficiencies in youth with EBP (Ruhl & Berlinghoff, 1992), academic underachievement has been noted in youth with EBP (Ruhl & Berlinghoff, 1992; Rutter, Tizard, Juul, Graham, & Whitmore, 1976; Schonfeld, Shaffer, O'Connor, & Portnoy, 1988; Sturge, 1982). Low academic achievement often manifests itself in youth with EBP, especially those youth with diagnosed Conduct Disorders (American Psychiatric Association, 1994), during the elementary grades, and continues throughout high school (Hinshaw, 1992a, 1992b; Hinshaw, Lahey, & Hart, 1993; Kazdin, 1987b; Loeber, 1990; Meltzer, Levine, Karniski, Palfrey, & Clarke, 1984). Cullinan et al. (1983) reported several prevalence estimates of students with EBP who possessed

concomitant academic difficulties (e.g., reading problems, arithmetic skill deficits, functional illiteracy) that ranged from 30% to 80%. Based on a review of the literature, Ruhl and Berlinghoff (1992) commented, "Most behaviorally disordered students do have academic difficulties" (p. 178).

In a retrospective study, Meltzer et al. (1984) found that 50% of delinquent adolescents demonstrated delays in all academic areas by junior high school, with 75% of them possessing substantial delay in reading ability. Webster-Stratton and Herbert (1994) observed that a complicating factor in the association between academic performance and externalizing behavior disorders is the fact that this relationship

is not merely unidirectional but is considered bidirectional; that is, it is unclear whether disruptive behavior problems precede or follow the academic difficulties, language delay, or neuropsychological deficits. (p. 16)

Jones (1987) asserted that students with emotional and behavioral problems "often believe they can obtain a sense of competence and power only through acting-out behavior" (p. 101), and that

compared to their peers, these young people frequently fail to understand the school environment and often find it difficult to see benefits associated with the self-restraint required to complete academic tasks. (p. 101)

Family Factors

Parent skills deficits. Two of the most researched realms in efforts to understand the development, maintenance, and progression of emotional and behavioral problems among youth are those of family functioning and parent-

child interactions (Early & Poertner, 1993; Glaser et al., 1992; Griest & Wells, 1983; Home & Sayger, 1990; Loeber et al., 1995; Prange et al., 1992; Reed & Sollie, 1992; Sayger et al., 1993; Webster-Stratton & Herbert, 1994).

Patterson (1982), Patterson and Stouthamer-Loeber (1984), and Webster-Stratton (1985, 1992, 1994) have reported that parents of EBP youth exhibit fewer positive behaviors, are more violent and critical in their use of discipline, are more permissive, erratic, and inconsistent, are more likely to fail to monitor their children's behaviors, and are more likely to reinforce inappropriate behaviors and to ignore or to punish prosocial behaviors.

Recent data from a longitudinal study of ODD and CD boys by Loeber et al. (1995) revealed that, in addition to boys' physical aggression, "several parenting factors were associated with CD onset, including boys' resistance to discipline, parents' inconsistent discipline, and poor supervision" (p. 507).

Inadequate parental attachment. Several theorists and researchers have proffered central etiological roles for youths' attachment relationships in the development of disruptive behavior disorders (Greenberg et al., 1993; Kagan, 1984; Marcus & Betzer, 1996; Richters & Waters, 1991). Waters, Posada, Crowell, and Lay (1993) asserted that one of the primary goals of research on externalizing behavior problems is to contribute to prevention and therapy. Thus, if for no other reasons than the foregoing, it would be useful and promising to incorporate attachment theory into the worldview of

researchers and clinicians in externalizing behavior problems. Waters et al.

(1993) also made the following observations:

Even if disruptive behavior problems are not traced etiologically to attachment problems, they inevitably disrupt the secure base relationship and the transition to collaborative models of parental supervision. Thus, it is useful and important to define therapeutic goals in terms of diminishing disruptive behavior and establishing or reestablishing a working secure base relationship between the child and its primary caregivers....Attachment theory also tells us what a child has to gain from a well-functioning secure base relationship and, thus, how and why a child would be motivated to change not only his behavior but his relationship to primary caregivers. (p. 223, emphasis in original)

An attachment generally refers to a close, enduring affectional bond or relationship between two persons (Ainsworth, 1989). Lopez and Gover (1993) noted that the presence of these bonds or relationships is presumed

to promote human development throughout the life span by providing recipients with emotional support and a sense of closeness and continuity....The nature of the parent-adolescent attachment is thus considered a primary context for understanding late adolescent development. (p. 560)

Further, from early through late adolescence, the parent-adolescent relationship in a well-functioning family presumably develops greater tolerance for the adolescent's expressions of autonomy and individuation (separateness) while it concurrently provides the adolescent with ongoing support and emotional validation (Cooper, Grotevant, & Condon, 1983; Grotevant & Cooper, 1985; Ryan & Lynch, 1989).

There is considerable evidence that a warm and positive bond between a parent and a child or adolescent leads to more positive communication and

parenting strategies, and that the existence of such a bond results in a child or adolescent who possesses greater social competence and positive psychological well-being (Adams et al., 1995; Armsden & Greenberg, 1987; Baumrind, 1971, 1989; Burke & Weir, 1979; Doane, 1978; Hirschi, 1969; Jacob, 1975; Mallinckrodt, 1992; McCormick & Kennedy, 1994; Raja et al., 1992; Rogosch & Cicchetti, 1994; Rohner, 1986; Rossi & Rossi, 1990; Sroufe & Fleeson, 1986; Steinberg & Elmen, 1986; Vuchinich et al., 1994). Burke and Weir (1979) and Armsden and Greenberg (1987) found that adolescents' attachment to their parents has a greater association with adolescents' psychological well-being relative to the contribution made by peer attachment.

Henggeler and his colleagues (Henggeler, 1982, 1989; Henggeler & Borduin, 1990; Mann et al., 1990) reported that parents of youth who exhibit antisocial behaviors, compared with parents of youth who do not manifest such problems, demonstrate less acceptance and support of, less warmth and affection toward, and less attachment (bonding) to their children. Marcus and Betzer (1996) asserted that the emotional quality of close relationships (e.g., attachment to parents) "should be included in a comprehensive model of contributions to antisocial behavior" (p. 245). Recently, Raja et al. (1992), in a large study of adolescents' perceived attachments to parents, reported:

An important relationship between mental health and attachment to parents was observed in this study. Generally, low perceived attachment to parents was associated with greater problems of conduct, inattention, depression, and the frequent experience of negative life events....The strongest effect of low parent attachment occurred for conduct and inattention problems. This

provides some support for the idea that too great an independence from parents may be associated with problems in developing self-reliance in early adolescence. As a result, adolescents may be more vulnerable to peer pressure especially in antisocial activity. (Raja et al., 1992, pp. 483-484)

Finally, Richters and Cicchetti (1993) noted that when a boy has a history of inadequate caregiving and insecure attachment relationships, his representational models of attachment figures and of himself in relation to others are likely to reflect his inadequate caregiving history. Thus, rather than approaching his environment and relationships in an unencumbered manner, the youth may perceive his environment and relationships so as to be consistent with negative experiences (Crittenden, 1990). Richters and Cicchetti (1993b) further observed that

these expectations are likely to affect adversely the ability to respond to potentially positive situations or to enter into adaptive relationships, resulting in the emergence of negative social interactions and behavior patterns (Cicchetti, 1991; Lynch & Cicchetti, 1991). (p. 14)

Parent interpersonal and interparental factors. Parent psychopathology places the child at considerable risk for EBP, especially Conduct Disorder. Specifically, depression in the mother has been shown to increase the child's risk for conduct disorders (Webster-Stratton & Hammond, 1988; Williams et al., 1990) as a result of the mother's greater restrictiveness and misperceptions of the child's behavior as inappropriate. With respect to fathers, criminal behavior and alcoholism in the father are consistently demonstrated as parental factors increasing the child's risk for externalizing

behavior problems (Frick, Lahey, Christ, Loeber, & Green, 1991; Loeber et al., 1995; Rutter & Giller, 1983; West & Prinz, 1987). However, as Kazdin (1995a) and Webster-Stratton and Herbert (1994) pointed out, in general, and as might be expected, the history and presence of aggressive or antisocial behavior in either parent or in a family places a child at greater risk for conduct disorders.

Specific family characteristics have been found to contribute to the development and maintenance of externalizing behavior problems in youth (Masten, 1988; Rae-Grant & Robson, 1988). Although Rae-Grant and Robson (1988) noted that parental separation or divorce is only a marker of the process of marital breakdown, interparental conflict leading to and surrounding divorce (Kazdin, 1987a; O'Leary & Emery, 1984; Rae-Grant & Robson, 1998) and stresses of single parenting (Forgatch, 1989; Rae-Grant & Robson, 1988) are often proffered as precipitators and maintainers of youths' externalizing behavior problems.

McCord (1993) has made the following pertinent observations:

For several decades, broken homes were blamed for juvenile misconduct. A correlation between rates of single-parent families and crime made the accusation plausible. Yet in studies with controls for social class, evidence fails to support the view that paternal absence causes crime....Rather, correlates of single-parent homes such as paternal alcoholism and criminality or lack of supervision and poor socialization practices within the home seem responsible for elevated rates of CD found among subsets of single-parent families....Furthermore, evidence from a longitudinal study suggests that misbehavior present after divorce typically has been present prior to divorce (Block, Block, & Gjerde, 1986). (p. 322)

Also, in a recent longitudinal study of factors associated with the onset of clinically diagnosed CD in 177 boys between the ages of 8 and 17 (boys who were between the ages of 7 and 12 at the time of their first clinical assessment), Loeber et al. (1995) found that "ethnicity, single parenthood, parent antisocial personality disorder, anxiety, and depression were not significantly associated with CD onset" (p. 507, emphasis in original).

Gable, Belsky, and Crnic (1992), Margolin (1981), and Sayger et al. (1993) have noted the reciprocal relationship between marital and child problems. Stoneman, Brody, and Burke (1988) observed that marital conflict is associated with more negative perceptions of the child's adjustment, inconsistent parenting, increased use of punishment and decreased use of reasoning, and fewer rewards for children. Jouriles, Murphy, and O'Leary (1989) demonstrated that if aggressive behavior is present in the marital relationship, the probability of externalizing behavior problems in the children in the family is greater than if marital conflict alone is present without overt (and, as a consequence, modeled) aggression.

In their review of research on marriage, parenting, and child development, Gable et al. (1992) stated that various types of discord in the marital relationship is associated with problematic child functioning from infancy through adolescence. They also noted that various measures of marital dissatisfaction have been linked to child internalizing and externalizing

behavior problems and weak child-parent attachment relationships (Gable et al., 1992).

However, looking in the other direction, Webster-Stratton and Herbert (1994) noted that the parenting problems of the parents of a child with an emotional or behavioral problem can stem from having to cope with a more difficult and unresponsive child. They observed that youth with EBP, particularly those with CD,

engage in higher rates of deviant behaviors and noncompliance with parental commands than do other children...exhibit fewer positive verbal and nonverbal behaviors (smiles, laughs, enthusiasm, praise) than do other children...exhibit more negative nonverbal gestures, expressions, and tones of voice in their interactions with both mothers and fathers...[and] have less positive affect, seem depressed, and are less reinforcing to their parents, thus setting in motion the cycle of aversive parent/child interactions. (Webster-Stratton & Herbert, 1994, p. 17)

Loeber et al. (1995), recently relating some of the findings of a longitudinal study of a groups of "non-CD" boys and a group of "CD onset" boys (between the ages of 8 and 17), stated that the parent-reported quality of the parents' marital relationship and the parent-reported quality of parent-child communication "were not statistically different at conventional levels [$p \leq .05$] for the two groups [non-CD and CD onset]" (p. 504).

Moffitt (1993a) has noted that a reasonable alternative hypothesis to parents' behaviors influencing the development of CD is that children's misbehavior creates the parental responses to which the misbehavior has been attributed mistakenly (e.g., Anderson, Lytton, & Romney, 1986; Bell,

1968; Bell & Harper, 1977; Eron, Huesmann, & Zelli, 1991; Magnusson, 1988). An experimental study by Anderson et al. (1986) provided support for this hypothesis. In this study, 6- to 11-year-old boys, half of whom were psychiatrically classified as CD and half of whom had no identified problems, interacted with their own and other mothers. Anderson et al. (1986) found that mothers of both CD and nonproblematic children tended to be more negative toward the CD children. The researchers reported that "CD children could also elicit greater punitiveness in their parents and even provoke marital discord" (Anderson et al., 1986, p. 608).

Lytton (1990a, 1990b) reviewed a substantial corpus of research evidence regarding parent and child influence on the development of CD in boys (e.g., interactions between unrelated mothers and children, reaction to punishment, longitudinal studies of delinquency) and concluded that evidence from this research (a) demonstrated "the primacy of the child's own contribution to CD within a reciprocal parent-child interactive system" (Lytton, 1990a, p. 683) and (b) corroborated the tenets of control systems theory (Bell & Harper, 1977). He further noted that "ten convergent lines of research, taken together, provide evidence that has persuaded me that the child's own tendencies are stronger contributions to CD than are parental influences" (Lytton, 1990b, p. 705).

Others, however, have disagreed with Lytton's (1990a) assertions. Dodge (1990), for example, stated that Lytton's perspectives and positions

regarding estimates of the relative strength of child versus environmental (parental) effects on the development of CD (a) "pit nature versus nurture in a way that detracts from an emphasis on the interaction of factors that characterizes most human behavioral development" (Dodge, 1990, p. 698), and (b) assume that child effects, environmental (parental) effects, and CD are homogeneous constructs rather than the more likely "aggregations of heterogeneous phenomena that have been grouped together only for heuristic reasons" (Dodge, 1990, p. 698). Finally, Wahler (1990), in his response to Lytton's (1990a) arguments, asserted, "The research literature does not yet permit conclusions on the directionality of parent-child effects in CD" (p. 702).

McCord (1993) observed:

In sum, studies of child-rearing seem to show that a child's difficult behavior influences parental behavior in the short term, though perhaps not in the long term, and that socialization practices have different effects on different types of children. Much remains to be learned about the interplay between childhood behavior and parental socialization practices. (p. 323)

In any case, it is fair to say that the parent-child relationship, like any social relationship, serves a special role in existence and is thought by many professionals to be integral to individual functioning (Henry, 1994; Horne & Sayger, 1990; Kazdin & Johnson, 1994; Paul, Porter, & Falk, 1993; Paulson & Hill, 1989; Robin & Foster, 1984; Sayger et al., 1993; Stice & Barrera, 1995; Vuchinich et al., 1994; Wierson & Forehand, 1992). Youniss and Smollar (1985) observed that youth need to know that "others understand

them and think as they do. The individual needs to feel transcendent beyond self, as belonging to something with others. This sense of cohesion is every bit as fundamental to the person as is individual identity" (p. 174).

Socioeconomic factors. Feehan et al. (1995), Hawkins, Catalano, and Miller (1992), and Kolvin, Miller, Fleeting, and Kolvin (1988) noted that poverty, poor housing, overcrowding, employment by fathers and mothers in unskilled or semiskilled occupations, unemployment, and receipt of public assistance monies are among the prominent and enduring indicators of socioeconomic disadvantage that increase the risk for development and maintenance of EBP. Feehan et al. (1995) found that, particularly for boys, low socioeconomic status (SES) and family economic disadvantage during early and middle childhood "have long-term effects on mental health" (p. 677). Recently, Loeber et al. (1995), in a longitudinal study mentioned previously of 177 boys with clinically diagnosed Conduct Disorder (CD), found that

CD developed in 70% of those boys from the lowest socioeconomic strata....The risk for the onset of CD appears to be heightened in oppositional boys with parents of low SES, who abuse substances. (pp. 507-508)

However, Kazdin (1995a) and Webster-Stratton and Herbert (1994) asserted that when these separate risk factors (e.g., poverty, poor housing, overcrowding, unemployment, receipt of public assistance monies) are controlled, "social disadvantage by itself does not always show a relation to conduct disorder" (Kazdin, 1995a, p. 58, emphasis added), and more than

likely there is "no link between social class and child conduct disorders" (Webster-Stratton & Herbert, 1994, p. 20).

Thus, Webster-Stratton and Herbert (1994) and others (e.g., Conduct Problems Prevention Research Group, 1992; Farmer, 1995; Feehan et al., 1995; Gibbs et al., 1996; Hawkins & Weiss, 1985; Patterson, 1986; Patterson, DeBaryshe, & Ramsey, 1989; Patterson et al., 1992; Reid, 1993) have argued for a cumulative model of factors which contribute to development, progression, and persistence of conduct disorders among youth, and, thus, which lead to inauspicious personal and societal outcomes. Gibbs et al. (1996) made the following observations:

Once antisocial behavior is established, the trajectory is difficult to change. Problems emerging in childhood often endure and escalate over the course of development. Not surprisingly, virtually all antisocial adults are products of troubled childhoods. In a typical progression, the stubborn preschooler becomes a rebellious schoolboy, then a delinquent adolescent, and ultimately a violent young offender. While the nature of offense may change, the antisocial trajectory continues. (p. 22)

School Factors

Peer-child and teacher-child interactions. Children who are aggressive and disruptive with peers quickly become rejected by their peers (Ladd, 1990), rejection which can last throughout their school career. Peers become mistrustful of aggressive children and respond in ways that exacerbate the probability of in-kind aggressive actions (Dodge & Somberg, 1987). As a result of their poor relations with peers and generally noncompliant and

disruptive behavior, youth with EBP develop poor relations with teachers and generally receive less support in the school environment (Campbell & Ewing, 1990).

School environment. Urie Bronfenbrenner (1979) highlighted the importance of interactions that children have within social microsystems (e.g., school, peer group, family), but also the connections between these social systems (Bernes, 1993; Bower, 1988; Cicchetti & Lynch, 1993; Eccles, Midgley, & Wigfield, 1993; Franklin & Streeter, 1995; Glaser et al., 1992; Hawkins & Weiss, 1985; Johnson, 1994; Steinberg, 1994; Young, Gable, & Hendrickson, 1989). Webster-Stratton and Herbert (1994) asserted:

The child's "bonding" to social institutions (both family and school) as well as the family's bonding to the child and school are believed to be critical features in prevention of deviant behavior....[Thus] an intervention model requires not only the development of appropriate social, cognitive, and behavioral skills in the child and parent, but in addition healthy bonds between parents and school, child and school, and parents and teachers. (p. 23).

More recently, Gibbs et al. (1996) observed that "students with serious conduct problems typically become locked in overt power struggles with adults, or they covertly try to sabotage adult influence" (p. 23). They went on to say that these students display negativism, hostility, and noncompliance with authority, and that 90% of the youth who qualify for the psychiatric diagnosis of Conduct Disorder also satisfy the clinical criteria for Oppositional Defiant Disorder (Hinshaw et al., 1993). Finally, Gibbs et al. (1996) asserted, "While psychiatrists call this 'co-morbidity' (the patient has double diseases),

a more parsimonious view is that these psychiatric labels are merely synonyms for describing antisocial youth who do not have positive bonds to adults and their institutions" (p. 23).

Peters (1990) noted that adolescents' mental health problems are linked to environmental factors in a more direct way than at any other age period (World Health Organization, 1977), and that these problems may be best understood as deviations from normal psychosocial development resulting from disrupted or chaotic experiences in the family, at school, or in peer relationships (Bower, 1988; Eccles et al., 1993; Franklin & Streeter, 1995; Hartup, 1989; McWhirter & McWhirter, 1993; Parker & Asher, 1987; Rogosch & Cicchetti, 1994; Rutter, 1985; Turner, 1991). For example, Rutter, Maughan, Mortimore, and Ouston (1979) and Rutter (1983) found that good secondary schools (i.e., schools that emphasize academic work, schools in which teachers use praise and communicate appreciation for school work, schools in which there is great availability of teachers to deal with students' problems, schools in which strong and secure relationships exist with adults) positively affect academic achievement and rates of truancy and drop-out.

Andrews, Soberman, and Dishion (1995), however, also pointed out that deviancy not only occurs in and affects the school environment, but it is also frequently nurtured in schools by the social interaction opportunities provided. They asserted that

most adolescent deviancy involves social interaction, with deviant teens associating primarily with one another (Dishion, Patterson,

& Griesler, 1994). Schools are a convenient meeting place and training ground for these deviant peer groups. (Andrews et al., 1995, p. 479)

Prevalence Estimates of Behavior Problems Among Adolescents

Prevalence refers to the number or percentage of individuals exhibiting a disorder at or during a given time. Although the scope and types of emotional/behavioral problems that youth experience are broad, accurate data are often difficult to obtain. A major obstacle is variance in operational definitions of child disturbance. For example, investigators conducting research studies in this area have used a variety of nonstandardized criteria and labels such as "emotionally disturbed," "clinically maladjusted," or "behaviorally disordered" to describe youth manifesting a wide variety of problems (Gould, Wunsch-Hitzig, & Dohrenwend, 1980).

Based on population surveys, conservative estimates of the percentage of students who manifest behavior problems and who need special education services ranges from 3% to 6% of the student population (Achenbach & Edelbrock, 1981; Cullinan et al., 1984a; Juul, 1986). More recently, even the most conservative estimates from current epidemiologic research suggest that 8% of all school-age children and youth may have emotional or behavioral disorders severe enough to require treatment (Brandenburg, Friedman, & Silver, 1990; Forness, Kavale, & Lopez, 1993). Recently, in a large-scale community survey, Offord, Boyle, and Racine (1990) found that 17.7% of

youth aged 12 through 16 met the Diagnostic and Statistical Manual of Mental Disorders, Third Edition (DSM-III; American Psychiatric Association, 1980) criteria for an externalizing behavior disorder (i.e., Conduct Disorder or Attention Deficit/Hyperactivity Disorder).

Bower (1981), using his own definition and data from ratings by teachers, peers, and the students themselves, estimated that about 10% of school-age youth had emotional disabilities. An important estimate of prevalence for educators is presented in a longitudinal study by Rubin and Balow (1978). Each year they asked teachers to report via questionnaire whether children in their study sample had evidenced behavior problems. The decision as to what constituted a problem was left to the individual teacher. Over half of the 1,586 children Rubin and Balow (1978) studied were at some time during their school years considered by at least one of their teachers to show a behavior problem. In any given year, about 20% to 30% of the children were considered to be a problem by at least one teacher. Most importantly, 7.4% of the children (11.3% of the boys and 3.5% of the girls) were considered a problem by every teacher who rated them over a period of three years.

Center and Obringer (1987), Center (1993b), Smith, 1985), and Wood (1985) have all reported that youth with emotional and behavioral disorders

are frequently not identified by the schools.² Regarding the issue of prevalence of youth with emotional and behavioral disorders (EBD) in the U.S., Nelson and Pearson (1991) observed:

Because of the federal mandate to provide special education and related services to EBD pupils, more data is [sic] available regarding the prevalence of such children in school...However, it is widely recognized that school-age children with EBD are among the most underidentified and underserved of all students with disabilities....The actual prevalence of EBD among children and youth is difficult to determine because agreement regarding definition is lacking, the measurement of socioemotional disturbances is difficult, and the cost and practical obstacles involved in conducting epidemiological research concerning children's mental health are great (Stroul & Friedman, 1986). (Nelson & Pearson, 1991, p. vi)

Recently, Dickson (1996) noted that the underidentification of students with behavior disorders "is guided by two implicit assumptions: a. programming for BD students is very expensive; b. programming for BD is likely to be ineffective" (p. 42).

Based on recent data for early to middle adolescents from the Sixteenth Annual Report to Congress on the Implementation of IDEA (U.S. Department of Education, 1994), 12.2% of the special education population ages 12 through 17 years old in the 50 states, Washington, DC, and Puerto Rico (242,387 out of 1,987,242 students) were classified as "seriously emotionally

²The label seriously emotionally disturbed (SED) was adopted in Public Law 94-142 definition of this population (Education of the Handicapped Act, 1977). Individual states may adopt an alternate label, as long as the label and accompanying definition identify a similar population of students. The state of Utah, for example, has chosen the designation of behavior disorder (BD; Utah State Board of Education, 1993).

disturbed" (SED) and were served under IDEA (Part B) or Chapter 1 of ESEA.

In contrast, based on data from the same Report, the percentage of 12- through 17-year-olds classified as SED and served in Utah schools was 18.6% (3,391 out of 18,203 students), 33% higher than the national percentage. Indeed, perhaps Utah public schools are doing a better than average job of identifying adolescents with BD or SED, because several researchers (Dickson, 1996; Forness, 1989, 1991; Forness & Kavale, 1989; Kauffman, 1988; Smith, Wood, & Grimes, 1988; Walker & Fabré, 1987) have asserted that youth with BD or SED who are in need of intervention services remain significantly underidentified, and hence underserved, in our nation's public schools, with recent estimates of the prevalence of BD or SED in the school-age population as high as 22% (Guetzloe, 1993).

Characteristics of and Prospects for Youth Who Manifest Externalizing Behavior Problems

Studies of the characteristics of students now in programs for externalizing behavioral problems (EBP) demonstrate that these students possess serious academic and social difficulties that are not likely to be overcome without intervention (Cullinan et al., 1984a, 1984b; DeBaryshe et al., 1993; Kauffman, 1991; Kauffman, Cullinan, & Epstein, 1987). Walker et al. (1987) have delineated typical characteristics of early adolescent youth

with EBP: academic deficiencies reflected in low measured achievement, poor grades, and basic skill deficits; little interest in school; careless work; lack of enthusiasm toward academic pursuits; truancy; fighting; theft; temper tantrums; destroying property; and defying or threatening others. Although variables such as poor academic achievement have been shown consistently to relate to externalizing behavior disorders and delinquency, causal relationships remain unclear (Forehand, Long, Brody, & Fauber, 1986; Hinshaw, 1992a, 1992b; Loeber et al., 1995; Mastropieri et al., 1985; Tremblay et al., 1992).

Educators who work in both regular and special education have attested to the fact that early adolescents with EBP severely test the educational capacities of the schools and the clinical and social service capabilities of the community agencies that are obligated to serve them (Brendtro & Ness, 1995; Duchnowski & Friedman, 1990). Yet, we must endeavor to provide them and their families with appropriate services. If we do not, the consequences for youth with EBP appear to be dismal (Knitzer et al., 1990; Nelson & Pearson, 1991; Wagner, 1995). For example, in a national survey, only approximately half (49.7%) of parents of secondary school youth with EBP reported that their child possessed independent functional abilities, such as looking up a telephone number and using the phone, telling time on an analog clock, reading common signs, and counting change (Wagner, Newman, & Shaver, 1989).

The National Longitudinal Transition Study
(NTLS) of Special Education Students

Students with serious emotional disturbance (SED) or externalizing behavioral problems (EBP) frequently experience sundry and pervasive negative outcomes that are associated with high personal and social costs (Andrews et al., 1995; Brendtro & Ness, 1995; Knitzer et al., 1990; Knitzer, Steinberg, & Fleisch, 1991; Masten et al., 1995; Wagner, 1995). Andrews et al. (1995) recently observed that

disruptive and deviant behaviors displayed in school are costly to students, parents, society, and the schools themselves. Behavior problems in school are also highly correlated with decreased academic performance and eventual school dropout. (pp. 478-479).

Masten et al. (1995) made the following observations from their longitudinal study of 191 children and adolescents:

Conduct problems become increasingly incompatible with academic attainment in adolescence....[In our study], conduct showed striking stability over time, consistent with the literature demonstrating the stability of antisocial behavior by late childhood (Loeber, 1982; Olweus, 1979). Though the repertoire of antisocial behavior undoubtedly changes with age, there is a remarkable degree of continuity in the tendency to break the rules governing behavior in society. Moreover, if such behavior continues, it appears to undermine academic attainment and job competence as well. (p. 1654)

The personal employment and economic effects of deviance such as externalizing behavior disorders during adolescence were studied by Anderson, Mitchell, and Butler (1993). They analyzed data from the NIMH Epidemiological Catchment Area Program to ascertain the effects of deviance

during adolescence on educational attainment and employment. The researchers concluded:

Our results indicate that deviance during adolescence has significant effects on future labor market outcomes. We find that adolescent deviance has significant detrimental effects on schooling...[I]ndividuals who displayed antisocial behaviors as adolescents are more likely to be unemployed. (Anderson et al., 1993, p. 353)

The Sixteenth Annual Report to Congress on the Implementation of IDEA (U.S. Department of Education, 1994) made the following observations about students with SED:

Students with serious emotional disturbance (SED) pose unique challenges to special educators...[and often require] complex patterns of service delivery within public schools...Effectively meeting the needs of children and youth with SED and their families is a growing national concern. Failure to do so threatens the success of the nation's educational objectives (e.g., Goals 2000) and limits lifelong opportunities for many people. (p. 109)

A recent national study, the National Longitudinal Transition Study (NLTS) of Special Education Students, painted a less than rosy picture of SED youth. To investigate the nature and extent of outcomes for youth with SED, the NLTS was funded by the U.S. Office of Special Education Programs and was initiated by Stanford Research Institute in 1987 and completed in 1994. The NLTS investigators compiled a longitudinal database that includes more than 8,000 youths with disabilities who were ages 13 to 21 and special education students during the 1985-1986 school year in more than 300 school districts across the U.S. Data were collected from telephone interviews with parents and with youths with disabilities when they were able

to respond to questions themselves. School records were obtained for special education students' high-school years. Surveys were also conducted of principals at students' schools and of teachers who served the students (Wagner, 1995).

Wagner (1995) noted that the NLTS database is a nationally representative sample that permits generalizations from the database to young people with disabilities as a whole and to those in each federal special education category, such as SED. She noted that throughout her and her colleagues' work on the NLTS, "the outcomes for young people with serious emotional disturbances (SED) have been particularly troubling" (Wagner, 1995, p. 92). Some of the major findings of the NLTS related to youth with SED are reported below.

Major Findings of the NLTS for SED Students

Nature and age of onset of problems. Wagner (1995) reported that one of the findings of the NLTS was that, among students with SED, externalizing disorders (i.e., conduct disorders, "acting out" behaviors) were significantly more prevalent than internalizing behaviors (i.e., withdrawal, depression) (Ashbaker & Roberts, 1994; Mattison et al., 1991, 1992, 1993; McConaughy & Achenbach, 1996). When findings of the NLTS are compared with national samples, it is apparent that students with SED are significantly more likely to be male by more than 3 to 1 (76.4%) (Wagner, 1995).

Although the majority of parents (64.0%) of students with SED reported that their child began to have serious emotional and behavioral difficulties during their grade school years (Wagner et al., 1991), 16.0% of parents reported that their child did not begin to exhibit emotional and behavioral problems that were considered troublesome until secondary school. In fact, in the NLTS, students with SED were more likely than students with any other disability to first experience disability-related problems in adolescence (Wagner, 1995).

This relatively late onset of SED in the NLTS has been supported by other research (e.g., Burke, Burke, Regier, & Rae, 1990). Wagner (1995) has proffered two plausible explanations for this late onset. First, it is possible that the actual behaviors that resulted in the identification of students as SED were indeed present earlier, but the behaviors were not considered troublesome when exhibited by younger children. Bower (1981), for example, argued that indicators of emotional and behavioral disorders are often present but unrecognized in younger children. Second, physiological changes associated with adolescence may trigger or compound emotional or behavioral disorders. Unfortunately, however, as Wagner (1995) astutely noted, "diagnoses of the causes of or contributors to SED in children and adolescents are often unclear" (p. 95).

Terrie Moffitt (1993a) presented a dual taxonomy to reconcile two incongruous facts about antisocial behavior among youth. First, antisocial

behavior shows substantial continuity over age. Second, the prevalence of antisocial behavior changes dramatically over age, increasing by nearly a factor of 10 during the adolescent period. Moffitt suggests that antisocial behavior or delinquency conceals two distinct categories of individuals, each with a unique history and etiology of problems. One small group of individuals engages in various sorts of antisocial behavior at every life stage. The other, larger group is only antisocial during the adolescent period of life. From the theoretical perspective of life-course persistent antisocial behavior, (a) youths' neuropsychological problems interact cumulatively with their criminogenic environments across development and culminate in a pathological personality, and (b) a contemporary maturity gap encourages adolescents to imitate antisocial behavior in ways that are normative and adjustive (Moffitt, 1993a).

Ferdinand, Verhulst, and Wiznitzer (1995) investigated the 4-year course of behavioral and emotional problems (internalizing and externalizing) from adolescence into young adulthood in a general population sample of 364 adolescents (ages 15-18 years). They found no statistically significant difference in the continuity or persistence of internalizing versus externalizing problems, including problems that are often regarded as typical problems of childhood (e.g., attention problems, hyperactivity).

Academic performance and aptitude. Data from the NLTS (Wagner, 1995) showed that, at all grade levels, the grade point averages of students

with SED were below those of other students with disabilities, which, in turn, were below the grade point averages of those students in the general population. In the NLTS, 77.4% of students with SED failed one or more courses during their high school years, the highest failure rate of any category of students with disabilities (Wagner, Blackorby, & Hebbeler, 1993; Wagner, 1995). Students with SED also failed minimum competency examinations more frequently than did other students with disabilities (Koyangi & Gaines, 1993).

When a high-school student receives a failing grade, the student receives no credit for the course. If this is a frequent occurrence in a student's educational experience, often beginning with a pattern of failure during the junior high-school years, he or she begins to fall behind age peers substantially (Eccles & Midgely, 1989; Eccles, Midgely, & Adler, 1984; Entwisle, 1990; Simmons & Blyth, 1987; Slavin, 1989). When a student "does not get promoted to the next grade along with the rest of the class, everyone knows he has flunked. He will never catch up with his class again" (Bachman, Green, & Wirtanen, 1971, p. 53).

Hence, given this social stigma and scholastic retrogression, the temptation to drop out of school is powerful (Franklin & Streeter, 1995). In the NLTS, among students with SED who had left school, more than half (54.8%) had done so by dropping out (Wagner, 1995). This dropout rate is more than twice the rate of students in the general population and the highest

of any category of students with disabilities (Wagner, 1995). Fifty percent of students with SED dropped out of school, most of them by 10th grade. Data from the NLTS also revealed that only 42% of students with SED graduated. This percentage is in stark contrast to the graduation rates of 56% for all students with disabilities and 71% of students at large (Wagner et al., 1991; Wagner, 1995).

More than one fourth (29.4%) of students with SED nationally are listed as "status unknown" with regard to exiting the school system. This high percentage is believed to comprise, in part, many youth who did not formally withdraw, but simply stopped attending school (U.S. Department of Education, 1994).

Interestingly, however, in the NLTS, the poorer grades earned by students with SED relative to other students with disabilities were not entirely a reflection of SED students' poor scholastic aptitude. In fact, the reading and mathematics abilities of students with SED in the NLTS (as measured by standardized tests) were, on average, not as far behind their actual grade levels as the reading and mathematics abilities of most other categories of students with disabilities.

For example, students with SED were, on average, 2.2 grade levels behind in reading and 1.8 grade levels behind in mathematics, compared with students with hearing or orthopedic impairments who were, on average, 3 to 4 grade levels behind in mathematics. Yet, students with SED had grade

point averages of 1.7 in 9th and 10th grades, compared with grade point averages of 2.3 for students with hearing impairments and 2.4 for students with orthopedic impairments (Wagner et al., 1991; Wagner, 1995).

Nature of services. In the NLTS, the only support cited that was directly related to the behavioral issues that were at the core of the disabilities experienced by students with SED was behavior management programs. Data from the NLTS revealed that only 10.9% of students with SED, however, were reported to have such programs in place in their regular education classes, where they spent the majority of their scholastic time (Wagner, 1995).

Despite their relatively poor scholastic performance placing them at risk for school failure and dropping out, in combination with their identified emotional and behavioral difficulties, few students with SED in the NLTS received other forms of support from their schools outside their regular education classes either. In the NLTS, receipt of personal counseling was relatively rare for students with disabilities as a group (17.1%), but astonishingly, it was even fairly uncommon for students with SED (36.2%), those students most likely in need of counseling (Wagner, 1995). Wagner (1995) made the following comments in this regard:

Thus, the disability for which these students were classified as needing special education was emotional or behavioral in nature, yet the special education services they were provided were largely academic. In the absence of consistent counseling or therapy, can more time to take tests or modified grading standards help a student whose disability manifests itself most in

conduct disorders or social adjustment problems. NTLs data suggest that few aspects of [SED] students' school programs were directed explicitly to the central nature of their disability. (p. 105)

Criminality. Twenty percent of students with SED are arrested at least once before they leave school. By 2 years after high school, 37% have been arrested. Three to 5 years after high school, over half (58%) have been arrested, an arrest record 250% higher than that of youth in the general population (Wagner et al., 1991; Wagner, Newman, Marder, D'Amico, & Blackorby, 1992).

Families. Families of students with SED are more likely to be blamed for the student's disability (Adams et al., 1995; Caplan & Hall-McCorquodale, 1985; Friesen & Koroloff, 1990; Kutash & Rivera, 1995; Lefley, 1989). Moreover, they are more likely to make substantial financial sacrifices to secure services for their children (Cohen, Harris, Gottlieb, & Best, 1991; Ervin, 1992; Knitzer et al., 1991; Kutash & Rivera, 1995).

Factors related to successful outcomes. Wagner (1995) noted that although the NLTS data on youth with SED have demonstrated that many of these youth experienced little in their secondary school programs to help them achieve positive outcomes, this experience is not inevitable. She stated that NLTS multivariate statistical analyses have identified several factors that are related to significantly better outcomes for youth with SED. Although several factors for student success were delineated by the NLTS (Wagner, 1995), only the factors pertinent to the present study are discussed here.

One predominant factor found in the NLTS is parent involvement. Findings of the NLTS regarding youth with SED confirmed what is known about the importance of parents in the lives of all children. Key factors in student success in general are the extent to which the family encourages learning, expresses high expectations for youth, and becomes involved in youths' school and community lives (Henderson, 1994; Walker et al., 1995). The findings of the NLTS support the current federal initiatives to increase parental participation in the process of developing both the Individualized Education Plans (IEPs; the plans that state goals for students during school and specify the services schools will provide or arrange for in helping students meet those goals) and Individualized Transition Plans (ITPs; the plans that indicate the services/assistance schools will provide toward transition out of the school setting) for students with disabilities (Blackorby & Wagner, 1996).

Social integration was another key factor in improved outcomes for students with SED in the NLTS. Schools can clearly support the social integration of students with disabilities into the ecumenical life of the school. Findings from the NLTS revealed that, independent of other differences between them, students with disabilities who belonged to social, sports, hobby, or other kinds of groups while in high school missed significantly less school and had significantly lower probabilities of failing courses and dropping out than students who were not affiliated with groups while in school.

Wagner (1995) noted that schools can facilitate the development of a wide range of options for group affiliation that will appeal to the interests of a wide variety of students with SED and "actively instruct students with SED in the social skills needed to succeed in such groups" (p. 108).

Collaboration between and among schools, families, and service agencies is another key factor in increasing successful outcomes for adolescents with SED (Blau & Brumer, 1996; Steinberg, 1994). Wagner (1995) noted that, although opportunities for improving outcomes for students with SED are available to most schools,

their focus on the traditional school activities of course work and student interactions continues to ignore the specific mental health needs of students and the constellation of family-related stresses that are common to students with SED. (p. 108)

Similarly, the U.S. Department of Education (1993a) has observed that

while successful adult outcomes are significantly based on one's education as a child, productivity, independence, and quality of life are also influenced by access to and provision of health and social services. Schools increasingly acknowledge that many of these noneducational services are vitally needed, but the needs often go unmet. (p. 36576)

However, schools at large are unlikely to be able to address the complex and multifaceted needs of students with SED (or EBP) and their families alone. Thus, collaboration with mental health and social service agencies is required to construct ecumenical services that meet the multiple needs of many students with SED (or EBP) and their families (American Psychological Association, 1994; Ashbaker & Roberts, 1994; Blau & Brumer,

1996; Dryfoos, 1993, 1994). In a recent report on the efficacy of Utah's child-serving system working with youth with SED, Ashbaker and Roberts (1994) noted that "services for SED children and their families are viewed as 'too little too late' both by parents and service providers" (p. 23).

Externalizing Behavior Problems and Boys: An Almost Exclusive Club

Researchers have long noted that boys are more likely than girls to be perceived by teachers and school personnel as troublesome and identified as emotionally disturbed (Algozzine, 1979; Compas, Hinden, & Gerhardt, 1995; Cullinan et al., 1984b; Kelly, Bullock, & Dykes, 1977; Mattison et al., 1986, 1992; Moffitt, 1993a; Offord, Alder, & Boyle, 1986; Zoccolillo, 1993). Bowe (1995) commented:

Externalizing behavior problems, which are more common among boys than girls, include such outward-directed activities as fighting with other children and defiance toward teachers and other adults; conduct disorders and hyperactive behaviors may also be referred to as externalizing. By contrast, internalizing behaviors, which appear to occur more among girls than among boys, include such inward-directed activities as withdrawal from interaction from peers and being depressed. (p. 351)

Likewise, Walker et al. (1995) have noted that

the vast majority of antisocial children are boys; antisocial behavior in girls is less evident and expressed differently than in boys (that is, antisocial behavior among girls is more often self-directed than other directed). (p. 6)

Researchers who have conducted empirical studies of students with externalizing behavior problems (e.g., high levels of aggressive and interpersonally negative behavior toward peers and adults, disruption of the classroom environment, chronic truancy, noncompliant behavior, delinquent behavior), as opposed to internalizing behavior problems (e.g., withdrawn behaviors, anxious behaviors, overt depression; McConaughy & Skiba, 1993; Mills, 1996; Walker & Fabré, 1987), unequivocally have found that the majority of the population of youth with serious emotional disturbance (SED) display externalizing behavior problems (Council for Children with Behavioral Disorders, 1990; Epstein et al., 1985; Kauffman, 1989; Mattison et al., 1986, 1992; McConaughy & Achenbach, 1996; McConaughy et al., 1994; McGinnis & Forness, 1988; Nelson, Rutherford, Center, & Walker, 1991; Rozario, Kapur, Rao, & Dalal, 1994; Wagner, 1995; Walker & Bullis, 1991; Walker et al., 1995). Also, findings from other of empirical studies have shown that males are disproportionately identified as having SED (U.S. Department of Education, 1994). For example, the investigators who conducted the National Longitudinal Transition Study of Special Education Students (NLTS; Wagner, 1995; Wagner et al., 1991) of special education students reported that 68.5% of all secondary students with disabilities were male. However, more than three fourths (76.4%) of students identified as SED were male, the highest proportion of males to females in any of the IDEA disability categories (U.S. Department of Education, 1994).

**A Composite of Characteristics of Youth
with Externalizing Behavior Problems**

In summary, youth with externalizing behavior problems (EBP) or serious emotional disturbance (SED) are likely:

1. To be male and to have a heterogeneous constellation of symptoms (Algozzine, 1979; Barkley, 1990; Bowe, 1995; Compas et al., 1995; Constantino, 1992; Cullinan et al., 1984b; Kelly et al., 1977; Lahey et al., 1995; Loeber et al., 1995; Martin & Hoffman, 1990; Mattison et al., 1986, 1992; Moffitt, 1993a; Offord et al., 1986; U.S. Department of Education, 1994; Wagner, 1995).
2. To manifest academic deficiencies as reflected in achievement level, grade point average, and specific skill areas (especially reading and language; Camarata, Hughes, & Ruhl, 1988; Coutinho, 1986; DeBaryshe et al., 1993; Epstein et al., 1989; Foley & Epstein, 1992; Hinshaw, 1992a, 1992b; Ledingham & Schwartzman, 1984; Mack & Warr-Leeper, 1992; Mastropieri et al., 1985; Murphy, 1986; Ruhl & Berlinghoff, 1992; Sturge, 1982; Tremblay et al., 1992; Wagner, 1995).
3. To be viewed by teachers as uninterested in school, unenthusiastic about academic pursuits, and careless in their work (Center, 1993b; DeBaryshe et al., 1993; Mullin & Wood, 1986; Safran & Safran, 1987; Walker et al., 1987).

4. To be retained more frequently at grade level, to demonstrate learning problems and lower achievement levels, and terminate their schooling sooner than their peers (Bachman et al., 1978; Duchnowski, Johnson, Hall, Kutash, & Friedman, 1993; Epstein et al., 1992; Fessler, Rosenberg, & Rosenberg, 1991; Glassberg, 1994; McConaughy & Ritter, 1995; Nelson & Rutherford, 1990; Wagner, 1995).

5. To have poor interpersonal relations (e.g., are rejected by their peers, demonstrate poor social skills and are socially ineffective in their interactions with peers and a wide array of adults including parents and teachers; Cullinan et al., 1984a, 1984b; Dodge, 1993a; Dodge et al., 1990; Dodge & Somberg, 1987; Freedman, Rosenthal, Donahoe, Schlundt, & McFall, 1978; Gresham, 1982, 1990; Patterson et al., 1992; Walker, Todis, Holmes, & Horton, 1988).

6. To reside in families with some form of dysfunction (e.g., parent psychopathology, father absence, poor parental supervision and monitoring, dysfunctional communication patterns, marital discord; Barber, 1992; Barber, Olsen, & Shagle, 1994; Hetherington & Martin, 1986; Horne & Sayger, 1990; Kazdin, 1987a, 1987b, 1990, 1995a, 1995b; Palmo & Palmo, 1993; Prange et al., 1992). In the next section, a brief explication is presented of why it is vital for educators and related services personnel, such as school psychologists and counselors, to seize the developmental period of early adolescence as opportunity window for working with students with EBP.

**Seizing the Early Adolescent Period as an Intervention
Opportunity Window for Youth Who Manifest
Externalizing Behavior Disorders**

Kazdin (1993b) made the following observations with respect to the developmental and psychoeducationally critical period of early adolescence and prevention and intervention of externalizing behavior disorders. Kazdin wrote:

[Y]outh undergo a variety of transition periods where change and varying influences operate. The transition that occurs when one progresses from one level of school to the next (e.g., elementary to middle or to junior high school) represents potential stress for youth but at the same time opportunities for intervention (e.g., Felner & Adan, 1988). Changes in cognitive development, peer influences, and transition periods (e.g., in schools) in adolescence may provide special intervention opportunities. Also, the transitional nature and normal disequilibrium of adolescence (e.g., from dependence to autonomy, from parent to peer influence) may represent an especially sensitive period for intervention and influence. (1993b, pp. 305-306)

Coie and Jacobs (1993) in their discussion of the role of social context in the prevention of externalizing behavior disorders, especially conduct disorder, made some astute assertions regarding the critical developmental intervention importance of the middle school years, which correspond chronologically with the early adolescent period of life. They observed the following:

[T]ransition to middle school engenders a host of contextual variables that appear to facilitate and often intensify problematic behavior. In fact, the middle school years represent a particularly precarious period because conduct problems that may be viewed

as merely troublesome or hard to manage in early childhood begin to take on more serious, and often permanent, implications over time. (Coie & Jacobs, 1993, p. 268)

In Utah, a recent review of the special education child counts from 1990-1994 of early adolescents (ages 10 through 14) who were receiving special education and related services as "behavior disordered" (BD) in Utah's public schools revealed that this age group has historically comprised and presently contains the largest numbers of students per age category (10-, 11-, 12-, 13-, and 14-year-olds) served under the BD classification (Dr. Les Haley, Data Manager for Special Education, Utah Office of Education, personal communication, July 5, 1995). It is interesting to note, however, that although these age categories still comprise the largest numbers of youth served under the BD classification in Utah, the total number of children served has declined from a range of 773 to 904 per age category in 1990, to 511 to 595 in 1994. Although no solid reasons could be established for this "disappearance" of scores of BD students in these age categories over this 5-year period, discussions with special education administrators in Utah have yielded some explanations, including pressure not to classify a student as BD because of legal limitations on disciplinary options and cutbacks in special education monies (Mr. Kirk Allen, Director of Special Education for Box Elder School District, personal communication, November 16, 1994).

Walker et al. (1995) have noted that

there are two types of antisocial behavior (overt and covert). Overt involves acts against people; covert involves acts against

property and/or self-abuse. By adolescence, many at-risk children display both forms, which escalates their risk status substantially. (p. 6).

Thus, if youth with externalizing behavior problems are not identified and led down a more prosocial and personally efficacious path during early and middle childhood (Coie & Jacobs, 1993; Coie, Lochman, Terry, & Hyman, 1992; Conduct Problems Prevention Research Group, 1992; Farmer, 1995; Loeber, Lahey, & Thomas, 1991; Patterson et al., 1989; Reid, 1993), early adolescence presents the next best opportunity for intervention. Jackson and Hornbeck (1989) observed:

During early adolescence, young people begin to make decisions about their self-worth, the worthiness of others, and the value of education, health, work, and citizenship. For many youth, early adolescence is one of the last real opportunities to affect their educational and personal trajectory...a critical "turning point" in the lives of American youth. (p. 831)

Likewise Hechinger (1992) observed that "adolescence is a period of great risks and opportunities....Adolescence can be a pathway to a productive adult life or to a vastly diminished experience" (p. 13).

The early adolescent years (ages 10 through 15) are open to the formation of both positive and deleterious behavior patterns in education and health that have lifelong significance and impact (Epstein & Lee, 1995; Hechinger, 1992). For example, by early adolescence, academic inadequacies, alienation from the mainstream culture, and association with deviant peers may play a particularly critical role in promoting adolescent delinquency (Farmer & Hollowell, 1994). It is the deviant peer group in

adolescence that appears to be a major training ground for delinquency and substance abuse (Dishion & Loeber, 1985; Elliot, Huizinga, & Ageton, 1985; Hirschi, 1969; Kean, 1989), behaviors that result in far too many adolescent and adult casualties. Addressing the critical nature of early adolescence as an intervention period, Hechinger (1992) asserted:

Before damaging patterns are firmly established, therefore, we have a major opportunity for intervention....It is essential to help young adolescents acquire enduring self-esteem, inquiring habits of mind, reliable human relationships, a sense of belonging in a valued group, and a feeling of usefulness....They and we face fateful choices in creating healthy and productive lives for our common future. (pp. 14, 16)

The life period of adolescence has been described as a phase of life beginning in biology and ending in society (Petersen, 1988). For both adolescents and their parents, early adolescence (typically the years between 10 and 15) is concomitantly a time of excitement and of anxiety, of joy and of troubles, of discoveries and of bewilderment, and of breaks with the past and of continuations of childhood behavior (Epstein & Lee, 1995; Lerner, 1993). Zaslow and Takanishi (1993) have observed that, although research on the development of adolescents has made laudable progress in the past two decades, significant opportunities to deepen our understanding of this period of life and to explore new territory still abide. One of the ways to enrich our understanding of the intrapersonal characteristics and interpersonal behaviors of young people during this period of life is to assess and explicate their personal cognitions.

Personal Cognitions of Youth Who Manifest Behavioral Problems

Epstein (1991, 1994) proffered that individuals, youth as well as adults, are observed to utilize personal theories of reality in responding to life events. Individuals, including youth with emotional and behavioral problems, process their raw experiences by reducing and organizing them into simplified schemata that are easier to remember and to apply (Wood, 1995). Epstein (1991) asserted:

Like it or not, everyone constructs a theory of reality. A person does not set about to do it consciously and deliberately. Rather, the theory develops spontaneously in the course of everyday living....[I]t is assumed that a personal theory of reality is not developed for its own sake, but is a conceptual tool for coping with life's problems. (pp. 81-82)

He also noted that every youth and adult within his or her personal theory of reality has an intuitive assessment corresponding to the degree which: (a) the world is considered to be a source of pleasure versus misery; (b) the world is considered to be meaningful (including predictable, controllable, and just) versus capricious, chaotic, and uncontrollable; (c) people are viewed as desirable to relate to and as a source of support and affection versus threatening and a source of disappointment and hostility; and (d) the self is viewed as worthy (including competent, moral, and lovable) versus unworthy (including incompetent, bad, and unlovable; Epstein, 1991).

Safran and Safran (1988) observed that the manner in which special educators view cognitions of problem behaviors of youth has been the focus

of researchers for several decades (e.g., Beilin, 1959; Wickman, 1928). However, it has been only fairly recently that researchers have sought to ascertain and understand the personal cognitions and perceptions of youth with behavioral problems (e.g., Bandura, 1977b; Dadds, 1995; Dodge, 1993a; Duplass & Smith, 1995; Kendall, 1993; Lewis, 1992; Webster-Stratton & Herbert, 1994). The cognitions and perceptions of such youth, as are those of individuals in general, are "intrinsically complex, multivariate in nature, and are subject to individual variability" (Safran & Safran, 1988, p. 39).

Leach (1977) has proffered a definition for such constructs:

Perceptual frameworks (or personal construct systems) may be said to incorporate the current set of working hypotheses which have been built by individuals from their past experiences to make sense of and increase predictability in their current experiences of everyday life and the objects and people they encounter (including themselves). They include beliefs, assumptions, attitudes and expectations, and are built up by personal experiences and by experiences shared or reported by others. They are therefore made up of shared group beliefs and idiosyncratic ones. (p. 190)

Safran and Safran (1988) noted that, from an ecological perspective, the study of the problem behaviors of youths

would be largely incomplete without a careful analysis of this sometimes elusive concept....[I]t stands to reason that with such variability in what [often] constitutes a behavior problem...these cognitions are an area worthy of investigation. (p. 40)

One construct or perceptual framework that has received attention from researchers and clinicians in recent years is youths' perceptions of control.

Pertinent information from the psychological literature on perceptions of control is presented in the next section.

Perceptions of Control: Highlights from the Psychological Literature

Kendall and MacDonald (1993) have reported that researchers and clinicians recognize that cognitive activities of youths, including beliefs about the controllability and personal efficacy regarding environmental events, "are central to the development, assessment, and treatment of psychopathology" (p. 387). Recently, regarding behavioral problems and psychopathology during adolescence, Fabrega and Miller (1995) noted that it is idiographic material about an adolescent's world

that renders his or her behavior meaningful not only in a clinical sense but in an experiential and humanistic one as well....[I]t will be descriptive studies that connect with the meanings and values of adolescents' experiences that will enable a comprehensive understanding of what psychopathology means in this age group. (p. 220)

One of the constructs that may help to shed some light on the cognitive or experiential aspects of externalizing behavior disorders in early adolescent boys is perceived control. Ellen Skinner (1995), in her most recent treatise on perceived control, stated that youths' beliefs about personal control over events "do not consist of cold procedural knowledge about causes and effects; they are hot potent constructions, imbued with emotion and personal significance" (p. xvii). She also noted that youth construct their beliefs about

control cumulatively, through interactions with the environment in which interesting and important outcomes are at stake; thus a "sense of control is grounded in interactions with the environment" (p. 45).

Weikart (1994) observed that when youth develop control and self-discipline through education and socialization processes, "this control is real power, not over people, or things, but over oneself. While no single factor assures success in life, the sense of personal control is certainly a major factor" (p. 234, emphasis in original). Skinner (1995) noted that, in the broadest sense, perceptions of control can be thought of as

naive causal models individuals hold about how the world works: about the likely causes of desired and undesired events, about their own role in successes and failures, about the responsiveness of other people, institutions, and social systems. (pp. xvi-xvii)

Finally, McMinn and Foster (1990) observed that

one of the persistent phenomena in the study of thinking is the tendency for beliefs to determine what kind of information we seek out and how we interpret that information....Those who believe they control their own future achieve more and are better able to deal with their problems than those who believe their future depends on factors that are beyond their control....Conversely, those who believe they are helpless and have no control over their environment tend to be more depressed and less successful than others. (pp. 46, 89)

The study of perceived control continues to occupy prominent place on the research agendas of social, clinical, personality, and developmental psychologists (Baltes & Baltes, 1986; Brim, 1974; Lefcourt, 1981, 1983; Skinner, 1995). Perceived control is a psychosocially potent construct

(Skinner, 1995), and five decades of research have established it as a robust predictor of people's behavior, emotion, motivation, performance, and success and failure in many domains of life (see Baltes & Baltes, 1986; Brim, 1974; Carlisle-Frank, 1991; Lefcourt, 1981, 1983; Nunn, 1988; Peterson, 1980; Rodin, 1986; Rodin, Schooler, & Schaie, 1990; Rothbaum & Weisz, 1989; Strickland, 1989).

Perceptions of control influence whether responses are initiated, have an impact on emotional reactions to success and failure, influence how well intentions can be implemented, and promote or impede effort, exertion, and persistence. Perceptions of control are constructed from an adolescent's history of experiences interacting with the social and physical context. In some domains, such as with parents or teachers, these experiences number in the hundreds of thousands and take place over many years. Hence, "beliefs about control are not just ideas; they are phenomenologically 'real.' They are convictions about how the world works" (Skinner, 1995, p. 5).

The construct of "perceived control" has been adopted by a diverse set of theorists interested in motivational and cognitive accounts of behavior (Abramson, Seligman, & Teasdale, 1978; Bandura, 1977b, 1978, 1981, 1982, 1985, 1989a; Chapman & Skinner, 1985a, 1985b; Chapman, Skinner, & Baltes, 1990; Connell, 1985; Crandall, Katkovsy, & Crandall, 1965; Harter, 1978, 1981; Kendall, 1993; Lefcourt, 1976, 1981, 1983; Nunn, 1988; Patrick et al., 1993; Rotter, 1954, 1966, 1975; Seligman, 1975; Skinner, 1991;

Skinner & Chapman, 1984; Skinner et al. 1988a, 1988b; Skinner, Schindler, & Tschechne, 1990; Stetsenko, Little, Oettingen, & Baltes, 1995; Weiner, Heckhausen, Meyer, & Cook, 1972; Weisz, 1983, 1990; Weisz & Stipek, 1982; Wellborn, Connell, & Skinner, 1989). Four influential theories of perceived control have guided thinking in this area. These theories are centered on the constructs of locus of control (Lefcourt, 1981, 1983), causal attributions (Vispoel & Austin, 1995; Weiner, 1985a, 1985b, 1986), learned helplessness (Abramson et al., 1978; Seligman, 1975), and self-efficacy (Bandura, 1977b, 1981, 1982, 1985, 1986, 1989a, 1989b). However, a "fifth force" in the area of perceived control that has emerged in recent years, and that is the focus of the present study, is based in action theory.

Action Theoretical Perspectives on Perceived Control

Whether the individual will exert control, and whether the individual experiences a subjective perception of control, also depends on the individual's probability of action, which may involve questions of motivation and values (Deci, Hodges, Pierson, & Tomassone, 1992; Farrington, 1993; Patrick et al., 1993; Skinner, 1985). Chapman and Skinner (1985a, 1985b), Chapman et al. (1990), Skinner and Chapman (1984), Skinner, Chapman, and Baltes (1982), Skinner et al. (1988a, 1988b), Skinner, Wellborn, and Connell (1990), and Wellborn et al. (1989) have integrated findings from major theories of perceived control in a new conceptualization. This

approach is based on the general distinction between agents, means, and ends in action theory (Brandtstadter, 1984; Chapman, 1984; Eckensberger & Meacham, 1984; Frese & Sabini, 1985).

This conceptualization distinguishes between children's and adolescents' beliefs about (a) "what it takes to do well," or the sources of success and failure, (b) "whether I have got it," or the extent to which the self has access to particular sources, and (c) "whether or not I can do well in school" without reference to specific means (Patrick et al., 1993; Skinner et al., 1988a; Skinner, Wellborn et al., 1990). These beliefs are referred to as strategy, capacity, and control beliefs, respectively, and "combinations of these beliefs have proved useful for identifying profiles of perceived control that promote and undermine children's motivation, behavior, and emotion" (Patrick et al., 1993, p. 781).

This new conceptualization departs from previous constructs, such as locus of control, in which internal and external sources are presumed to be inversely related to each other and are thus assessed as a single, bipolar dimension (Skinner, 1990). In this new model, separate dimensions about children's beliefs about internal (e.g., ability) and external (e.g., powerful others) factors are considered as sources of control. A new feature of children's beliefs is also introduced in this model: unknown source of control (Connell, 1985).

Included under the rubric of perceived control are the sources that youth view as responsible for important outcomes in their lives, the roles youth perceive themselves to play in influencing events, and the resources youth believe they can access in reaching their goals. Taken together these can be thought of as naive causal models about how the world works and about the impact of the self (Skinner, 1990, 1991).

These naive models are assumed to be flexibly organized sets of beliefs that change based on disconfirming experiences, but that also create their own stability by generating supportive consistent experiences. Hence, this view explicitly rejects two extreme alternative conceptions: Control-related beliefs are not conceived of as fleeting, situationally derived perceptions, nor as stable personality traits. Within the current framework, the former is not useful because perceived control could not guide or direct action across situations; and the latter is not useful because control-related beliefs could not undergo developmental or contextual transformation. With this model as a map for inquiry, the key issues focus on how individuals, through their beliefs and actions, can influence their own development (Skinner, 1990, 1991; Skinner et al., 1988a, 1988b; Skinner, Schindler et al., 1990).

Thus, in this conceptualization of perceived control, three qualitatively different sets of beliefs are differentiated: (a) beliefs about the extent to which certain potential sources are effective in producing outcomes; (b)

beliefs about the extent to which the youth has access to potential known sources; and (c) beliefs about the extent to which the youth can produce desired outcomes, without reference to any explicit categories of sources (Skinner et al., 1988a; Skinner, Wellborn et al., 1990).

In the model, the three sets of beliefs are referred to as follows.

Strategy beliefs are expectations about "what it takes for me to do well in school" (such as ability, powerful others, luck, and unknown factors).

Capacity beliefs are expectations about whether "I have what it takes" (i.e.,

Am I smart? Am I liked by powerful others (teachers)? Am I lucky?). Control beliefs are expectations about "whether or not I can do well in school" without reference to specific means, for example, "I can do well in school if I want to" (Skinner, Wellborn et al., 1990).

Essentially, strategy beliefs (knowing how to go about achieving particular outcomes) and capacity beliefs (beliefs in one's ability to execute the operative strategy, e.g., using powerful others [teachers] to do well in school) comprise a substrate of personal competence (Masten et al., 1995; Skinner & Chapman, 1984). Low levels of academic competence (as well as social competence) have been highlighted as contributing and maintaining factors of psychopathology and behavioral disorders among youth, particularly boys (August, Anderson, & Bloomquist, 1992; Clark, 1985; DeBaryshe et al., 1993; Feehan et al., 1995; McCord & Tremblay, 1992; McGee et al., 1990; Patterson et al., 1989; Scruggs & Mastropieri, 1986; Swicegood & Linehan,

1995). Control beliefs are a measure of whether and how much children believe they can affect aspects of their environment (e.g., school) to produce desired or prevent undesired outcomes (Skinner, 1991).

Although reconceptualizations of the construct of perceived control differ on sundry specifics, emerging viewpoints seem to converge on two overarching features: (a) perceived control is multidimensional and (b) perceived control is domain specific. In terms of multiple dimensions, two innovations in current thinking about control have been: (a) the separation of beliefs about internal, external, and unknown sources (Connell, 1985; Levenson, 1973; Marsh, 1984; Marsh, Cairns, Relich, Barnes, & Debus, 1984); and (b) the distinction between the beliefs about the effectiveness of sources and beliefs about the self's access to those sources (Bandura, 1977b, 1978, 1981, 1982, 1985, 1989a, 1989b; Skinner et al., 1988a; Weisz & Stipek, 1982).

Along with researchers in other areas, developmental psychologists have argued that perceived control is domain specific. That is, individuals may believe that they can exert different amounts of control in different areas of their lives. The concept of "domain" usually refers to target outcomes that are to be controlled or explained, and can be identified according to major life areas such as intellectual functioning, relationships, health, sports, and politics. Empirical research findings document that individuals do differentiate among life domains in their control-related beliefs and that the best predictors

of behaviors in a specific life area are perceptions from the corresponding domain (Benenson & Dweck, 1986; Chapman et al., 1990; Connell, 1985; Dweck, 1986; Marsh, 1984; Patrick et al., 1993; Rotter, 1975; Wünsche & Schneewind, 1986).

Plausible Linkages Between Personal
Control Beliefs and Behavioral
Problems Among Youth

Psychologists of diverse persuasions have posited connections between control beliefs and psychological problems. Included in this group are psychoanalysts such as Erikson (1963), who linked a variety of emotional problems to desires for autonomy, initiative, industry, and generativity. An emphasis on control beliefs is also evident in research on social learning theory (Bandura, 1977b, 1978, 1981, 1982, 1985, 1989a, 1989b). Rotter's (1966) locus of control construct and the measurement thereof (Nowicki & Strickland, 1973) has been linked to psychological problems (Lefcourt, 1976, 1983; Rothbaum, 1980; Yates, Hecht-Lewis, Fritsch, & Goodrich, 1994) as has Bandura's (1977a, 1978, 1981, 1982, 1985, 1989a, 1989b) construct of self-efficacy.

It is important, however, to distinguish between locus of control, which refers to a youth's beliefs that outcomes are a result either of his own actions or of chance, and self-efficacy, which is comprised of domain-specific self-beliefs about the youth's own abilities and characteristics that guide his behavior by determining what they try to achieve and how much effort he puts

into his performance in that particular situation or domain (Bandura, 1977a, 1978, 1981, 1982, 1985, 1989a, 1989b). Thus, the youth's self-perceptions provide a framework or structure against which he judges information; the self-perceptions determine how or whether the youth puts into action the knowledge that he possesses.

Control beliefs have been related to several specific forms of child mental and behavioral difficulties, including externalizing problems, such as negativism (Brehm, 1981; Wenar, 1982), hostile aggression and rebellion (Brehm & Brehm, 1981), and internalizing problems, such as phobias (Bandura, 1977a), inferiority (Dweck & Elliot, 1984), and depression (Seligman, 1975; Weisz, Weiss, Wasserman, & Rintoul, 1987). Deprivations in autonomy and freedom have been associated most often with externalizing problems (Brehm & Brehm, 1981; Deci et al., 1992; Wenar, 1982), whereas deprivations in contingency, competence, and efficacy have been associated more with internalizing problems (Bandura, 1977a, 1978, 1981, 1982, 1985, 1989a, 1989b; Rothbaum, 1980; Seligman, 1975; Vito & Connell, 1988; Weisz et al., 1987).

Some light can be shed on the utility of the action theory-based scheme of Skinner (1990, 1991, 1995) and Skinner et al. (1988a, 1988b) for examining perceived control in youth by examining research on the pattern of strategy and capacity beliefs and the motivational profiles of children who have been labeled "at-risk" for academic failure or personal maladjustment by

their teachers (Chapin & Vito, 1988; Crichlow & Vito, 1989; Vito & Connell, 1988). Using a measurement instrument to assess children's control-related beliefs in the academic domain, Chapin and Vito (1988) and Vito and Connell (1988) found that relative to random controls, children labeled "at-risk" (a) reported that they knew less about the sources of school success and failure, (b) endorsed ability, powerful others, and luck as playing a bigger role in their school performances, and (c) viewed themselves as possessing fewer of the corresponding capacities. Skinner, Wellborn et al. (1990) found that this is the combination of beliefs most likely to undermine engagement and actual performance in school.

Patrick et al. (1993) noted that, taken together, profiles of beliefs predicted to promote and to undermine children's motivation "account for more than 25% of the variance in teachers' ratings of children's engagement and disaffection in the classroom" (p. 781). Recently, with particular reference to the academic domain, Schmitz and Skinner (1993) asserted:

A profile of control-related beliefs accompanies academic success. Children who believe they can exert more control, who perceive more contingency, who have higher self-efficacy, or who think that good outcomes are caused by their own actions, also earn better grades and perform better on intelligence and achievement tests (Dweck & Elliot, 1984)...Children who believe they have no control will fail more often, confirming their beliefs in lack of control. In contrast, children who believe they have control are more likely to succeed, corroborating their perceptions of control...The connection between beliefs and performance seems a robust finding and is at the core of many interventions (Foersterling, 1985). (Schmitz & Skinner, 1993, p. 1010)

Youth with high-perceived control select challenging tasks (Skinner, 1995). When they imagine task scenarios, they envision an interesting and fun process of interaction and successful outcomes (Bandura, 1989a, 1989b). They construct more effective action plans and exert more sustained effort. Youth who manifest low perceived control over events in their lives set low and diffuse goals, have difficulty focusing their attention, and possess a disorganized and chaotic outlook (Skinner, 1995).

When confronted by setbacks or failure, youth with low perceived control actively wonder about their efficacy, doubt the controllability of the task, feel confused, and imagine the consequences of failure. In contrast, youth with high perceived control do not spend time reflecting about their high control, their positive abilities, or their probable success (Dweck & Leggett, 1988). They are engrossed in the task itself. Heckhausen (1991) stated that only after interactions are completed will beliefs be used to evaluate action episodes and make decisions about future goals and actions.

Low perceived control can always prevent a youth from performing at the peak of his capacity; it increases his chance of failure and can even prevent him from attempting a task at all (Skinner, 1995). However, high perceived control does not guarantee a youth's success. Instead, its effects are constrained by actual contingencies in the situation and extant competencies of the youth (Chapman, Skinner, & Baltes, 1990; Schmitz & Skinner, 1993; Skinner, 1995; Stetsenko et al., 1995). Rothbaum and Weisz

(1989) stated that, although control must take its place alongside other motives (e.g., affection, approval), the influence of control is regarded as one of the most pervasive and least understood of the powerful incentives shaping youths' psychological problems.

Youth-Perceived Attachment and Bonding to Parents and Behavioral Problems of Youth

An attachment generally refers to a close, enduring affectional bond or relationship between two persons (Ainsworth, 1989). Lopez and Gover (1993) noted that the presence of these bonds or relationships is presumed "to promote human development throughout the life span by providing recipients with emotional support and a sense of closeness and continuity" (p. 560). Mallinckrodt (1992) has asserted that both "theory and research suggest that parental emotional responsiveness and control in childhood may significantly influence adult social competencies" (p. 455).

Peterson and Rollins (1988) observed that "the parent-child bond is the basic association of the human experience" (p. 499), and there is a body of evidence that supports the contention that a warm and positive bond between a parent and a child or adolescent leads to more positive communication and parenting strategies, and a child or adolescent who possesses greater social competence and positive psychological well-being (Armsden & Greenberg, 1987; Baumrind, 1971, 1989; Burke & Weir, 1979; Doane, 1978; Hirschi,

1969; Jacob, 1975; Mallinckrodt, 1992; McCormick & Kennedy, 1994; Raja et al., 1992; Rogosch & Cicchetti, 1994; Rohner, 1986; Rossi & Rossi, 1990; Sroufe & Fleeson, 1986; Steinberg & Elmen, 1986; Vuchinich et al., 1994). Burke and Weir (1979) and Armsden and Greenberg (1987) found that adolescents' attachment to their parents has a greater association with adolescents' psychological well-being relative to the contribution made by peer attachment.

Henggeler and his colleagues (Henggeler, 1982, 1989; Henggeler & Borduin, 1990; Mann et al., 1990) reported that parents of youth who exhibit antisocial behaviors, compared with parents of youth who do not manifest such problems, demonstrate less acceptance and support of, less warmth and affection toward, and less attachment (bonding) to their children.

Recently, Raja et al. (1992), in a large study of adolescents' perceived attachments to parents, reported:

An important relationship between mental health and attachment to parents was observed in this study. Generally, low perceived attachment to parents was associated with greater problems of conduct, inattention, depression, and the frequent experience of negative life events....The strongest effect of low parent attachment occurred for conduct and inattention problems. This provides some support for the idea that too great an independence from parents may be associated with problems in developing self-reliance in early adolescence. As a result, adolescents may be more vulnerable to peer pressure especially in antisocial activity. (pp. 483-484)

Maccoby (1992) noted that the affective aspects of relationships between parents and children (e.g., love, hate, fear) have continued "to

occupy a central place in most conceptions of the socialization process" (p. 1006). Maccoby stated that youth internalize, from their attachment experience, the quality of a relationship with each parent, "not the personality characteristics of a parent" (p. 1011). Mallinckrodt (1992) has noted that "the consistency of attachment figures' responses to the child's emotional needs may have far-reaching consequences for adult functioning" (p. 454).

When youths' working models of attachment (Ainsworth, 1989; Bowlby, 1969, 1973; Main, Kaplan, & Cassidy, 1985) are derived from and maintained over time on the basis of insecure and inadequate attachment relations (Canter, 1982; Cernkovich & Giordano, 1987; Collins & Read, 1990; Doane, 1978; Hinde, 1992; Hirschi, 1969; Jacob, 1975; Maccoby, 1992; Mallinckrodt, 1991, 1992; McCormick & Kennedy, 1994; Sroufe & Fleeson, 1986; Tolan & Lorion, 1988; Turner, 1991),

it can be expected that relationships with significant others will tend to reflect patterns of insecurity the child carries with him into relationships with others, in terms of social cognition, perceptual biases, affective relations, and interpersonal behavior. (Vondra & Belsky, 1993, p. 19)

Thus, one of the most important of the many factors that affect child and adolescent development is attachment to and interactions with parents (Ainsworth, 1989; Bowlby, 1973; Brewin, 1988; Canter, 1982; Cernkovich & Giordano, 1987; Collins & Read, 1990; Dadds, 1987; Doane, 1978; Emery & Tuer, 1993; Hawkins & Weiss, 1985; Henggeler, 1989; Hirschi, 1969; Jacob,

1975; Maccoby, 1992; Main et al., 1985; O'Leary & Emery, 1984; Robin & Foster, 1984; Sroufe & Fleeson, 1986; Tolan & Lorion, 1988; Turner, 1991).

Seita and Brendtro (1995) observed that youth who are unattached and who have weak personal bonds with adults typically develop internal working models of themselves as unworthy and unlovable (Bowlby, 1969, 1973; Canter, 1982; Cernkovich & Giordano, 1987; Dadds, 1987; Hawkins & Weiss, 1985; Hirschi, 1969; Peterson & Rollins, 1988; Sroufe & Fleeson, 1986; Tolan & Lorion, 1988), models which often manifest themselves inwardly as depression mixed with rage and aggression as outward effects. They went on to say that such youth

target their anger at adults who fail to meet their needs for love, and at themselves for not deserving it. Angry and distrustful, they are society's unclaimed kids; and they are forever biting the hand that didn't feed them. (Seita & Brendtro, 1995, p. 37)

These same authors also argued that, "Contrary to popular belief, it is not 'broken families' that cause delinquency, but rather broken bonds between youth and adults" (Seita & Brendtro, 1995, p. 37). In support of this contention, Hawkins and Weiss (1985) found the factor of attachment or bonding to parents to be a more important predictor of delinquency than the structure (i.e., intactness or nonintactness) of the family. Recently, Walker et al. (1995) noted, "It is important to remember that many children who live in poverty or in divorced families do not become chronic delinquents and do relatively well in school and in their peer relations" (p. 272, emphasis added).

Extreme rebellion during adolescence is often a strong signal that adults have not met the youth's basic needs for secure attachment or bonding and autonomy (Hinde, 1992; Maccoby, 1992; Marcus & Betzer, 1996; Newman & Newman, 1986; Peterson & Rollins, 1988; Sroufe & Fleeson, 1986). Viewed from the perspective of these unmet needs, overt, hostile acts of aggression and rejection are not the youth's preferred strategy of interacting with adults, but rather are extreme forms of coping used only when other avenues and means of legitimate need-satisfying behavior are thwarted or blocked (Balswick & Macrides, 1975; Hirschi, 1969). Seita and Brendtro (1995) stated that from this conceptual standpoint, "rebellious, antisocial behavior can be seen as resilience, a valiant attempt to meet normal human needs, albeit using flawed coping strategies" (p. 38).

Zarb (1992) noted that "parenting practices and parent role models shape the personality development of the child and adolescent. The family provides the conditions that contribute to effective socialization" (p. 9). Robin and Foster (1984) described the role of the family in such behavioral and personality development from a social-learning perspective in the following way. They characterized families as being

social systems of interacting members, held together by strong bonds of affection, who exercise a mutual control over each other's [reinforcement] contingency arrangements....Individual family members have repertoires of interpersonal skills and cognitive sets that both determine and are, in part, determined by their interactions with other members. (p. 197)

As such, from a cognitive-behavioral perspective, Zarb (1992) observed that "maladaptive cognitions held by family members will contribute to parent-adolescent conflict both as mechanisms of processing relationship information (e.g., habitual distortion of reality) and as content variables (e.g., particular dysfunctional self statements and themes)" (p. 9).

Anthropologists Laurens van der Post and Jane Taylor (1985) observed the following with respect to the importance of the family in the development of children and adolescents:

It remains an irrefutable social and individual premise, that no culture has ever been able to provide a better shipyard for building storm-proof vessels for the journey of man from the cradle to the grave than the individual nourished in a loving family. (pp. 130-131)

Lopez and Gover (1993) noted that in recent years there has been increasing interest in how dynamics within the family influence the successful development of adolescents (Rice, 1990), particularly in relation to separation-individuation (Allison & Sabatelli, 1988; Lopez, 1992). They proffered that

qualities of the parent-adolescent attachment are assumed to either promote or inhibit the process of separation-individuation, which itself presumably furnishes the adolescent with a clear, stable, and separate sense of self. (Lopez & Gover, p. 560)

Ryan and Lynch (1989), who investigated aspects of emotional autonomy versus detachment in early adolescents, found that those early adolescents who reported more secure attachments to parents also report more emotional security with friends. Ryan and Lynch asserted that

attachment to and the ability to utilize parents is a developmental support and is typically a positive influence. They went on to say that

insofar as one conceives of attachment as both an emotional bond and a sensitivity to developmental needs, it would seem that it is attachment rather than detachment that optimises [sic] individuation and the capacities for relatedness to self and others during adolescence. (1989, p. 355)

Chapin and Vito (1988) in a study of 544 7th- and 10th-grade students, approximately 40% of whom had been labelled at-risk for academic failure, found that family disengagement (i.e., low levels of emotional bonding between and among family members; Olson et al., 1983) was the quality of family functioning that most clearly distinguished adolescents who were at-risk for academic failure from those adolescents who were not at-risk. Chapin and Vito's (1988) results provided support for the idea that family dynamics can have an important influence on adolescents' school functioning. Also, Barber (1992) noted that "externalized behaviors such as delinquency and drug use are associated with disengaged family environments" (p. 73).

Parent Satisfaction, the Parent-Child Relationship, and Behavior Problems of Youth

In light of the almost ubiquitous belief that parents and adolescents are almost daily engaged in domestic warfare, Mitchell (1986) observed that it is surprising to many people that the home remains

the psychic and physical frame of reference during early adolescence. Conflicts with parents are frequent but not

fundamental....Most youth retain strong emotional ties with their parents and find them more comforting and humane than virtually any other adults in their social world. (p. 102)

Likewise, Csikszentmihalyi and Larson (1984) commented:

In dwelling on the dramatic instances of conflict, it is easy to overlook the constant material and psychic support that the family provides, as a matter of course, in the lives of teenagers. The family is a bit like good weather, which is usually only noticed when it fails. It is true that adolescents are positively gloomy with their families compared to how they feel with friends; on the other hand, they are radiant with the family in comparison with how they feel in solitude or in classrooms. By and large, the family seems to provide a setting of neutrality where teenagers recover in relative safety and warmth from the highs and lows of daily life. (pp. 144-145)

Peterson and Rollins (1988) observed that, aside from the family itself, the parent-child relationship is interconnected with other settings at the same and more general levels of the social milieu (Bronfenbrenner, 1979; Hurrelmann, 1988):

That is, the parent-child relationship interfaces with schools, peers, work settings, socioeconomic conditions, and the surrounding ethnic environment. All of these settings, including the parent-child relationship, influence each other. (p. 496)

Thus, given the vital interconnectedness of adolescent-parent relations to other aspects of an adolescent's life, if a much worse than normal adolescent-parent relationship appears to be facilitating an adolescent's significant behavioral difficulties, it seems prudent for schools and other service agencies to consider making this relationship a target of intervention.

The parent-child relationship, like any social relationship, serves a special role in life, one that many professionals feel is central to individual

functioning (Henry, 1994; Horne & Sayger, 1990; Kazdin & Johnson, 1994; Paul et al., 1993; Paulson & Hill, 1989; Robin & Foster, 1984; Sayger et al., 1993; Vuchinich et al., 1994; Wentzel, 1994; Wierson & Forehand, 1992).

Without such a relationship, an individual runs the risk of alienation and uncertainty. Youniss and Smollar (1985) observed that youth need to know that

others understand them and think as they do. The individual needs to feel transcendent beyond self, as belonging to something with others. This sense of cohesion is every bit as fundamental to the person as is individual identity. (p. 174)

With particular respect to the parent-child relationship, Youniss and Smollar (1985) stated that the aim of this relationship "is to understand and be understood" (p. 175).

Umberson (1989) stated that "the parent-child relationship is one of the strongest social ties available to individuals" and that "it carries important implications for the parent's behavior, attitudes, values, and adjustment" (p. 999). From her research on the effects of dimensions of the parent-child relationship on parents' psychological well-being, Umberson concluded that "the content of parent-child relationships, particularly positive relational content, is strongly associated with parents' well-being" (p. 1009), and that "relationship content may constitute a pivotal mechanism through which parenting can exert a powerful effect on parents' psychological well-being" (p. 1009).

Rothbaum and Weisz (1994) asserted that externalizing behavior is the most frequently investigated type of youth problem behavior in studies of parent-child relations, and some theories of youth socialization purport a close relationship between parental caregiving and child and adolescent externalizing behavior (Hetherington & Martin, 1986; Maccoby & Martin, 1983; Patterson et al., 1992). Wentzel (1994) recently noted that "much research indicates that a child's tendency to behave with restraint and in a socially responsible manner is linked to [positive] parent-child interactions" (p. 273). This close association between parental caregiving and prosocial and antisocial child behavior is posited by researchers who emphasize parents' influence on children and adolescents (e.g., Baumrind, 1989; Resnick, Harris, & Blum, 1993; Rohner, 1986) as well as by researchers who underscore children's and adolescents' influence on parents (e.g., Anderson et al., 1986; Bell & Chapman, 1986).

Peterson and Rollins (1988), from an ecological or systems perspective (Bower, 1988; Demick & Andreoletti, 1995; Hartup, 1979; Munger, 1991; Sameroff, 1986, 1987; Stice & Barrera, 1995; Wapner & Demick, 1991; Wentzel, 1994), observed that one way of conceptualizing parent-child effects from a systemic viewpoint is

to consider the possibility that one family relationship can influence another family relationship....It is likely, for example, that the quality of the wife-husband relationship has an effect on the kind of parent-child relationship that develops. (Peterson & Rollins, 1988, p. 494).

Emery and Tuer (1993) and Vondra and Belsky (1993) noted that characteristics of the immediate family context, such as the level of spousal support, the quality of the parent-child relationship, and perceptions of efficacy in the parental role, can significantly influence parents' psychological well-being and behavior toward their child. As Okagaki and Johnson-Divecha (1993) asserted, "Just as a husband-wife relationship may directly or indirectly alter the nature of a parent-child relationship, a parent-child relationship may impact the husband-wife relationship" (p. 51).

When problematic parent-child relations are maintained over time in the context of marital difficulties, especially low spousal support, and poor parenting skills and lack of satisfaction with the parental role or performance, subsequent psychological well-being in both children and parents is compromised (Lewis, Feiring, McGuffog, & Jaskir, 1984; Sayger et al., 1993; Vondra & Belsky, 1993; Weisner, Berstein, Garnier, Rosenthal, & Hamilton, 1990). As Vondra and Belsky (1993) noted, "With a supportive partner...the challenges and demands of parenting...are more manageable" (p. 10).

Also, although parents sometimes believe that their adolescents no longer need them and early adolescents often believe that they have outgrown their parents, and thus, aside from providing basic necessities of life, their parents are not that important, Coleman and Hendry (1990) have stated:

The function of parents as role models during adolescence is a surprisingly significant one. It is undoubtedly a popular

assumption that, all things being equal, parents have a more important part to play during childhood than during adolescence. Our brief review indicates that this is far from the truth. At a time when role models are necessary to a far greater extent than ever before, it is upon parents above all that the adolescents depend for knowledge and example. (p. 95)

Webster-Stratton and Herbert (1994) observed that some parents of youth with externalizing behavior problems feel inadequate in multiple areas of their lives, including childrearing or parent performance. Also, they noted that some parents feel inadequate in or unsatisfied with their marital relationship, and relationship with other parents, teachers, and community professionals (Webster-Stratton & Herbert, 1994).

Building a Self-Reported Experiential Worldview of Early Adolescents with Externalizing Behavior Problems and Their Families

Roman philosopher Epictetus (ca. A.D. 55 - ca. 135) once said, "What disturbs men's minds is not events, but their judgment of events" (as cited in Thompson & Rudolph, 1992, p. 133). Baumrind (1991) has observed that too few research studies "say anything about how the child's cognitive or affective system may act as an intervening variable" (p. 157). Yet, it has been demonstrated that the cognitive apperceptions or generalizations about people that a youth brings to social interactions (e.g., with peers, with parents, with teachers) can shape those interactions (Amatea & Sherrard, 1995; Cantor, 1981; Collins, 1991; Cooper et al., 1983; Forehand et al., 1988;

Gibbs et al., 1996; Hurrelmann, 1988; Jessor, 1981; Kendall, 1993; Lewis, 1992; Pont, 1995; Roberts, Glendinning, & Hendry, 1992).

Magnusson and Endler (1977) noted that social behavior is determined to a substantial degree by an interaction between the cognitive and dispositional characteristics of youth and the social and situational characteristics of the environment. Youths' cognitive generalizations and apperceptions about themselves, about various people whom they encounter in social interactions (e.g., peers, parents, teachers), and about the nature of the social situations in which they interact all play a considerable role in influencing their behavior (Amatea & Sherrard, 1995; Cantor, 1981; Gibbs et al., 1996; Jessor, 1981; Jessor, Van Den Bos, Vanderryn, Costa, & Turbin, 1995; Kelly, 1955; Kendall, 1993; Lewis, 1992; Magnusson, 1976, 1988; Markus, 1977; McWhirter & McWhirter, 1993; Pont, 1995; Price & Blashfield, 1975). Cantor (1981) observed that youths' behavior

may emerge through a cognitive filter containing generalizations about the self, others, and the situation drawn from past experiences in similar circumstances. To the extent that social behavior is cognitively mediated, the personologist [or psychologist] needs to pay increasing attention to the cognitive generalizations about the world that the lay perceiver [or adolescent] maintains. (pp. 229-230)

Sixty-eight years ago, Thomas and Thomas (1928) in their book on the behavior problems of and programs for children in the United States, highlighted youths' personal realities and need for psychologists to acknowledge the operational and interactional validity of youths' perceptions

of others and social interactions. Their musings yielded the well-known apothegm: "If men define situations as real, they are real in their consequences" (Thomas & Thomas, 1928, p. 572). Likewise, Lewin (1951) insisted that descriptions of the environment (e.g., school, family) as they are perceived or experienced by the adolescent are imperative to understanding the adolescent's behavior.

That is, an adolescent's behavior cannot be explained properly if those individuals (e.g., parents, teachers) in the adolescent's environment do not endeavor to understand the way the adolescent views the world in which he or she lives (Amatea & Sherrard, 1995; Cartwright, 1978; Jessor, 1981; Jessor et al., 1995; Lewin, 1951; McConaughy & Achenbach, 1996; Rigazio-DiGilio, 1994). Social behavioral and social learning theory formulations include such acknowledgments as "...the environment is partly of a person's own making" (Bandura, 1978, p. 345) and "external influences operate largely through cognitive processes" (Bandura, 1978, p. 355).

With particular respect to the period of early adolescence as a time for scientific inquiry, Elliot and Feldman (1990) stated:

One difficult but informative line of [research] inquiry entails efforts to get adolescents to express their perceptions of and reactions to the world around them. Only they can talk about how they feel or identify concerns they may have about their immediate circumstances. (p. 9)

Recently, Phelan et al. (1994) observed:

The problems that young people face emanate from a variety of sources--namely, their family, peer, and school worlds....Students'

voices and concerns—their role as mediators of their own experience—need to be taken into account as pedagogical strategies, programs, and services are developed and implemented. (p. 441, 443)

Samenow (1988) asserted that the antisocial youth or early adolescent with externalizing behavior problems has a peculiar way of looking at the world, a view that is radically different and that is established on quite a different set of premises about life from the youth sans externalizing behavior problems. Thus, discussion of perceptions or beliefs of early adolescents with externalizing behavior disorders (and their families) might be construed framed best in the framework of a "worldview" (Arbuthnot & Gordon, 1986).

Noebel (1991) stated that "every individual bases his thoughts, decisions, and actions on a worldview" (p. 1). Several authors and researchers have proffered definitions of a worldview. Kraft (1979) defined a worldview as a "centralized systematization of conceptions of reality" (p. 53). Wolterstorff (as cited in Walsh & Middleton, 1984) stated that early adolescents' worldviews are "their way of thinking about life and the world, coupled with the values they set for themselves in the context of that way of thinking" (p. 9).

Wright (1989) described a worldview as a "comprehensive framework of beliefs that helps us to interpret what we see and experience" (p. 247).

Phillips and Brown (1991) stated that "a worldview is, first of all, an explanation and interpretation of the world and second, an application of this view to life" (p. 29). Biologist Richard Wright (1989) observed that

a worldview is a kind of picture of how we think the world to be, a picture that can often only be seen by observing how a person lives....Our worldview helps us to interpret what we see, the way we evaluate the events that cross our pathway each day....Even if we never examine our beliefs, they still exist and influence our approach to life. (pp. 9-11)

Geisler and Watkins (1989) stated that a worldview is a way of viewing or interpreting reality. It is an interpretive framework through which or by which an individual makes sense of his environment or the world.

Accordingly, Geisler and Brooks (1990) stated that a worldview is a grid through which individuals interpret everything around them. They observed that "just as a person with rose-colored glasses sees everything in pink, so all that we see is colored by our worldview" (p. 56).

Based on the foregoing discussion, it is proffered that every early adolescent has a worldview (Cantor, 1981; Elliot & Feldman, 1990; Geisler & Brooks, 1990; Geisler & Watkins, 1989; Nash, 1992; Phelan et al., 1994; Samenow, 1988; Wright, 1989). The worldview of the early adolescent functions as an interpretive conceptual scheme to explain why he sees the world as he does, and why he often thinks and acts as he does. To use an analogy, the worldview of a youth with externalizing behavior problems is a pair of cognitive eyeglasses through which he perceives and filters everyday events in various situations and contexts (Amatea & Sherrard, 1995). As Goldstein (1983) remarked, "Spinoza said the eyes of the mind are proofs, but Noam regards proofs more in the way of spectacles, bringing the visions

of intuition into sharper focus" (p. 47). In this regard, Arbuthnot (1992) recently observed that, in adolescents with externalizing behavior problems:

We can rarely have an influence over contextual variables, though we can promote more accurate perceptions and more thorough analyses of contextual variables....The overall failure of most approaches for correcting or preventing antisocial behavior, I believe, lies in their failure to address directly the adolescent's worldview. (pp. 303, 305)

Through the documentation of the behavioral difficulties of early adolescent boys with externalizing behavior problems, we know a great deal about what early adolescents with externalizing behavior problems do (Ashbaker & Roberts, 1994; Braaten & Wrobel, 1991; Compas et al., 1991; Dice, 1993; Gabel & Shindlecker, 1991; Hinshaw, 1992a, 1992b; Kauffman, 1989, 1991; Mattison et al., 1992; Ninness et al., 1993). However, we know very little about what they believe with respect to (a) perceived control in the academic, social, and general domains; and (b) parental bonding, with respect to perceived care and social/personal control. As La Greca (1990) pointed out, although researchers have focused on and collected a wealth of self-report information from youth with internalizing problems (e.g., depression),

much less attention has been accorded to obtaining self-reports from children with externalizing types of problems, such as inattention, hyperactivity, and aggressive behavior, yet the need for systematic input from these youngsters may be critical as well. (p. 10)

Likewise, we also know a great deal about what the parents of youth with externalizing behavior problems do and do not do (e.g., Patterson et al.,

1992), but less about the perceived levels of satisfaction possessed by the parents of such youth with respect to perceived support from the current or ex-spouse, the parent-child relationship, and parent performance or efficacy, as well as early adolescent-perceived bonding to their parents. This study provides descriptive information in all of these areas, enabling the acquisition of a sample-specific snapshot of what early adolescent students with externalizing behavior problems (EBP) and early adolescent students in regular education (RED) perceive and what their parents report regarding various aspects of parent satisfaction.

CHAPTER III

RESEARCH PROCEDURES

The purposes of this descriptive comparison study (Caudill & Hill, 1995) were to survey and to describe (a) the self-reported control-related beliefs, (b) the self-reported early adolescent-perceived parental bonding, and (c) the self-reported parent satisfaction of a sample of early adolescents classified by the public schools as having externalizing behavior problems (Utah State Board of Education, 1988, 1993) and their parents, and a demographically matched sample of early adolescents in regular education and their parents (Schonert-Reichl, 1993).

The three objectives of this descriptive comparison study were to survey, to describe, and to explicate:

1. The differences and commonalities in self-reported control-related beliefs in the academic, social, and general domains between early adolescent boys with externalizing behavioral problems (EBP) and early adolescent boys enrolled in regular education (RED).
2. The differences and commonalities in self-reported perceptions of parental bonding between early adolescent boys with externalizing behavioral problems (EBP) and early adolescent boys enrolled in regular education (RED).
3. The differences and commonalities in self-reported parent satisfaction between parents of early adolescent boys with externalizing

behavioral problems (EBP) and parents of early adolescent boys enrolled in regular education (RED).

An extensive review of the extant literature revealed that the self-report measures utilized in the present study had not been used previously with analogous samples of early adolescent boys and their parents. Thus, no precise hypotheses can be proffered for the present study based on previous research. However, in light of some of the characteristics of students with EBP and their families reported by investigators (see Chapter II), the following seven research questions are tendered for this study:

1. Do early adolescent boys with EBP differ to a statistically significant degree from early adolescent boys in regular education (RED) in their self-reported control-related beliefs in the academic domain?

2. Do early adolescent boys with EBP differ to a statistically significant degree from early adolescent boys in regular education (RED) in their self-reported control-related beliefs in the social domain?

3. Do early adolescent boys with EBP differ to a statistically significant degree from early adolescent boys in regular education (RED) in their self-reported control-related beliefs in the general domain?

4. Do early adolescent boys with EBP differ to a statistically significant degree from early adolescent boys in regular education (RED) in their self-reported perceptions of maternal bonding?

5. Do early adolescent boys with EBP differ to a statistically significant degree from early adolescent boys in regular education (RED) in their self-reported perceptions of paternal bonding?

6. Do the mothers of early adolescent boys with EBP differ to a statistically significant degree from the mothers of early adolescent boys in regular education (RED) in their self-reported levels of parent satisfaction?

7. Do the fathers of early adolescent boys with EBP differ to a statistically significant degree from the fathers of early adolescent boys in regular education (RED) in their self-reported levels of parent satisfaction?

To ascertain the existence of any differences between the two groups of students (EBP/RED) on several self-report dependent variables, a causal-comparative design (Borg & Gall, 1989) was used. The major purpose of causal-comparative designs, which are nonexperimental designs, is directed at the discovery of possible causes and effects of a behavior pattern (or personal characteristic) by comparing individuals in whom this behavior pattern (or personal characteristic) is present with similar individuals in whom the behavior pattern (or personal characteristic) is absent or present to a lesser degree (Borg & Gall, 1989). Although causal-comparative research designs (a) allow the researcher to study cause-and-effect relationships or group differences under conditions which do not permit or inhibit experimental manipulation, and (b) enable many intervariable relationships or group differences to be studied in a single research project, causal-comparative

designs do not determine "causal patterns with any degree of certainty" (Borg & Gall, 1989, p. 540, emphasis in original).

Delineation of the Sample of Participants in the Study

Federal Educational Definition of Serious Emotional Disturbance (SED)

Serious emotional disturbance (SED) was first defined under the Education of the Handicapped Act (U.S. Office of Education, 1977). SED continues to have the same definition under its Congressional reauthorization, the Individuals with Disabilities Education Act (IDEA; U.S. Department of Education, 1991), as follows:

- (i) The term means a condition exhibiting one or more of the following characteristics over a long period of time and to a marked degree that adversely affects educational performance:
 - (a) an inability to learn which cannot be explained by intellectual, sensory, or health factors;
 - (b) an inability to build or maintain satisfactory interpersonal relationships with peers and teachers;
 - (c) inappropriate types of behavior or feelings under normal circumstances;
 - (d) a general pervasive mood of unhappiness or depression; or
 - (e) a tendency to develop physical symptoms or fears associated with personal or school problems.
- (ii) The term includes children who are schizophrenic. The term does not include children who are socially maladjusted, unless it is determined that they have a serious emotional disturbance (U.S. Office of Education, 1977, p. 42478).

State of Utah Interpretation of the Federal Definition of SED

Clark, Reavis, and Jenson (1992) stated that, as a direct result of funding requirements for special education programs, the foregoing federal

definition of SED generally serves as a model for state-level special education classification. They observed, "Because funding to schools is tied to the number of children classified with a particular disability, state definitions are generally broad in coverage and include disorders of emotion and behavior, interpersonal difficulties, and learning and achievement problems" (Clark et al., 1992, pp. 54-55). Utah's definition of "behavior disordered" is an example of a broad definition of "behavioral difficulties that adversely affect academic performance" (Clark et al., 1992, p. 55).

The Utah State Board of Education (1988, 1993) Special Education Rules incorporate the above Federal definition but use the term "behavior disordered" (BD) to categorize students manifesting the foregoing difficulties, rather than the Federal term of "severely emotionally disturbed" (SED). The most recent edition of the Utah State Board of Education (1993) Special Education Rules states:

Behavior disorders is used as a generic term to cover two types of behavior difficulties which are not mutually exclusive but which adversely affect educational performance.

(1) Externalizing refers to behavior problems that are directed outwardly by the student towards the social environment and that usually involve behavioral excesses.

(2) Internalizing refers to a class of behavior problems that are directed inwardly and often involve behavioral deficits. (p. 38, emphasis in original)

Also, in Utah, as in most other states (Mattison et al., 1993; Schonert-Reichl, 1993), before classifying a student as manifesting a primary behavior

disorder (BD), a multidisciplinary team must determine, through data in the student's cumulative records, interviews or classroom observations, and evaluations, that: (a) the student is not primarily identified as manifesting a communication disorder, an orthopedic impairment, a specific learning disability, an intellectual disability, a multiple disability (including deaf-blindness and autism), a visual impairment, a hearing impairment, or a health impairment (e.g., epilepsy, heart condition), tuberculosis, asthma, hemophilia, epilepsy, diabetes); (b) the student is not behaving as a BD student because of vision or hearing impairment; and (c) the student is not behaving as a behavior-disordered student because of an inappropriate classroom discipline system, breakdown of classroom discipline, or inappropriate academic instruction or materials. In Utah, a complete formal and informal evaluation covering behavior, social, and educational areas is required before a child can be classified as primarily BD (Utah State Board of Education, 1988, 1993).

Procedures Required by Participating School Districts to Protect Student and Parent Subjects in the Study

Research in the behavioral and social sciences in general, and the present research in particular, is aimed at collecting and analyzing data concerning beliefs, attitudes, and behaviors of youth and adults (Baumrind, 1990; Ruebhausen & Brim, 1966). As a result, it often becomes a complex issue to pursue the goals of research and, concomitantly, guard against

superfluous invasion of research subjects' privacy (Baumrind, 1990; Daley, 1992; Drew & Hardman, 1985; Harry, 1996).

Drew and Hardman (1985) asserted that "there are few studies in which there is any need to maintain (certainly not publish) data in a form in which subjects can be personally identified" (p. 37) and that, if there is even the slightest potential of privacy risk, "the investigator should take all precautions possible" (p. 38). Clearly, researchers in the behavioral and social sciences must remain exceedingly alert concerning the degree to which private information becomes known to others, particularly when such information is of a personally or interpersonally sensitive nature (Diener & Crandall, 1978; Drew & Hardman, 1985; Macklin, 1992; Melton, 1992; Ruebhausen & Brim, 1966; Sigel, 1990).

On the issue of safeguarding research data, Herzog (1996) noted that the "cadillac of privacy techniques is anonymity" (p. 271). He asserted that "whenever anonymity is possible, it is the preferred approach" (Herzog, 1996, p. 271). Daley (1992) observed that confidentiality, and, ideally, anonymity in research pursuits in which data on families are collected, because families are "one of the most closed and private of all social groups" (p. 4). Baumrind (1990) stated that researchers in developmental psychology have a fiduciary-beneficiary relationship with youth and parent participants in research which involves the "placing of a special trust...and caring" (p. 19). Thus, researchers in developmental psychology have a "protective obligation"

(Baumrind, 1990, p. 17) to all research participants which they must fulfill, if they are "to do good well" (p. 27).

In preparation for implementing this study, this investigator and Dr. Richard N. Roberts (this investigator's major professor), conducted teleconferences with each of the directors of special education and research of nine interested school districts during the 1991-1992 school year. During these teleconferences, the purpose and procedures of the study were delineated, and the participation of their respective school districts was solicited from the directors. Seven school districts eventually agreed to participate partially (i.e., they would only permit access to students with identified behavior problems and their families for the study) or completely (i.e., they permitted access to students with identified behavior problems and to regular education students and their families) in the study. Although all seven school districts officially sanctioned the study at the central administration level (see Appendix B), those districts in which site-based management policies were in effect left participation in the study to the discretion and option of individual school principals.

After the proposal for this study was approved by this investigator's graduate supervisory committee, this investigator met personally with the directors of special education and research from the seven school districts who agreed to participate in the study. This investigator again described the study to the directors and provided them with copies of the questionnaires

and data-collection forms to be used in the study. The directors stated that the results of the study might indeed be useful in programming efforts with students with behavioral disorders. However, because of problems with other student-conducted research in their districts, they unanimously verbalized great concerns about personal anonymity, privacy, and confidentiality of all of the information collected on and provided by students and their parents. Extensive discussions were held between each special education and research director and this investigator in this regard. Such participant concerns have been noted by researchers in previous studies of early adolescents (e.g., Grossman et al., 1992) and in the research literature at large (e.g., Kaijser, 1994; Macklin, 1992; Melton, 1988, 1992; Stanley & Sieber, 1992; Weithorn, 1987).

This investigator concurred that, given the extremely personal, interpersonal, sensitive, and potentially threatening nature of many of the data collected in this study (i.e., students' beliefs about how much control they have over certain aspects of their lives, students' perceptions of the degree and quality of bonding to their parents, the degree of parent satisfaction with spousal support, parents' degree of satisfaction with their own performance as a parent and with their identified child), strict anonymity of all information collected must be maintained after any links to data are no longer needed by the researcher (e.g., after all requisite assessments and mailings are completed; Borg & Gall, 1989; Gall, Borg, & Gall, 1996). Lebow

(1982) has noted that to reduce reactivity in subjects who are being asked to provide information using self-report instruments, researchers should provide a guarantee of respondent anonymity, explain that the data analysis will focus on group and not individual results, use data gatherers who are not service providers (e.g., work for the school district), and offer a clear explanation of the potential use for the data being collected.

For the present study, the special education and research directors in the participating school districts required that specific and detailed procedures be followed to maintain anonymity of all student and parent data. The subject protection procedures requested by all directors were adhered to strictly (Borg & Gall, 1989; Committee for Ethical Conduct in Child Development Research, 1990; Douvanis & Brown, 1993, 1995; Drew & Hardman, 1985; Foster, 1988, 1990; Gall et al., 1996; Macklin, 1992; Melton, 1992; National Center for Education Statistics, 1994; Utah State Board of Education, 1988, 1993). A list of these procedures is contained in Appendix A. The requisite research clearances for the seven participating Utah school districts and copies of all correspondence between this investigator and school district representatives and staff are located in Appendixes B and C, respectively.

In summary, after all data-collection efforts (initial and follow-up) were concluded and family monetary incentives were mailed (thus, eliminating any compelling research need for students' and parents' names and addresses), personal anonymity for all student and parent data collected for this study

was pledged to the special education and research directors by this investigator and Dr. Richard N. Roberts. Although students' and parents' names and addresses would need to be utilized for study administrative purposes until the completion of all student and parent data collection (Herzog, 1996), this investigator and Dr. Richard N. Roberts assured the directors that all student-provided and parent-provided data would be rendered completely anonymous after initial and follow-up data collection, verification of the data, and entry of the data into a computer file for analysis (Committee for Ethical Conduct in Child Development Research, 1990; Douvanis & Brown, 1993, 1995; Drew & Hardman, 1985; Foster, 1988, 1990; Herzog, 1996; Irvine, 1992; Kaijser, 1994; Marshall, 1993; Melton, 1988, 1992; National Center for Education Statistics, 1994; Sproull, 1988; Stanley & Seiber, 1992; Utah State Board of Education, 1993). Although parents of students were apprised of the data anonymity and security strategies at the time their participation in this study was solicited (March, 1992), they were informed of these procedures again by this investigator and Dr. Richard N. Roberts at the conclusion of parent data collection in the fall of 1992 (see Appendixes D and J).

Location and Selection of Study Participants

After subject protection agreements were reached among the seven special education and research directors, this investigator, and Dr. Richard N. Roberts, the district special education/research directors and individual school

principals provided, the names of boys (a) who were receiving services under the special education classification of "behavior disordered" (BD; Utah State Board of Education, 1988) in Category I, Category II, Category III, Category IV, and Category V educational placements and, (b) if the directors knew, who were considered to be exhibiting behavioral problems of a primarily externalizing nature (Utah State Board of Education, 1988). The externalizing natures of students' problems were documented by this investigator through (a) an examination of each student's weaknesses as listed on their Individualized Education Program (IEP) form, (b) review and gleaning of behavioral information from extant reports of the district school psychologist or designated psychological examiner contained in the students' special education files, and (c) conversations with each student's special education teacher(s).

All seven school district special education directors noted that, from their experience, more than 90% of the early adolescent boys receiving some level of special education services under the BD classification in their programs demonstrated problems of a primarily "externalizing" nature (i.e., outwardly directed behavior toward others and the environment usually involving behavioral excesses) rather than problems of an "internalizing"

nature (i.e., behavior problems that are directed inwardly and often involving behavioral deficits) (Utah State Board of Education, 1988, 1993).³

In the present study, the term "externalizing behavior problem" (EBP), is used as a synonym for the students in the study sample who were identified under state of Utah Special Education Rules (Utah State Board of Education, 1988, 1993) as "behavior disordered" (BD). The term EBP, chosen for use in the present study, while descriptive regarding the nature of students' public school-identified behavioral difficulties (externalizing), does not impute either an internal (student-centered) or exogenous source to the students' identified difficulties (Long & Brendtro, 1992). Instead, the term EBP simply implies that students so designated have been identified by the public schools as youth who are having behavioral problems of a specific nature (externalizing) and hence, as a consequence of the externalizing

³The following are the explications of the intensity levels of special education service provision for students in Utah served under the Individuals with Disabilities Education Act (U.S. Department of Education, 1991, 1992, 1993c, 1994):

Category I - A student receives special education and related services between 0% and 21% of the school day;

Category II - A student receives special education and related services between 21% and 60% of the school day;

Category III - A student receives special education and related services for more than 60% of the school day;

Category IV - A student is housed and is receiving educational services in a public residential facility outside the public school environment; and

Category V - A student is receiving educational services at home or in a hospital environment.

manifestation of their problems, are often "in conflict with self, family, school, and community" ("Statement of Purpose," 1992, p. 2).

For most Category I and some Category II EBP students, parent or guardian names and addresses for the students were released, in confidence, to this investigator by individual school principals for purposes of mailing study participating letters. The parent or guardian names and addresses for many Category II, Category III, Category IV, and Category V EBP students were released, in confidence, to this investigator by the seven special education and research directors of the participating school districts for the same purpose (see Footnote #3 for an explication of the foregoing categories of special education service provision to students). However, in some cases, neither individual school principals nor special education and research directors would release parent or guardian names and addresses. Rather, some principals and directors requested that this investigator provide letters (and, if families agreed to participate, subsequent parent-satisfaction questionnaires and follow-up materials) to them, personally, and they would mail correspondence and questionnaires to families directly from their schools.

In either case, the parents or guardians of all EBP students (Categories I-V) who were receiving special education services during March 1992 in the seven participating school districts were mailed letters explaining the purpose of the study and requesting their confidential, and eventually anonymous,

participation (see Appendix D). If parents agreed to participate confidentially and anonymously in the study, they were requested to complete and return (in a self-addressed, stamped envelope) an informed consent form (see Appendix E) and a family information form (demographic data sheet; see Appendix F), which were included with the letter in which their participation in the study was requested. A follow-up mailing to parents of EBP students who did not respond and for whom school districts provided current mailing addresses was conducted 2 weeks following the initial mailing.

The initial and follow-up mailings to all school district-accessible families of current (March 1992) seventh- and eighth-grade students with identified EBP yielded a total of 35 seventh-grade students and a total of 34 eighth-grade students whose families volunteered to participate anonymously in the study from the seven participating school districts. Based on the EBP enrollment data reported by the participating school districts' special education and research directors for seventh- and eighth-grade students with EBP, the total number of families of EBP students who agreed to participate in the study represented 9.9% of the seventh-grade boys and 9.7% of the eighth-grade boys who were receiving some level (Category I through Category V) of special education services in the seven participating school districts during March of 1992.

These voluntary participation rates are quite low, and greatly limit the generalizability of results obtained in this study. However, as Grossman et al.

(1992) have noted, collecting data from parents and their adolescent children from "a middle and working class community that is justifiably wary of psychological research presents inevitable problems in obtaining full participation" (p. 533). This researcher, similar to Grossman et al. (1992), believes that although the self-selection factor introduces potential bias, obtaining any information on this little-studied group is of value, and that further research "will be necessary to confirm findings, which must be viewed as exploratory" (Grossman et al., 1992, p. 533).

Discussions of these low voluntary participation rates with the special education/research directors in the seven participating school districts as well as consultations with special education professionals at the Utah State Office of Education revealed that these low participation rates are not surprising given the problematic and school-wary nature of the population. Similarly, Walker et al. (1995) noted the following:

It is well known that schools are not friendly places for parents of difficult students. Many parents of these children and youth were themselves difficult in school and may carry negative, hostile memories of their school experiences. Thus, they are distrustful of the school setting and often expect the worst when they are required to have contact with school personnel. Such parents are not necessarily all that supportive of school personnel. (p. 273)

Hence, given this psychosocial schema, it is possible that, when the parents of the early adolescents with EBP in this study were mailed letters (a) which requested their participation in a research project supported by their school district, and (b) which involved their child and themselves in completing

questionnaires about personal matters (e.g., beliefs, levels of satisfaction), they balked at such involvement.

Thirty EBP students/families from the 35 available seventh-grade EBP students/families and 30 EBP students from the 34 available eighth-grade EBP students/families were selected for inclusion in the study using a table of random numbers (Borg & Gall, 1989). However, after families of EBP students who agreed to participate in the study were mailed parent satisfaction self-report questionnaires, six parents of EBP students (one parent of a seventh-grade EBP student from an intact family; two parents of seventh-grade EBP students from a nonintact families; two parents of eighth-grade EBP students from intact families; and one parent of an eighth-grade EBP student from a nonintact family) contacted this investigator by phone and requested that they and their child be removed from the study.

The reasons provided by the six parents for withdrawing from participation in the study were that they did not want to complete the parent-satisfaction questionnaires, and that they had second thoughts because they were concerned that their school/district would have access to the data that they and their child would provide. Given the nature of research such as that in this study (i.e., parent self-reports of personal satisfaction regarding aspects of family relationships, behaviors, and environment), such attrition is not unusual (Grossman et al., 1992).

The nature of the study was explained to these six families of EBP students again. Specifically, this investigator highlighted (a) how their and their child's identities would be protected (i.e., information identifiable only by anonymous ID number only after all data were collected on students and families), and (b) how no information would be reported for specific individuals and families but only by groups of students and families. After this additional explanation and assurance by this investigator, only the parents of two eighth-grade EBP students from intact families reenlisted in the study, thus allowing archival educational data and self-report questionnaire data to be retained for the EBP students from these families.

However, the parents of these EBP students who reenlisted in the study permitted the collection of data on their child only; they declined to complete parent-satisfaction self-report questionnaires. These two families of EBP students, although they only permitted collection of data on their children, were retained in the study to maximize group sample sizes.

None of the other three families of seventh-grade EBP students nor the family of the eighth-grade EBP student could be dissuaded from leaving the study. One of the parents remarked that, "Once I was told by someone like you that my son's testing or questions that they asked me would not be talked about with anyone. Then, the next week most of the school knew. After I got this parent questionnaire from you, I changed my mind. I made that mistake once, but I'm not going to make it again." Therefore, abiding by

the research agreements among the school districts, parents, and this investigator, the four families' requests were honored and they (and their EBP child) were removed from the study.

In addition to the attrition of the foregoing four families of EBP students (three families of seventh-grade students; one family of an eighth-grade student), two of the EBP students, who were listed by a participating school district as enrolled in the eighth grade, were found by this investigator to be actually enrolled as ninth-grade students and, thus, were outside the grade parameters of the study. Also, two of the seventh-grade EBP students and one of the eighth-grade students originally selected for inclusion in the study were discovered by this investigator to manifest primarily internalizing behavioral problems (Reynolds, 1992), based on a review of their special education files (i.e., both of these students were identified by the schools and were receiving special education services for social isolation/withdrawal, and anxiety/depression). Thus, these two seventh-grade EBP students and the eighth-grade EBP student were outside the descriptive EBP group parameters of the study (i.e., primarily externalizing behavior). Consequently, the remaining two families of eighth-grade EBP students and the remaining three families of eighth-grade EBP students in the original pool of families were included in the study, leaving no seventh-grade EBP nor eighth-grade EBP students/families left in the volunteer subject pool.

Fortuitously, no parents from these five "replacement" families of EBP students contacted this investigator to withdraw themselves or their child from the study. Thus, equal numbers of EBP and RED students were still able to be maintained in the four cells of the research design: 30 seventh-grade EBP students; 30 eighth-grade EBP students; 30 seventh-grade RED (regular education) students; and 30 eighth-grade RED students. However, some families of seventh- and eighth-grade EBP students did not return parent-satisfaction questionnaires despite several follow-up attempts (discussed later).

Demographic profiles of the final 30 students in the seventh-grade EBP group and the final 30 students in the eighth-grade EBP group were constructed from confidential demographic self-report data provided by parent(s) at the time they agreed to participate in the study (see Appendix F). These demographic data consisted of (a) marital status (intact/nonintact), (b) terminal level of education of the mother, (c) terminal level of education of the father, (d) annual household income, and (e) total number of members currently residing in the household. Variants of each of these demographic variables have been associated with aggressive, adolescent antisocial behaviors, as well as juvenile delinquency, by numerous researchers (Canter, 1982; Cohen, Brood, Cohen, Velez, & Garcia, 1990; Compas et al., 1995; Dadds, 1995; Dickson, 1996; Farrington, Loeber, & Van Kammen, 1990; Frick, 1993; Gibbs et al., 1996; Hawkins & Weiss, 1985; Henggeler, 1989;

Hetherington & Martin, 1986; Kazdin, 1995a; Loeber, 1990; McCord, 1990, 1993; Moffitt, 1993a; Offord & Boyle, 1988; Reed & Sollie, 1992; Simon & Johnston, 1987; Steinberg, 1987; Webster-Stratton & Herbert, 1994; Williams et al., 1990).

As per the research agreements among this investigator, Dr. Richard N. Roberts, and participating parents and school district representatives for this cross-sectional study, after completion of all student and parent data collection in July of 1992, all links by name and by school to any student- and family-provided information were eliminated under the supervision of Dr. Richard N. Roberts, and lists of parent names and addresses were discarded. For school district research participation and constituent accounting purposes, the seven special education directors requested and were provided by this investigator in September 1992 with the total numbers (but not names) of families and students who participated in the research project from each of their school districts and individual schools.

Independent Confirmation of EBP Students' Difficulties

Independent confirmation of the externalizing nature of the problems of the final groupings of 30 seventh-grade and 30 eighth-grade EBP students was conducted by two external judges who were blind to the purposes of the study. The external judges were (a) Dr. Lee Robinson, an assistant superintendent at a public special education institution in Utah who had

extensive experience in working with special education populations, and (b) Dr. David Mercaldo, an associate professor of special education at an Idaho university with extensive experience in working with students who manifested various disabilities, including externalizing behavior disorders. Neither external judge was employed by any of the seven participating school districts.

Brief behavioral descriptions of the 30 seventh-grade and 30 eighth-grade EBP boys were constructed by this investigator and Dr. Richard N. Roberts from extant information in the students' special education records (see Appendix H). The two external judges were given the definitions of primarily "externalizing behavior disorder" and primarily "internalizing behavior disorder" from the Utah State Office Education Special Education Rules (1988), and were asked to determine whether each of the behavioral descriptions of the EBP students met the primarily "externalizing behavior disorder" definitional criteria or the primarily "internalizing behavior disorder" definitional criteria, and to contact this investigator and Dr. Richard N. Roberts by phone when they had completed their determination. The judges reported that, based on the brief behavioral descriptions provided by this investigator, all 30 of the seventh-grade and all 30 of the eighth-grade EBP students in the study met the definitional criteria of externalizing behavior disorder as defined in the Utah State Office Education Special Education Rules (1988).

Selection of the Regular Education (RED)
Student Participant Group

Because of their perception of the primarily special education nature of the research and the time period for student data collection (March-June, 1992, late in the 1991-1992 school year), three of the seven participating school districts limited their research consent to participation by EBP students and their families. All of the EBP students selected for inclusion in the study who attended school in a fourth participating school district attended classes in a special school in which no RED students were enrolled.

The central administration of a fifth participating school district gave the principals of intermediate, middle, and junior high schools in the district the latitude to determine guidelines for access to students in the study from their schools. Given this administrative prerogative, the principals in this fifth school district only permitted mailings of study participation requests to families of EBP students who attended their schools, because they felt mailings to the general school populations would be too disruptive during the particular time of the school year. Consequently, only two of the participating seven school districts permitted ecumenical access to both EBP students and RED students and their families.

Clearly, selection of RED students from different schools than EBP students attend does present an indeterminate selection threat to the internal validity of this study, but one that was unavoidable given the aforementioned access constraints to students and families. In an attempt to control for this

selection threat to internal validity, whenever possible, RED students in this study were selected from three schools in the two participating school districts that permitted access to RED students and their families: a middle school (grades 6-8), an intermediate school (grades 7-8), and a junior high school (grades 7-8). The middle school and junior high school from which RED students were selected were located in a county comprised of small and moderate size towns (1990 U.S. Census population count for the county = 36,500; Bureau of the Census, 1993), and the intermediate school was located in a county comprised of a mixture of suburban and urban communities (1990 U.S. Census population count = 726,000; Bureau of the Census, 1993).

Letters requesting parents' and their early adolescents' participation in the study were mailed to all parents of seventh-grade boys and eighth-grade boys (a) who were attending one middle school (grades 6-8), one intermediate school (grades 7-8), and one junior high school (grades 7-8) in two out of the seven participating school districts, and (b) who were not receiving any special education services and were enrolled in regular education (RED) classes only. Students' educational services status (i.e., that they were enrolled in regular education classes only and were receiving no special education services of any kind) and current grade assignment were substantiated by extant school records, guidance counselors, and principals of the three schools from which students in the RED comparison

group were drawn. Similar procedures and operational guidelines have been used and reported in other comparison studies of students with and without identified behavioral problems (e.g., Schonert-Reichl, 1993).

Oversampling of families of seventh-grade and eighth-grade RED boys yielded a volunteer subject pool of 132 seventh-grade RED families/students, and 124 eighth-grade families/students, from which this investigator and Dr. Richard N. Roberts matched, as closely as possible, RED families to EBP families on the five demographic variables delineated previously (Schonert-Reichl, 1993). Demographic variable congruence was first sought between the already selected EBP students and the to-be-chosen RED students on the marital status of the family (intact or nonintact). The other points of EBP student/RED student demographic congruence, in descending order of demographic variable level acceptability, were mother's level of education, father's level of education, annual household income, and total household size (in members).

The goal for this investigator and Dr. Richard N. Roberts in matching EBP cases to RED cases was to attain one-to-one correspondence on all of the five demographic variables (marital status of the family, mother's level of education, father's level of education, annual household income, total household size) for each case. All cases were matched one-to-one on marital status of the family (intact/nonintact). However, one-to-one demographic variable correspondence for EBP/RED cases was not always

possible for the other four demographic variables, given the variability of the demographic distribution in the oversampled pool of volunteer RED families. Mother's level of education, because it was the second demographic variable for which close demographic correspondence was sought, was the most demographically congruent variable between EBP and RED groups. In cases where one-to-one demographic variable correspondence between an EBP case and a RED case was not possible, a case was considered an adequate "match" if the categorical level of the demographic variable of an RED case was within one demographic variable category (lower or higher) of the particular EBP case to which the RED case was to be matched.

It is interesting to note that this volunteer subject pool of families of RED students represented 30.5% of the families of seventh-grade RED boys and 29.8% of the families of eighth-grade RED boys in the three middle-level schools from which RED matching subjects were solicited. These percentages of volunteer participation for RED families are three times higher than the percentages of volunteer participation for the EBP families reported earlier.

A demographically congruous comparison group of 30 seventh-grade and 30 eighth-grade RED students was selected from the oversampled group drawn from the three middle-level schools mentioned above. Each family of a seventh-grade or eighth-grade RED student was selected to match, as closely as possible, a family of a seventh-grade or eighth-grade EBP student

on the variables of (a) marital status (intact/nonintact), (b) terminal level of education of the mother, (c) terminal level of education of the father, (d) annual household income, and (e) total number of members currently residing in the household. If more than one RED student met the matching criteria for an EBP student, one RED student was chosen at random from this subset of RED students with equivalent demographic matching criteria. Demographic information on level of education for fathers from nonintact families from both the EBP group ($n = 18$) and RED group ($n = 18$) was provided by the mothers from these families.

In addition to the foregoing demographic variables, RED students (and their families) were selected from these three schools (located in two participating school districts) to match EBP students (located throughout all seven participating school districts) as closely as possible on the geographical milieu of their respective schools. Such rough "geographical" matching of RED students to EBP students was possible in 36 out of 60 cases (60%). Fifteen percent ($n = 9$) of the RED students were matched to EBP students from the same schools.

After families of RED students who agreed to participate in the study were mailed parent satisfaction self-report questionnaires, four families of RED students (two families of seventh-grade RED students and one family of an eighth-grade RED student from intact families; one family of an eighth-grade RED student from a nonintact family) contacted this investigator by

phone and requested that they and their child be removed from the study. The reasons given by all three parents of RED students for withdrawing from participation in the research were that they (nor their spouses, if they were married) did not want to complete parent-satisfaction questionnaires.

As with the parents of EBP students who elected not to participate after receiving parent-satisfaction questionnaires, this investigator explained the nature of the study to the RED parents again, specifically highlighting (a) how their and their child's identities would be protected (e.g., information identified by anonymous ID number only after all data were collected on students and families), and (b) how no information would be reported for specific individuals and families but only by group. After this additional explanation and assurance by this investigator, the intact families of one seventh-grade and one eighth-grade RED student reenlisted in the study, thus allowing archival educational data and self-report questionnaire data to be retained for this RED student. However, despite verbal encouragement from this investigator, neither of the other two families of RED students could be dissuaded from leaving the study.

Thus, two other families of RED students were selected from the remaining pool of families of RED students who had agreed to participate to match as closely as possible, the demographic profiles of the two families of RED students who withdrew from the study, and, hence, the demographic profiles of the EBP students with whom the original two RED students were

matched. No parents from these two "replacement" families of RED students contacted this investigator to withdraw themselves or their adolescent from the study. However, some families of RED students did not return parent-satisfaction questionnaires despite several follow-up attempts (discussed later).

Final Composition of the EBP and RED Participant Groups

The final sample of students for the study consisted of 30 seventh-grade EBP students, 30 seventh-grade RED students, 30 eighth-grade EBP students, and 30 eighth-grade RED students. The final sample of students' families was comprised of 84 intact (two-parent) families (42 EBP; 42 RED), and 36 nonintact (single-parent) families (18 EBP; 18 RED).

Thus, intact (two-parent) families comprised 70.0% of the volunteer sample of families of EBP and RED students, and nonintact (single-parent) families constituted 30.0% of the volunteer sample of families of EBP and RED students in this study. Mothers were the heads of all nonintact families (both EBP and RED) in this study, and they gave permission for their children to be included and participate in the study. The percentage of nonintact families in this sample (30.0%), although slightly lower, is fairly comparable to previous data on the percentage of nonintact families among secondary school youth with disabilities (36.8%) reported by Wagner et al. (1989) and compared to the general population of secondary school youth (29.7%)

(Bureau of the Census, 1987). A comparable percentage of nonintact families (39.0%) has been reported recently in clinical studies of antisocial children in the published literature (Kazdin, 1995b).

Group Comparability Analyses⁴

Dadds (1995) has observed that investigators using typical group-comparison designs have sought to compare children with externalizing behavior problems and their families with children who have different problems and their families or children with no identified problems and their families. Because the independent variable (diagnostic or categorical status) is produced by selection versus manipulation, these designs are correlational rather than experimental. Thus, "the researcher cannot be sure that the differences are due to the independent variable rather than some other confounding variable" (Dadds, 1995, p. 65), such as parent education, SES, and age and sex of the child (Loeber et al., 1995).

Therefore, in the current study, unlike typical group-comparison studies in the clinical literature on children with behavior disorders and emotional disturbance (e.g., Gehring & Marti, 1993), substantial effort and resources were expended to achieve comparability of groups on important demographic variables (i.e., parent education, annual income, total household size, age and sex of the youth, and family status [intact/nonintact]).

⁴All statistical analyses in this study were performed using SPSS for WindowsTM (Release 6.0; Norusis, 1993).

The comparability of the EBP and RED groups on parent self-reported demographic variables is displayed in Tables 1 through 6. Because several of the parent self-reported demographic variables were categorical (education of mother, education of father, annual income), chi-square analyses were conducted (Sproull, 1988). The chi-square analyses revealed no statistically significant differences ($p > .05$) between obtained and expected frequencies for the EBP and RED groups on the variables of education of mother, education of father, and annual income.

Inspection of the demographic data in Tables 1 through 6 suggests that the families of EBP students who chose to participate in this study may reflect a somewhat better educated and more "middle class" group than other families of EBP students. For example, 66.6% of the mothers of seventh-grade EBP students in this study and 73.3% of the fathers of seventh-grade EBP students reported having some training or education beyond high school, and 26.6% of the families of seventh-grade EBP students reported having annual household incomes above \$22,999. For the sample of eighth-grade EBP students in this study, 73.3% of the mothers and 83.3% of the fathers of eighth-grade EBP students reported having some training or education beyond high school, and 59.9% of the families of eighth-grade EBP students reported having annual household incomes above \$22,999. Recently, Andrews et al. (1995) reported, in a treatment study of at-risk and antisocial early adolescents ($n = 158$; mean age = 12 years) which utilized self-selected

Table 1

Comparability of Seventh-Grade EBP and RED Groups on Education
of Mother^a

Education of mother	7th-Grade EBP	7th-Grade RED	Pearson chi-square
< 8 years	0.0%	0.0%	4.81*
8th grade to some high school	6.7%	3.3%	
High school graduate	26.7%	26.7%	
Post-high school training	10.0%	16.7%	
Some college or Associate degree	36.7%	26.7%	
4-year college degree	0.0%	6.7%	
Some graduate school	10.0%	16.7%	
Graduate degree	10.0%	3.3%	

^a7th-grade EBP group $n = 30$; 7th-grade RED group $n = 30$

* $p > .05$

(volunteer) families, that 75% of the families who agreed to participate in the study had annual incomes above \$10,000, and "more than 50% of the mothers and 45% of the fathers had some college education" (p. 483).

As a gauge of the relative affluence of the sample of families in the present study, according to the federal government, in 1991 a family of three was "poor" if its total annual income was less than \$10,860. For a family of four, the poverty threshold was \$13,924 (Children's Defense Fund, 1992). As another comparative measure of the relative affluence of the families in this sample, the Bureau of the Census (1993) reported that median family incomes in the five northern Utah counties containing the seven school

Table 2

Comparability of Eighth-Grade EBP and RED Groups on Education
of Mother^a

Education of mother	8th-Grade EBP	8th-Grade RED	Pearson chi-square
< 8 years	0.0%	0.0%	0.82 [*]
8th grade to some high school	10.0%	6.7%	
High school graduate	16.7%	20.0%	
Post-high school training	13.3%	16.7%	
Some college or Associate degree	33.3%	26.7%	
4-year college degree	13.3%	13.3%	
Some graduate school	6.7%	10.0%	
Graduate degree	6.7%	6.7%	

^a8th-grade EBP group $n = 30$; 8th-grade RED group $n = 30$

^{*} $p > .05$

districts that participated in this study ranged from \$31,562 to \$38,050.

Findings from previous research (e.g., Rosenthal & Rosnow, 1975) suggest that volunteer subjects in research typically are better educated, come from a higher socioeconomic class, are more in need of social approval, and are more intelligent than those who choose not to volunteer and participate in research studies. In fact, Borg and Gall (1989) have stated, "We know that volunteer subjects are likely to be a biased sample of the target population since volunteers have been found in many studies to differ from nonvolunteers" (p. 227).

Table 3

Comparability of 7th-Grade Externalizing Behavior Problem (EBP) and
Regular Education (RED) Groups on Education of Father^a

Education of father	8th-Grade EBP	8th-Grade RED	Pearson chi-square
< 8 years	0.0%	0.0%	3.58*
8th grade to some high school	6.7%	6.7%	
High school graduate	20.0%	6.7%	
Post-high school training	20.0%	26.7%	
Some college or Associate degree	23.3%	23.3%	
4-year college degree	20.0%	16.7%	
Some graduate school	6.7%	10.0%	
Graduate degree	3.3%	10.0%	

^a7th-grade EBP group $n = 30$; 7th-grade RED group $n = 30$

* $p > .05$

Thus, such a bias must be taken into account when attempting to generalize the findings of the present study (Andrews et al., 1995; Baker, 1988; Grossman et al., 1992). Because this investigator did not have direct access to parents' educational and financial records for information confirmation purposes, and because school district special education programs do not maintain records on family income and education data by type of student (i.e., EBP), parents of both EBP and RED students in this study were presumed to be veridical regarding their reported economic and educational statuses.

Table 4

Comparability of Eighth-Grade EBP and RED Groups on Education
of Father^a

Education of father	8th-Grade EBP	8th-Grade RED	Pearson Chi-square
< 8 years	0.0%	0.0%	8.81*
8th grade to some high school	10.0%	3.3%	
High school graduate	6.7%	16.7%	
Post-high school training	30.0%	13.3%	
Some college or Associate degree	30.0%	20.0%	
4-year college degree	10.0%	30.0%	
Some graduate school	0.0%	3.3%	
Graduate degree	13.3%	13.3%	

^a8th-grade EBP group $n = 30$; 8th-grade RED group $n = 30$

* $p > .05$

As recommended by Huberty and Morris (1989), a one-way analysis of variance (ANOVA) was performed on the continuous matching variable of parent self-reported household size (seventh-grade students: $F [1, 119] = 1.27, p > .05$; eighth-grade students: $F [1, 119] = 0.24, p > .05$) and revealed no statistically significant difference between the means for the EBP and RED groups on this variable. Both the EBP and the RED groups had equivalent numbers of students from intact families (married) and nonintact families (separated or divorced). The seventh-grade EBP and RED groups both had 24 intact and 6 nonintact families; the eighth-grade EBP and RED groups both had 18 intact and 12 nonintact families. Thus, aggregated across grade

Table 5

Comparability of 7th-Grade Externalizing Behavior Problem (EBP) and Regular Education (RED) Groups on Annual Household Income and Total Household Size^{a,b}

Annual household income	7th-Grade EBP	7th-Grade RED	Pearson chi-square
\$0 thru \$9,999	10.0%	3.3%	4.52'
\$10,000 thru \$15,999	6.7%	16.7%	
\$16,000 thru \$22,999	36.7%	20.0%	
\$23,000 thru \$29,999	20.0%	26.7%	
\$30,000 thru \$36,999	10.0%	10.0%	
\$37,000 thru \$43,999	10.0%	13.3%	
\$44,000 thru \$50,999	3.3%	6.7%	
\$51,000 and above	3.3%	3.3%	
			ANOVA
<u>Total Household Size</u>			<u>F Statistic</u>
Mean # of Members Reported Living in the Household			
	5.2	4.7	1.27'

^a7th-grade EBP group $n = 30$; 7th-grade RED group $n = 30$

^bStudents were also matched case by case on the "intactness" of the family (married, two-parent family = "intact" family; separated or divorced, single-parent family = "nonintact" family).

'p > .05

(7th/8th), the total number of intact families was 42 and the total number of nonintact families was 18 for both the EBP and RED groups.

Because of school district concerns, no data were collected on student or family ethnicity. However, data from the Bureau of the Census (1993)

Table 6

Comparability of Eighth-Grade EBP and RED Groups on Annual Household
Income and Total Household Size^{a,b}

Annual household income	8th-Grade EBP	8th-Grade RED	Pearson chi-square
\$0 thru \$9,999	10.0%	10.0%	3.65*
\$10,000 thru \$15,999	16.7%	16.7%	
\$16,000 thru \$22,999	10.0%	3.3%	
\$23,000 thru \$29,999	16.7%	26.7%	
\$30,000 thru \$36,999	20.0%	10.0%	
\$37,000 thru \$43,999	13.3%	23.3%	
\$44,000 thru \$50,999	13.3%	10.0%	
\$51,000 and above	13.3%	10.0%	
<u>Total Household Size</u>			ANOVA F Statistic
Mean # of Members Reported Living in the Household	5.1	4.9	0.24*

*8th-grade EBP group $n = 30$; 8th-grade RED group $n = 30$

^bStudents were also matched case by case on the "intactness" of the family (married, two-parent family = "intact" family; separated or divorced, single-parent family = "nonintact" family).

* $p > .05$

indicated the following ethnicity percentages for 12- and 13-year-old males in Utah during 1990 (2 years prior to the present study): Caucasian = 89.8%; Black = 0.04%; American Indian, Eskimo, or Aleut = 1.4%; Asian or Pacific Islander = 1.5%; Hispanic = 4.9%; Other race = 2.1%.

Academic Achievement, General Ability,
and Grade Point Average Data Derived
for EBP and RED Students from Extant
Archival Scholastic Records

Collection of archival achievement, general ability, and grade-point-average (GPA) data, especially from students' extant educational files, can present problems related to reliability, validity, completeness, and direct comparison for data obtained (Gay, 1992; Rosnow & Rosenthal, 1993). However, despite these limitations, extant archival data in these areas were collected on students in the present study in an attempt to gather as much descriptive data as possible for group comparison purposes.

Data on reading, math, and language achievement, when not available from EBP students' Stanford Achievement Tests (SAT; The Psychological Corporation, 1992) results found in their scholastic cumulative records maintained by school guidance counselors, were collected from EBP students' most recent special educational evaluation standardized test protocols and psychoeducational reports located in their special education files. All archival data on reading achievement, math achievement, language achievement, and general ability for the 60 EBP students in this study were no more than 2 years old at the time of collection. However, because not all EBP students were administered the same achievement measures in their special education programs, a methodological weakness of these data is that they are not all from the same assessment source (i.e., the same achievement or general-ability test). For EBP students, information on

general ability was derived from extant special education records, as measured by traditional, school district personnel-administered intellectual assessment instruments (e.g., Wechsler Intelligence Scale for Children-Revised [Wechsler, 1974]; Slosson Intelligence Test [Slosson, 1983]).

Because RED students are not in special education placements that require both individualized assessments of academic achievement and general intellectual ability prior to special education placement and service provision, assessments of general intellectual ability of RED students are usually not available. The only available and closest approximation to a "general" or "intellectual ability" index for RED students, for comparative purposes in this study, were RED students' Thinking Skills subtest scores derived from their school's most recent administration of the 8th edition of the Stanford Achievement Test Series (SAT; The Psychological Corporation, 1992).

The Thinking Skills subtest of the SAT Series is a recent domain assessed by the Series. It is best described by the following sections taken from the booklet, "Measuring Progress Toward America's Educational Goals" (The Psychological Corporation, 1992):

Questions at the highest cognitive level are labeled 'Thinking Skills' questions. Thinking Skills questions measure students' ability to use the most complex levels of thinking and are embedded throughout the battery....Thinking Skills questions are classified as such because of the behaviors (processes) involved in answering them, not because of the measured level of difficulty of the questions. Performance on these questions is reported as a Thinking Skills score from items in the Reading

Comprehension, Listening, Concepts of Number, Mathematics Applications, Study Skills, Science, and Social Science subtests. (pp. 28-29)

Total math, reading, and language achievement national percentile scores for RED students were obtained from their most recent SAT (The Psychological Corporation, 1992). All archival data on reading achievement, math achievement, language achievement, and general ability, for the 60 RED students in this study, were no more than 2 years old at the time of collection.

However, because special education students who are served more than 50% of the day in special education program settings are not required to take the SAT by the Utah State Office of Education, not all EBP students in this sample were administered the SAT by participating school districts, and, thus, SAT scores for all EBP students were not available for direct comparison with RED students' SAT scores. In this sample, because less than half of the EBP students (38.3%) had partial or complete SAT data for math, reading, and language achievement, supplemental information on academic achievement was collected from other standardized achievement tests located in EBP students' special education files. SAT reading, math, and language achievement scores for EBP students were used when they were available.

As aforementioned, however, a substantial methodological weakness of the achievement and general-ability data in the present study data is that they

are not all from the same assessment source (i.e., of necessity they represent a mélange of academic achievement and general-ability indices), and, thus, they must be viewed and interpreted with this caveat in mind. Grade-point-averages (GPA) for EBP and RED students for the most recent grading period (March, 1992) were provided by school guidance counselors.

Means and standard deviations for the EBP and RED groups on academic achievement (language, reading, math), general ability, and GPA are located in Table 7. Means for reading achievement, math achievement, language achievement, and general ability are presented in \bar{I} -score averages. \bar{I} -scores are standard scores with a mean of 50, and a standard deviation of 10. \bar{I} -scores were derived from student archival record achievement test percentiles or other standard scores using a score conversion table (Ghiselli, Campbell, & Zedeck, 1981, pp. 455-466).

Because the EBP and RED groups in this study were matched on several demographic variables (e.g., parents' education, income), t -test statistics for EBP/RED group comparisons reported in Table 7 are derived from t tests for correlated means and are based on two-tailed tests of statistical significance (Borg & Gall, 1989, pp. 549-550). Standardized mean differences (SMD) between the EBP and RED groups on the variables in Table 7 were calculated using the following formula:

$$\frac{EBP_{Mean} - RED_{Mean}}{\text{Pooled } \underline{SD} \text{ of EBP and RED}} = \text{SMD}$$

Table 7

Means, Standard Deviations (SD), t Values, and Standardized Mean Differences (SMD) for Externalizing Behavior Problem (EBP) and Regular Education (RED) Groups on Academic Achievement, General Ability, and Grade Point Average Independent Variables Derived from School Archival Records^a

Independent variables	Grade	N	EBP Group		RED Group		t value ^b	SMD ^c
			Mean	SD	Mean	SD		
Reading achievement	7th	30	46.4	3.2	52.5	4.1	-6.2*	-1.7
	8th	30	45.8	3.1	49.4	4.4	-3.9*	-0.9
	7th+8th	60	46.1	3.2	51.0	4.5	-7.0*	-1.3
Math achievement	7th	30	48.0	3.2	53.3	4.8	-5.2*	-1.3
	8th	30	47.6	3.6	49.0	3.8	-1.5	-0.4
	7th+8th	60	47.8	3.4	51.2	4.8	-4.6*	-0.8
Language achievement	7th	30	47.0	2.3	52.1	3.6	-6.3*	-1.7
	8th	30	45.7	3.4	49.6	3.3	-4.4*	-1.2
	7th+8th	60	46.4	2.9	50.8	3.6	-7.5*	-1.4
General ability	7th	30	48.8	2.3	50.7	1.7	-4.7*	-0.9
	8th	30	48.2	1.4	50.1	2.3	-4.4*	-1.0
	7th+8th	60	48.5	1.9	50.4	2.1	-6.5*	-0.9
Grade point average	7th	30	2.1	0.6	3.0	0.7	-5.8*	-1.3
	8th	30	2.4	0.6	2.9	0.4	-4.6*	-1.1
	7th+8th	60	2.3	0.6	3.0	0.6	-7.3*	-1.2

^aMeans reported for Reading Achievement, Math Achievement, Language Achievement, and General Ability are T-scores (standard scores; mean = 50, SD = 10) converted from percentiles or other standard scores (Ghiselli, Campbell, & Zedeck, 1981). The means for Grade Point Average are based on a 4-point scale (range 0.0 to 4.0).

^bBecause the EBP/RED groups were matched on a set of demographic variables, reported t-values are from t-test analyses for paired samples (Glass & Hopkins, 1984).

^cStandardized Mean Differences (SMD) were calculated using the following formula:

$$\frac{EBP_{\text{Mean}} - RED_{\text{Mean}}}{\text{Pooled SD of EBP and RED}} = \text{SMD}$$

*p < .05 (two-tailed statistical significance)

Because one of the disclaimers for classification as a EBP student is that the student is not primarily identified as manifesting a cognitive disability, no large difference was expected between the groups in general ability. That is, EBP students should have, by federal special education classification guidelines, and are likely to possess, general cognitive abilities that lie within the average range of functioning. For more than three decades, this presumption has been supported by many researchers (Beitchman, Patterson, Gelfand, & Minty, 1982; Foley & Epstein, 1992; Forness & Dvorak, 1982; Lahey et al., 1995; Loeber et al., 1995; Mastropieri et al., 1985; Mattison et al., 1993; McConaughy & Achenbach, 1996; Perna, Dunlap, & Dillard, 1983; Rutter, 1984; Schonert-Reichl, 1993; Schroeder, 1965; Valdes, Williamson, & Wagner, 1990). The average general ability \bar{I} -score for the EBP group in this study was 48.5. This \bar{I} -score, despite being statistically significantly different from the RED group's average general ability \bar{I} -score of 50.4, is within one-half of a standard deviation of the average \bar{I} -score of 50.

However, as Foley and Epstein (1992) have observed, "Despite their average intellectual functioning, behaviorally disordered students are portrayed as academic underachievers" (p. 16). The findings of the present study strongly support their observation. Statistically significant differences ($p < .05$) were found by grade and overall between the EBP group and the RED group for all of the independent variables in Table 7, except for math achievement for eighth-grade students.

All standardized mean differences (SMDs) for these variables were negative (indicating lower ratings for the EBP group) and were beyond a half a standard deviation in magnitude (again, except for math achievement for eighth-grade students). However, Snyder and Lawson (1993) recently observed that data-interpretation aids, such as SMDs, "are merely tools to assist the researcher in gaining a more informed analysis of data. The ultimate responsibility for developing a comprehensive analysis of the meaning of results rests with the researcher" (p. 347, emphasis in original).

Finally, although EBP students, as a group, had lower achievement averages and GPAs than RED students to a statistically significant degree, the lowest achievement T-score average for the EBP group (45.7 for language achievement for eighth-grade EBP students) was still within one half standard deviation of the mean of T-score distribution (mean = 50; SD = 10), indicating low average functioning. Also, the overall GPA of EBP students was above a "C" average (BD group GPA = 2.3; "C" average = 2.0). These findings are consistent with other reports of EBP students' scholastic achievement and performance (Epstein et al., 1989; Foley & Epstein, 1992; Scruggs & Mastropieri, 1986; Wagner, 1995; Walker et al., 1987).

Special Education Service Patterns of EBP students in the Study

During the 1991-1992 school year (when the data collection for this study was conducted), a total of 3,614 adolescents (students ages 12 through

17) in Utah was receiving special education services under the classification of "behavior disordered" (BD) in the state of Utah. Students under the BD classification in Utah are served in a spectrum of alternative special education categorical placements (Utah State Board of Education, 1993, p. 79). With respect to the amount of time they received special education and related services for their identified behavioral disabilities, adolescent students who received such services under the BD classification in Utah during the time period of study were a very heterogeneous group. The following numbers and percentages of students (ages 12 through 17) were receiving sundry special education and related services in the following continuum of special education settings under the BD classification during the 1991-1992 school year (U.S. Department of Education, 1994; Utah State Board of Education, 1993):

Category I - Students who were receiving special education and related services between 0% and 21% of the school day = 1,123 students (31.07%);

Category II - Students who were receiving special education and related services more than 21% but less than 60% of the school day = 1,271 students (35.17%);

Category III - Students who were receiving special education and related services for more than 60% of the school day = 1,033 students (28.58%);

Category IV - Students who were receiving special education and related services in a public residential facility outside the public school = 56 students (1.55%); and

Category V - Students who were receiving special education and related services at home or in a hospital environment = 28 students (0.77%).

Comparable to the population of adolescent-age students with EBP in the state of Utah during the time this study was conducted (the 1991-1992 school year), the 60 adolescent-age students with EBP in this study were a heterogeneous group with respect to the amount of time during the school day and, thus, the special education service settings, in which they were receiving special education services to intervene and address their behavioral problems. Based on special education records of the seven participating school districts and teacher reports, the following numbers and percentages of EBP students in this study were receiving special education services related to their disability (EBP) in the respective special education service time categories delineated above during the 1991-1992 school year:

Category I = 14 students (23.3%); Category II = 26 students (43.3%); and Category III = 20 students (33.3%).

Most of the students with EBP in this study ($n = 40$; 66.7%) received special education and related services $\leq 60\%$ of the school day. Thus, if one presumes that the amount of time a student is scheduled to receive such services by the school district is correlated with the severity of his problems,

then the students with EBP in this study might be considered to occupy the mild to moderate end of the continuum of behavioral difficulties.

Self-Report Instruments Used in the Study

Multidimensional Measure of Children's Perceptions of Control (MMCPC)

The Multidimensional Measure of Children's Perceptions of Control (MMCPC; Connell, 1985) was selected for use in the present study to obtain data on students' control beliefs specifically in the arenas of social (peer-related) and general (global) control. That is, to assess both what students know about those attributes that control their successes and failures (internal and powerful others perceptions) and how much they do not know about why they succeed and fail.

The MMCPC was constructed, standardized, and validated on nearly 1,300 third- through ninth-grade boys (ranging from approximately 8 through 14 years of age). The final three-dimensional scale (internal, powerful others, and unknown control) was established from factor-analytic studies, internal-consistency analyses, and comparison of children's MMCPC questionnaire responses with responses the children gave in structured interviews.

The total MMCPC scale includes 48 items: Each source of control (internal, powerful others, and unknown) within each domain (cognitive, social, physical, and general) for each outcome (success or failure) is represented by two items. No two consecutive items represent the same

source of control, and the other components of the scale (domain and outcome) are randomly ordered given this constraint. Internal-consistency reliability coefficients for the various subscales of the MMCPG for third-through sixth-grade students in the standardization sample ranged from .52 to .71 (Connell, 1985). Test-retest reliabilities for the standardization sample ranged from .60 to .78 (Connell, 1985). Validity for the cognitive domain of the MMCPG was established through academic achievement scores, group IQ scores, and teacher ratings (Connell, 1985). Validity for the physical domain was established through correlations with Harter's (1982) measure of children's perceptions of their physical competence and with teacher ratings. Validity for the social domain was established through correlations with the "peer acceptance" subscale of Harter's (1982) perceived competence scale.

For the present study, only the social and general domains/scales of the MMCPG were included in the final control beliefs questionnaire constructed for this study (24 items). The cognitive (academic) area of perceived control was assessed in greater detail with the Student Perceptions of Control Questionnaire (SPOCQ) described below. A copy of the MMCPG is available in the research article by Connell (1985).

Student Perceptions of Control Questionnaire (SPOCQ)

Because school-based learning and activity is, essentially, the "work" of youth during middle childhood and early adolescence and because the

school context "is a place where children develop or fail to develop a variety of competencies that come to define self and ability" (Good & Weinstein, 1986, p. 1095), the Student Perceptions of Control Questionnaire (SPOCQ; Wellborn et al., 1989) was chosen for the present study to provide a detailed assessment of students' control-related beliefs within the academic domain. The SPOCQ is a 60-item self-report questionnaire which assesses children's control-related beliefs about outcomes in the domain of academic performance. The SPOCQ can be used for school-age children (ages 6 to 18 years) and the total instruments can be administered in two sessions of a half hour each. The SPOCQ is the product of 14 studies with over 2,000 American and German children from ages 6 through 15.

Three separate sets of control-related beliefs may be usefully distinguished by the SPOCQ: (a) control beliefs, defined as expectations about the extent to which agents (such as the self) can produce desired and prevent undesired events, without explicit reference to the sources of the events; (b) strategy beliefs, which refer to expectations about the extent to which certain categories of potential sources (means) are effective in producing desired outcomes (ends); and (c) capacity beliefs, defined as expectations about the extent to which agents (such as the self) possess or have access to categories of potential means.

The SPOCQ is structured as follows: All 60 items refer to events in the domain of academic (school) performance, and all scales contain an

equal number of items about success and failure. All items are answered on a 4-point scale designed to indicate relative truthfulness of the belief for the subject: 1 = "Not at all true;" 2 = "Not very true;" 3 = "Sort of true;" and 4 = "Very true." The control beliefs scale consists of six items that assess beliefs about the self's capacity to produce success and to prevent failure in school performance. The strategy beliefs scale is composed of 30 items, divided into five 6-item scales which refer to beliefs about the effectiveness of five categories of means in affecting school performance: effort, relatively permanent traits or attributes, powerful others, luck, and unknown factors. The capacity beliefs scale consists of 24 items, divided into four 6-item scales which refer to beliefs about the self's access to the four potential known means: effort, attributes, powerful others, and luck.

The relevant attribute for school performance used was ability, and the powerful others referred to were teachers. The effort subscale (12 items) of the SPOCQ was not administered to subjects in this study to make the results more conceptually and empirically congruent with the MMCP. Also, addressing a major concern of administrators and teachers, omission of the SPOCQ effort subscale also shortened the total questionnaire administration time, and, hence, the amount of out-of-class time for participating students.

Studies indicate that the SPOCQ scales possess satisfactory measurement properties, including internal-consistency reliabilities (range = .75 to .85), test-retest reliabilities (at 8 weeks, range = .39 to .64), and

theoretically-predicted overlap with other control scales (Skinner et al., 1988a). Most importantly, these measurement properties do not differ appreciably across age or type of scale (Chapman et al., 1990; Skinner et al., 1988a; Stetsenko et al., 1995).

The SPOCQ (Wellborn et al., 1989) used in this study was obtained from Dr. Ellen Skinner at Portland State University (Oregon), and was a public domain instrument at the time this study was conducted (1992). However, the SPOCQ is now a commercially vended instrument, and is available for use only by purchasing the book Perceived Control, Motivation, and Coping (Skinner, 1995). Forty-eight (48) items from the SPOCQ were combined with 24 items from the MMCPC to construct a 72-item control beliefs student self-report questionnaire for use in the present study.

Cleminshaw-Guidubaldi Parent Satisfaction Scale (CGPSS)

The Cleminshaw-Guidubaldi Parent Satisfaction Scale (CGPSS; Guidubaldi & Cleminshaw, 1985, 1989) was chosen for the present study to obtain data from another part of the child's social ecology--the home--from the perspective of the parent(s). Turner and Pew (1978) have stated that "the attitudes, values, and relationships within the immediate family...provide the initial critical medium through which the child's personality takes shape" (p. 5). Research by Guidubaldi and Cleminshaw (1985, 1989) demonstrated that satisfaction with parent-child relationships was related concurrently and

across time to the child's social competence and, additionally, to concurrent academic performance. Thus, parent-child interaction patterns may affect later personality development, which will have some impact on the child's interpersonal relations both inside and outside of the school setting (Goodyer, 1990). As an example, the recent research of Connell and Wellborn (1991) sheds some light on the influence of the parent-child relationship on academic engagement. They wrote that their findings "suggest that one way in which children's relationships with their parents influence school engagement is through the influence that parent-child relations have on the quality of students' relationships with significant others in school; in this case, classmates and teachers" (Connell & Wellborn, 1991, p. 65). Similarly, Guidubaldi and Cleminshaw (1989), from their research, asserted that it may be that the quality of the parent-child relationship predicts the quality of a child's social interactions outside the home with both peers and teachers:

[C]hildren whose parent-child relationships were poor were rated as having poorer peer relations and less acceptance from their peers, and conversely those whose parent-child relationships were good were rated as having good peer relations and better acceptance from peers. (Guidubaldi & Cleminshaw, 1989, pp. 273-274)

Also, Guidubaldi and Cleminshaw (1985, 1989) noted that reciprocity is an important consideration in parent-child relationships. That is, the parent who expects and anticipates a negative relationship (or a positive relationship) with his or her child may in fact be either initiating, maintaining, or accelerating it.

The CGPSS is a 45-item, parent self-report measure of parent satisfaction in three domains of 15 items each: (a) Spouse/Ex-spouse Support; (b) Parent-Child Relationship; and (c) Parent Performance (Guidubaldi & Cleminshaw, 1985, 1989). Responses are given on a 4-point Likert-type scale (Likert, 1932), with higher scores representing greater satisfaction. The Spouse/Ex-Spouse Support subscale includes items pertaining to the amount of satisfaction associated with the spouse's or ex-spouse's performance in the parenting role (e.g., "I am happy about the amount of interest that my spouse [ex-spouse] has shown in my child"). The Parent-Child Relationship subscale contains items that assess the parent's satisfaction with the relationship with his or her own child (e.g., "My child is usually a joy and fun to be with"). The Parent Performance subscale assesses the parent's satisfaction with his or her performance in the parent role (e.g., "I am upset with the amount of yelling I direct towards my child").

Internal-consistency reliabilities for the three factors of the CGPSS range from .82 to .96, and test-retest reliabilities range from .82 to .95. Correlational analyses indicate a strong relationship between level of parent satisfaction and children's social and academic performance (Guidubaldi & Cleminshaw, 1989, 1994).

The CGPSS provides a valid assessment tool for determining current parent-satisfaction status. Moreover, the factor structure of the CGPSS permits analysis of three discrete areas of satisfaction, thus enabling

clinicians to identify more focused intervention strategies (Guidubaldi & Cleminshaw, 1989, 1994).

The version of the CGPSS used in the present study in 1992 (Guidubaldi & Cleminshaw, 1989) was obtained from Dr. Helen Cleminshaw at Kent State University (Ohio) and was available free for research use only. However, the CGPSS is currently a commercially vended instrument only and is available for purchase from The Psychological Corporation (Guidubaldi & Cleminshaw, 1994).

Parental Bonding Instrument (PBI)

The child's perceptions of the parent-child bond and the parent-child relationship set up expectations about relationships in general and thus affect how the child interacts with others (Cubis, Lewin, & Dawes, 1989; Goodyer, 1990; Guidubaldi & Cleminshaw, 1985, 1989; Mackinnon, Henderson, Scott, & Duncan-Jones, 1989; Pearce et al., 1995). Radke-Yarrow, Richters, and Wilson (1988) have referred to youths' representations or perceptions of relationships with parents as "the working images that children carry around with them" (p. 62) that may contribute in unknown ways toward "shaping children toward given outcomes" (p. 64).

Self-report measures of adolescents' perceptions of their parents provide useful subjective indices of parents' behavior towards them. They mirror a lifetime of exposure to (or avoidance of) parents, as well as provide an overall judgment of how their parents compare with others. Such

measures may be influenced directly by adolescents' own personalities and indirectly by their parents' reactions to their behaviors. However, adolescents' perceptions may be more critical than actual parental behavior as they are closer to the end expression in adolescent behavior (Cubis et al., 1989).

The rationale for conducting assessment from the perspective of the "child" rather than, or in addition to, from the perspective of the parent(s) is twofold. First, one area that is often apt to engender considerable defensiveness on the part of adults is the suggestion that their parenting skills may leave something to be desired. Therefore, one may expect some significant degree of bias when individuals report upon their own parenting. Secondly, the case can be made (e.g., symbolic interactionism) that what is going to be of greatest moment to the child will depend upon the child's interpretations of interactions (Dr. John Buri, Chair of the Department of Psychology, University of St. Thomas, St. Paul, Minnesota, personal communication, September 20, 1991). As stated rather succinctly by child psychologist Jerome Kagan (1984),

the effects of most experiences are not fixed but depend upon the child's interpretation....The child's personal interpretation of experience, not the event recorded by camera or observer, is the essential basis for the formation of and change in beliefs, wishes, and actions....The person's interpretation of experience is simultaneously the most significant product of an encounter and the spur to the next. (pp. 240-241, 279).

Also, to paraphrase the Thomases' dictum, if children define the conditions

under which they are reared as real, they are real in their consequences (Thomas & Thomas, 1928). The foregoing provided the rationale for including the Parental Bonding Instrument (PBI) as a measure in the present study.

The Parental Bonding Inventory (PBI; Parker, Tupling, & Brown, 1979) has generated a great deal of activity in the 16 years since its introduction, proving highly reliable over test-retest periods of up to 10 years (Wilhelm & Parker, 1990). Overall, the PBI's factor structure has proven robust (Arrindell, Hanewald, & Kolk, 1989; Cubis et al., 1989; Mackinnon et al., 1989). Cubis et al. (1989), using a large, community-based sample, replicated the findings of Mackinnon et al. (1989) and identified three factors which comprise the PBI: a care factor, and two control (protection) factors, one related to the adolescent's own perceived control over his social domain and another factor concerned with perceived parental personal control.

Independent support for the centrality of factors (i.e., research not using the PBI) comes from a study by Paul Amato (1990) in which he studied the dimensions of the family environment as perceived by children. Amato (1990) concluded that his results

support the hypothesis that children's perceptions of family life are organized around two fundamental dimensions, one dealing with support [e.g., closeness to parents, receiving help from parents] and the other dealing with control [e.g., decision-making, autonomy]. (p. 618)

Finally, Lopez and Gover (1993) stated that the results of several research

studies (e.g., Mackinnon, Henderson, & Andrews, 1991; Parker, 1986) utilizing the PBI indicated that "PBI scores reflect actual and not imagined parental behaviors" (Lopez & Gover, 1993, p. 562).

The PBI is a self-report questionnaire consisting of 25 statements about parents' attitudes towards the respondent, the adolescent. These statements were chosen from an initial pool of 114 statements, following ratings by a heterogeneous nonclinical sample and a series of factor analyses. Each PBI item is rated by the subject using a Likert-type scale (scored 0-3), according to how much the the statement reflects the behavior of his or her mother or father. These ratings are used to define maternal and paternal scores on two factors: a Care factor (12 items) and a Protection factor (13 items). The PBI has been used in several studies (Baker & Helmes, 1983; Goldney, 1985; Howard, 1981; Kashani, Rosenberg, Beck, Reid, & Battle, 1987; Mackinnon et al., 1989; Mak, 1994; Parker, 1983b; Parker, Fairley, Greenwood, Jurd, & Silove, 1982; Parker, Hazdi-Pavlovic, Greenwald, & Weissman, 1995; Pedersen, 1994; Plapp, 1983; Rey, 1995; Sarason, Sarason, & Shearin, 1986; Shams & Williams, 1995; Silove, 1986), and the subscales of the PBI have been shown to correlate with psychosocial morbidity (Goldney, 1985; Parker, 1983b; Parker et al., 1982; Silove, 1986). The validity of the PBI as a measure of both perceived and actual parental characteristics has been assessed and found to be acceptable, and strong internal-consistency coefficients (range .73 to .87) and 3-week test-retest

reliability coefficients (range .63 to .76) have been reported (Parker, 1981; Parker, 1983a; Parker et al., 1979) in adult samples.

The PBI was developed originally and specifically to assess adults' perceptions of their parents and to enable an evaluation of the psychiatric significance of different types of perceptions (Parker, 1983a; Parker et al., 1979). Parker (1983b), in a study of the parent-child relationships of adult depressives, partitioned the PBI into four quadrants: high care/low protection ("optimal parenting"); high care/high protection ("affectionate constraint"); low care/low protection ("neglectful parenting"); and low care/high protection ("affectionless control"). Recently, Cubis et al. (1989) reported a three-factor structure for the PBI in a large community sample of adolescents. The three PBI dimensions identified were the original Care factor and two Protection factors: perceived social control and personal intrusiveness. This three-factor structure for the PBI was used for the student self-report instrument in the present study. Thus, the PBI instrument used in this study is accessible in Cubis et al. (1989).

Although the PBI is geared to adults, it is also appropriate for early adolescents as it refers to experiences up to the age of 16 (Cubis et al., 1989). Thus, the original questions were designed to reflect a respondent's opinions at a time when he or she was living with and controlled by his or her parents, but who was nevertheless capable of making judgments about his or her mother's and father's behavior.

However, the author of the present study reframed the questions of the PBI and focused on the present perceptions and experiences of the early adolescent in the family context. This approach (focusing on the present perceptions rather than the retrospective or past perceptions of respondents) was used recently by Rey and Plapp (1990) in a study of adolescents diagnosed with Oppositional Defiant Disorder and Conduct Disorder. Prior to the study by Rey and Plapp, parallel data in the literature were lacking for adolescents with externalizing behavior problems.

Procedures Followed During the Administration of Self-Report Measures to Student Participants

After all EBP and RED students and their families were selected, this investigator arranged dates and times during which student archival data could be collected (from students' extant cumulative and special education files). For individual student administration of self-report questionnaires, this investigator developed, in concert with principals and teachers of the local schools, an assessment schedule. This investigator contacted the principals of participating schools prior to travelling to the schools for student assessment.

Upon arrival at a school, this investigator reported to the main office to confirm testing arrangements. In accordance with the research agreement made between this investigator, the chair of this investigator's graduate

supervisory committee; individual school districts, and participating students' parents, this investigator relinquished all parental consent forms for the participating students in that school to appropriate school personnel (e.g., the school principal, special education teacher, school guidance counselor). The consent forms were placed in the participating students' cumulative or special education files in exchange for access to students and information contained in their archival educational records.

Students were individually read standardized instructions for and administered the control beliefs self-report questionnaire (72 items) and parental bonding self-report inventories (25 items) in quiet testing rooms assigned by school principals or guidance counselors. Because 36 of the 120 students were from nonintact families headed by mothers, to ensure more reliable data, standardized instructions for the PBI for these students were: "If your father no longer lives with you, please answer the questions according to how you remember your father to be, or how likely he is to do what the sentence says when you do see him. If you never see your father, or you do not remember much about your father's behavior, you do not have to complete this questionnaire." After these instructions were read, 14 students from nonintact families (8 EBP students; 6 RED students) elected not to complete the father-version of the PBI.

As a precaution against the internal validity threat of testing effects, the administration of the student self-report questionnaires was counterbalanced.

That is, one half of the students of each grade (30) and research subgroup (30) (EBP/RED) were administered the control beliefs questionnaire first, followed by the PBI. The remaining students were administered the PBI, followed by the control beliefs questionnaire. Mean completion time for both measures was 27 minutes per RED student and 33 minutes per EBP student.

Debriefing of Student Participants Following the Administration of Self-Report Questionnaires

Studies by Burbach, Farha, and Thorpe (1986), Landau and Milich (1990), and Lewis, Gorsky, Cohen, and Hartmark (1985) have found no or minimal psychological risk in various methods for obtaining self-reports from children and adolescents for research and clinical purposes. Although there are few empirical data on the emotional impact of the self-report assessment process itself on youth (La Greca, 1990), each student in the study was debriefed following completion of his self-report questionnaires. Each student was asked the following questions and permitted to discuss the experience if they desired: (a) Do you have any feelings you would like to share regarding the questionnaires you just completed? and (b) Is there anything you would like to talk about from the experience?

Only three students responded with anything other than, "No," and left for their next class or activity. The three students' responses were, "Yeah, they were stupid," "Bogus," and "It was interesting." No emotional upset was

recognizable in any EBP or RED students from the self-report questionnaire experience. The time period for all student self-report and archival educational data collection was March 9, 1992, through June 5, 1992 (the last quarter of the 1991-1992 academic year for the seven participating school districts).

Mailing, Receipt, and Follow-up of Parent Self-Report Questionnaires

Concomitant with administration of the control beliefs and parental bonding instruments to students, the researcher assembled and mailed packets that contained standardized written instructions and a 45-item, self-report parent-satisfaction questionnaire to parents of participating students. As delineated earlier, some parents requested to be removed from the study after receiving the parent-satisfaction questionnaires. The methods for handling these occurrences were described earlier.

For several reasons and despite attempts by this investigator, Dr. Richard N. Roberts, and some mothers from nonintact families, only partial self-report parent-satisfaction data were collected from nonresident fathers (i.e., not living with the mother and the student in the study) from nonintact families. As indicated earlier, mothers were the heads of all intact families in this study, and it was they, not the nonresident fathers, who agreed to participate in the study and who granted permission for their children to be

included in the study. Neither current addresses nor phone numbers for nonresident fathers were available to some mothers ($n = 4$). Six mothers declined to provide addresses to this investigator to which to mail father-version parent satisfaction scales.

A total of 26 fathers from the 36 nonintact families in the study was mailed parent-satisfaction questionnaires. Fourteen fathers did not return questionnaires, even after confirmation of correct addresses from mothers, and two follow-up mailings in which quid pro quo \$10.00 monetary incentives were offered for completion of the questionnaires (Baker, 1988; Borg & Gall, 1989; Linsky, 1975).

Thus, parent-satisfaction questionnaire data could only be collected from a total of one third of the fathers from the nonintact families of EBP students ($n = 6$) and RED students ($n = 6$). Collection of even these partial self-reported parent-satisfaction questionnaire data from nonresident fathers of EBP and RED students from nonintact families would not have been possible without the substantial interest, determination, and assistance of the mothers from these nonintact families.

Also, despite confirmation of families' current addresses by school districts, two follow-up mailings, two reminder phone calls to families (when phone numbers were available), and offering of quid pro quo \$10.00 monetary incentives (Baker, 1988; Borg & Gall, 1989; Linsky, 1975), only partial data on self-reported parent satisfaction were collected from the

following subgroups:

1. Mothers of EBP students from intact families (complete cases = 36 (85.7%); missing cases = 6 (14.3%)).

2. Mothers of EBP students from nonintact families (complete cases = 16 (88.9%); missing cases = 2 (11.1%)).

3. Fathers of EBP students from intact families (complete cases = 36 (85.7%); missing cases = 6 (14.3%)).

4. Fathers of EBP students from nonintact families (complete cases = 6 (33.3%); missing cases = 12 (66.7%)).

5. Mothers of RED students from intact families (complete cases = 38 (90.5%); missing cases = 4 (9.5%)).

6. Mothers of RED students from nonintact families (complete cases = 16 (88.9%); missing cases = 2 (11.1%)).

7. Fathers of RED students from intact families (complete cases = 38 (90.5%); missing cases = 4 (9.5%)).

8. Fathers of RED students from nonintact families (complete cases = 6 (33.3%); missing cases = 12 (66.7%)).

No additional families were available in the EBP volunteer subject pool to replace the families of EBP students who chose not to complete parent satisfaction questionnaires. Also, although this investigator and Dr. Richard N. Roberts thoroughly reviewed the demographic five-variable profiles of the remaining families in the oversampled pool of volunteer families of seventh-

grade and eighth-grade RED students, no demographically congruous replacement families for the six RED families, who chose not to complete parent satisfaction questionnaires, were extant. The time period for collection of all parent self-report data was March-July 1992.

Despite only partial collection of parent-satisfaction data from families (i.e., not all families returned or could be persuaded to return parent-satisfaction questionnaires), no additional families of EBP or RED students contacted this investigator or Dr. Richard N. Roberts to withdraw from the study. As noted previously, some parents of EBP and RED students allowed their child to remain in the study, but the parents simply did not want to complete and return parent-satisfaction questionnaires. Consequently, student self-report data on control beliefs, as well as educational data from students' school files, were collected for a total of 60 EBP students (30 seventh-grade; 30 eighth-grade) and 60 RED students (30 seventh-grade; 30 eighth-grade).

Also, only partial data were collected on the PBI (student self-report) for EBP and RED students. As indicated earlier, to ensure more reliable data for the PBI for students from nonintact families, the instructions for completing the father-version of the PBI for the 18 EBP students and 18 RED students from nonintact families, included the following sentence: "If you do not remember anything about your father and you never see him, please do not complete this questionnaire." As a result of this instruction, 14 students from

nonintact families (8 EBP students; 6 RED students) elected not to complete the father-version of the PBI. Thus, student self-report PBI data on fathers were only collected on 86.7% ($n = 52$) of EBP students and 90.0% ($n = 54$) of RED students.

**Incentives for Participants, Monetary Donations
to School Districts, and Final Correspondence
Sent to Participating Families**

Small courtesy incentives provided to research participants can increase participation rates and also can convey the researcher's appreciation to the granting of participants' time and cooperation (Blanck, Bellack, Rosnow, Rotheram-Borus, & Schooler, 1992). To encourage participation in the study, the researcher informed the parents, in the letter sent requesting their participation in the study, that their assistance would make them eligible for a \$10.00 incentive to be provided to 36 out of the 120 families in the study chosen at random after the completion of data collection (see Appendix I). Also, each student, upon completion of the self-report protocols, was provided with a coupon redeemable for a free item from a major fast food restaurant.

After the collection of all data in the participating school districts, a donation of \$25.00 was made by this investigator to each of the districts' nonprofit educational foundations with a request that the money be earmarked for special education programs. Also, when data collection ended,

parents were sent a final letter by this investigator and Dr. Richard Roberts thanking them for their participation in the study and apprising of them of the data confidentiality and security measures taken with the information provided by them and their child (Appendix J).

Data Encoding and Analyses

All student archival data (e.g., achievement and general ability scores, grade point averages) and individual item data from student self-report and parent self-report questionnaires were transferred from the original protocols, which contained names of individual students and their parents and other personally identifiable information (e.g., school locations, teacher names), onto anonymous variable-coded computer entry sheets for computer encoding. An audit of the accuracy of the data encoding was conducted by a second, trained undergraduate research assistant on all of the student archival file data, student self-report data, and parent self-report data.

Any errors in data transfer from protocols and entry onto computer encoding coding sheets were corrected. Raw data from the computer encoding sheets were entered into an ASCII computer data file by a trained undergraduate research assistant, and each datum was checked for errors in transfer from the coding sheets to the ASCII computer file. Any errors in ASCII computer file entry were corrected, until 100% correspondence was achieved between the computer encoding sheets and the ASCII data file.

Finally, and of cardinal importance to this study, because of the intimate and personally and emotionally sensitive nature of the family demographic data, students' school record (archival) and self-report data, and parents' self-report data in this cross-sectional study (Barber, 1976, 1979; Carter, 1979; Fox, 1978; Hayman, 1976; Kelman, 1978; Lincoln & Guba, 1989; Linowes, 1979; Macklin, 1992; Michael & Weinberger, 1977; Presser, 1994; Scanlon, 1978; Scarce, 1994; Wallen & Fraenkel, 1991), and as per the research agreements among this investigator, Dr. Richard N. Roberts (this investigator's major professor), participating students' parents, and the directors of special education and research of the seven participating Utah school districts, all parent- and student-provided data were rendered completely anonymous and accessible only by randomly assigned case identification numbers (Wallen & Fraenkel, 1991; see Appendix A). To ensure the perpetual anonymity of all student- and parent-provided data, and to adhere to the research agreements between the participating school districts and the researchers who conducted this study (this investigator and Dr. Richard, N. Roberts), only the ASCII-language anonymous raw data and statistical procedure command files were retained in secure locations (American Psychological Association, 1992; Batchelor & Briggs, 1994; Brickhouse, 1989; Carter, 1979; Cooley, 1990; Daley, 1992; Douvanis & Brown, 1993, 1995; Foster, 1988, 1990; Moore & Berliner, 1977; National Center for Education Statistics, 1994; Utah State Board of Education, 1993).

**Internal Consistency Reliability Coefficients
for the Dependent Measures Administered
to Study Participants**

Snyder, Lawson, Thompson, Stricklin, and Sexton (1993) stated that it is important to examine systematically the psychometric integrity of the measurement tools used with a research sample. First, it is important to investigate and to relate any differences in the reported reliability coefficients of instrumentation between the current research sample (and its particular sociodemographic characteristics) and those reliability coefficients reported for previous samples using the instrumentation (Goodwin & Driscoll, 1980). Snyder et al. (1993) noted that when researchers perform analyses that inform them about how a measurement instrument performs in a specified context with a given sample, they and others are in a better position to evaluate accurately the performances or reports of individuals compared to other samples of individuals in similar or dissimilar investigatory contexts.

Second, the reliability coefficients for sample data establish an upper limit on the effect sizes that can be discerned in any research study (Locke, Spirduso, & Silverman, 1987; O'Grady, 1982). Therefore,

reliability coefficients for the data obtained on study instruments used in the empirical investigation prospectively provide a basis for determining, a priori, whether a proposed study and substantive analyses are even plausible. These coefficients also allow a researcher to retrospectively interpret obtained effect sizes (e.g., r^2) against the ceiling created by the reliability

coefficients obtained for scores on instruments in a study.
(Snyder et al., 1993, p. 218)

It is fairly safe to say that there is unanimity among basic and applied researchers that reliability coefficients should be as high as possible. For applied research purposes, Herzog (1996) noted that the minimum acceptable reliability coefficient frequently has been set at .80.

However, for basic research and research in previously unexplored areas, Herzog (1996) observes that "the standard is less demanding, with opinions about the minimum acceptable coefficient ranging as low as .50 (Guilford, 1954; Nunnally, 1967)" (p. 100). Pedhazur and Schmelkin (1991) asserted that it is a serious mistake to suggest specific guidelines for reliability, because such guidelines might be applied indifferently. In general, the rule for reliability coefficients is "the higher the better" (Herzog, 1996, p. 100).

Also, reliability coefficients lower than .70 may obscure true between-group differences, as well as affect the magnitude of correlation coefficients (Herzog, 1996; Vockell & Asher, 1995; Dr. Carol Strong, personal communication, April 17, 1996). Thus, one of the relevant sources of information that should influence the final conclusions in a research study is data regarding reliability of measurement (Herzog, 1996).

Internal consistency reliability is the extent to which items in a subscale or instrument measure the same construct, and Cronbach's alpha (α) is one measure of internal consistency (Herzog, 1996; Vogt, 1993). Cronbach's

alpha (α) can range from zero to 1.0. The closer the alpha is to 1.0, the more internally consistent the subscale or instrument.

The Cronbach's alpha (α) reliability coefficients of the dependent measures used in the study (aggregated across EBP/RED groups) are displayed in Table 8. Coefficients for the academic domain control-related beliefs variables ranged from .78 to .91 in the present study. The magnitude of these internal consistency reliability coefficients for the academic domain control-related beliefs variables are similar to those reported in other studies (.75 to .85; Skinner et al., 1988a). Social domain control-related beliefs subscale coefficients ranged from .61 to .87. Coefficients for the general domain control-related beliefs subscales ranged from .67 to .85. These internal consistency coefficients, for seventh- and eighth-grade students on the social and general domain subscales in this study, are slightly higher than those reported for the subscales for third- through sixth- grade students in the original standardization sample (.52 to .71; Connell, 1985). These higher reliability coefficients may be due to greater consistency of reporting in the chronologically older subjects in this study).

Maternal and paternal bonding subscale (student self-report) coefficients ranged from .58 to .88 in the present study. These subscale internal consistency coefficients are slightly lower than those reported in other studies using adult samples (.73 to .87; Parker, 1981, 1983a; Parker et al., 1979). Finally, subscale coefficients for parent satisfaction (parent self-

Table 8

Internal Consistency Reliability Coefficients for the Dependent Measures

<u>Dependent variable domain and subscales</u>	<u>Reliability (α)</u>
<u>Academic domain control beliefs</u> (students' anonymous self-reports)	
Academic control beliefs	.81
Strategy beliefs: Attributes	.78
Strategy beliefs: Powerful others	.83
Strategy beliefs: Luck	.90
Strategy beliefs: Unknown	.88
Capacity beliefs: Attributes	.91
Capacity beliefs: Powerful others	.89
Capacity beliefs: Luck	.83
<u>Social domain control beliefs</u> (Students' anonymous self-reports)	
Social: Unknown success	.77
Social: Unknown failure	.65
Social: Powerful others success	.78
Social: Powerful others failure	.63
Social: Internal success	.87
Social: Internal failure	.61
<u>General domain control beliefs</u> (students' anonymous self-reports)	
General: Unknown success	.69
General: Unknown failure	.68
General: Powerful others success	.79
General: Powerful others failure	.67
General: Internal success	.85
General: Internal failure	.77

(table continues)

Dependent variable domain and subscales	Reliability (α)
<u>Maternal bonding</u> (students' anonymous self-reports)	
Maternal care	.75
Maternal social protection	.71
Maternal personal protection	.69
<u>Paternal bonding</u> (students' anonymous self-reports)	
Paternal care	.88
Paternal social protection	.59
Paternal personal protection	.58
<u>Mother satisfaction</u> (mothers' anonymous self-reports)	
Mother: Spouse/ex-spouse support	.91
Mother: Parent-child relationship	.77
Mother: Parent performance	.64
<u>Father satisfaction</u> (fathers' anonymous self-reports)	
Father: Spouse/ex-spouse support	.78
Father: Parent-child relationship	.80
Father: Parent performance	.70

report) ranged from .64 to .91. Again, these internal consistency coefficients reliabilities are slightly lower than those reported in previous research with parents (.82 to .96; Guidubaldi & Cleminshaw, 1989, 1994).

An inspection of the data in Table 8 reveals that there are 10 dependent variables in this study with low internal consistency reliability coefficients. These dependent variables are (a) Social: Unknown Failure (.65); (b) Social: Powerful Others Failure (.63); (c) Social: Internal Failure (.61); (d) General: Unknown Success (.69); (e) General: Unknown Failure (.68); (f) General: Powerful Others Failure (.67); (g) Maternal Personal

Protection (.69); (h) Paternal Social Protection (.59); (i) Paternal Personal Protection (.58); and (j) Mother: Parent Performance (.64). In light of the low or questionable reliability coefficients for the foregoing dependent variables in the present study, true differences between means of the EBP and RED groups on these dependent variables may be obscured (Dr. Carol Strong, personal communication, April 17, 1996).

**Comparisons of Complete and Missing Cases on Study
Demographic Variables for Paternal Bonding and
Mother and Father Parent-Satisfaction Data**

Gall et al. (1996) noted that "missing data are items of information that the researcher intended to collect as part of the research design but are not available for the data analysis" (p. 201, emphasis in original). Stevens (1992) asserted that, despite good faith efforts to prevent the eventuality of missing data, studies with missing data are "a fairly common occurrence in certain areas of research" (p. 32), particular educational and clinical research using students and families (Dadds, 1995). Except for the EBP students ($n = 8$) and RED ($n = 6$) students from nonintact families who chose not to complete PBIs about their fathers, (because the students conceded that they never see their nonresident fathers anymore or they did not remember much about their nonresident fathers), incomplete data in this study are from mothers and fathers who did not complete self-report parent satisfaction questionnaires.

As Gall et al. (1996) noted, missing data "can occur if an individual selected for the research sample refuses to or is unable to participate" (p. 201) in the study. As indicated earlier, some mothers, although they acceded to their children remaining in the study, would not complete parent-satisfaction questionnaires. Also, despite confirmation of mailing addresses by schools, and two follow-up phone calls, when phone numbers were available, some parents simply would not complete and return parent-satisfaction questionnaires. The most formidable group for realizing completion of parent-satisfaction questionnaires was the group of fathers from nonintact families (EBP $n = 18$; RED $n = 18$), because they (the nonresident fathers) did not originally agree to participate in the study; rather, their spouses or ex-spouses agreed to participate in the research.

The parent self-reported demographic data collected for this study were categorical. The ratios of missing to complete cases in the data cells for the variables of mother- and father-reported parent satisfaction were small. Also, some data cells contained no missing cases for analysis. Because of the foregoing facts, no appropriate statistical tests, such as Chi-square, could be conducted to examine any level of systematic demographic bias among the missing and complete cases in this study (Rosnow & Rosenthal, 1993; Sproull, 1988).

Thus, only descriptive data are examined in an endeavor to gauge any sociodemographic biases among respondents and nonrespondents on the

self-report measures (Rosnow & Rosenthal, 1993). Descriptive data on relevant sociodemographic variables for the three subsets of dependent variables with missing data, mothers' self-reported aspects of parent satisfaction, fathers' self-reported aspects parent satisfaction, and students' self-reported perceptions aspects of paternal bonding, are displayed by grade (7th/8th) and by dependent variable subset for respondents (complete cases) and nonrespondents (missing cases) in Table 9 through Table 22, inclusive.

Paternal Bonding Dependent Variables

The demographic variables examined in this descriptive analysis of nonrespondent versus respondent EBP and RED students from nonintact families on the father version of the PBI are levels of education of the mother and father and annual household income. Tables 9 and 10, respectively, display the patterns of educational levels of the mothers among the seventh-grade EBP and RED students and eighth-grade EBP and RED students.

No bias is apparent for the seventh-grade EBP or RED student nonrespondents nonrespondents on this demographic variable. However, there are slight indications of bias among eighth-grade EBP and RED student nonrespondents. Among the nonrespondent eighth-grade EBP students, two had mothers who were in the educational category of "some college or Associate degree" and two had mothers who were in the educational category of "4-year college degree." Two of the nonrespondent eighth-grade RED students had mothers who reported obtaining some graduate education.

Table 9

Descriptive Demographic Analysis of Complete and Missing Cases for Paternal Bonding Variables for Seventh-Grade Students: Education of Mother^a

Education of mother	EBP Students		RED Students	
	Missing cases	Complete cases	Missing cases	Complete cases
< 8 years	0	0	0	0
8th grade to some high school	0	2	0	1
High school graduate	1	7	1	7
Post-high school training	0	3	0	5
Some college or Associate degree	1	10	0	8
4-year college degree	0	0	1	1
Some graduate school	1	2	1	4
Graduate degree	0	3	0	1
Column total and percentage by student group	3 (10.0)	27 (90.0)	3 (10.0)	27 (96.0)

^a7th-grade EBP families $n = 30$; 7th-grade RED families $n = 30$

Tables 11 and 12 display the patterns of educational level of the fathers of seventh-grade EBP and RED students and eighth-grade EBP and RED students in the study, respectively. No bias is apparent among the three seventh-grade EBP student nonrespondents. Two of three seventh-grade RED student nonrespondents had fathers who were in the educational category, "some college or Associate." Table 12 shows that two of the five eighth-grade EBP student nonrespondents had fathers who were in the educational category, "post-high school training." Two more of the five

Table 10

**Descriptive Demographic Analysis of Complete and Missing Cases for
Paternal Bonding Variables for Eighth-Grade Students: Education of Mother^a**

Education of mother	EBP Students		RED Students	
	Missing cases	Complete cases	Missing cases	Complete cases
< 8 years	0	0	0	0
8th grade to some high school	0	3	0	2
High school graduate	0	5	0	6
Post-high school training	1	3	0	5
Some college or Associate degree	2	8	0	8
4-year college degree	2	2	1	3
Some graduate school	0	2	2	1
Graduate degree	0	2	0	2
Column total and percentage by student group	5 (16.7)	25 (83.3)	3 (10.0)	27 (90.0)

^a8th-grade EBP families $n = 30$; 8th-grade RED families $n = 30$

nonrespondents in this group had fathers who were in the educational category, "some college or Associate degree."

Tables 13 and 14 present the patterns of the annual household incomes of families of seventh-grade EBP and RED students and eighth-grade EBP and RED students in the study, respectively. Table 13 shows that all three of the seventh-grade EBP student nonrespondents were from families in the annual household income category, "\$16,000 thru \$22,999." Two of the three seventh-grade RED student nonrespondents were from families in this same annual household income category.

Table 11

**Descriptive Demographic Analysis of Complete and Missing Cases for
Paternal Bonding Variables for Seventh-Grade Students: Education of Father^a**

Education of father	EBP Students		RED Students	
	Missing cases	Complete cases	Missing cases	Complete cases
< 8 years	0	0	0	0
8th grade to some high school	0	2	0	2
High school graduate	0	6	0	2
Post-high school training	1	5	0	8
Some college or Associate degree	1	6	2	5
4-year college degree	0	6	0	5
Some graduate school	1	1	0	3
Graduate degree	0	0	1	2
Column total and percentage by student group	3 (10.0)	27 (90.0)	3 (10.0)	27 (90.0)

^a7th-grade EBP students $n = 30$; 7th-grade RED students $n = 30$

The annual household income data for eighth-grade EBP and RED student nonrespondents displayed in Table 14 reveal that two of the five eighth-grade EBP student nonrespondents were from families in the income category, "\$10,000 thru \$15,999," and two were from families in the income category, "\$23,000 thru \$29,999." Two of the three eighth-grade RED student nonrespondents were from families in the annual household income category, "\$37,000 thru \$43,999," indicating that the eighth-grade EBP student nonrespondents were from families with lower annual household incomes than their eighth-grade RED student nonrespondent counterparts.

Table 12

Descriptive Demographic Analysis of Complete and Missing Cases for Paternal Bonding Variables for Eighth-Grade Students: Education of Father^a

Education of father	EBP Students		RED Students	
	Missing cases	Complete cases	Missing cases	Complete cases
< 8 years	0	0	0	0
8th grade to some high school	0	3	0	1
High school graduate	0	2	0	5
Post-high school training	2	7	0	4
Some college or Associate degree	2	7	1	5
4-year college degree	0	3	1	8
Some graduate school	0	0	1	0
Graduate degree	1	3	0	4
Column total and percentage by student group	5 (16.7)	25 (83.3)	3 (10.0)	27 (90.0)

^a8th-grade EBP students $n = 30$; 8th-grade RED students $n = 30$

Mother Satisfaction Dependent Variables

The relevant sociodemographic variables considered in this descriptive analysis are mothers' reported level of education and annual household income. Table 15 displays the distribution of respondents (complete cases) and nonrespondents (missing cases) for mothers from families of seventh-grade EBP and RED students on the demographic variable of mothers' self-reported level of education. No ostensible respondent versus nonrespondent bias is evident for the complete versus missing cases for either EBP or RED families on this demographic variable.

Table 13

Descriptive Demographic Analysis of Complete and Missing Cases for
Paternal Bonding Variables for Seventh-Grade Students: Annual
Household Income^a

Annual household income	EBP Students		RED Students	
	Missing cases	Complete cases	Missing cases	Complete cases
\$0 thru \$9,999	0	3	0	1
\$10,000 thru \$15,999	0	2	0	5
\$16,000 thru \$22,999	3	8	2	4
\$23,000 thru \$29,999	0	6	1	7
\$30,000 thru \$36,999	0	3	0	3
\$37,000 thru \$43,999	0	3	0	4
\$44,000 thru \$50,999	0	1	0	2
\$51,000 and above	0	1	0	1
Column total and percentage by student group	3 (10.0)	27 (90.0)	3 (10.0)	27 (90.0)

^a7th-grade EBP students $n = 30$; 7th-grade RED students $n = 30$

Table 16 displays the distribution of respondents and nonrespondents for mothers from families of eighth-grade EBP and RED students on the demographic variable of mothers' self-reported terminal level of education. Some nonrespondent bias appears to be evident for the missing cases from both EBP and RED families on this demographic variable. Three of the five nonrespondents from families of EBP students were from the educational

Table 14

Descriptive Demographic Analysis of Complete and Missing Cases for
Paternal Bonding Variables for Eighth-Grade Students: Annual
Household Income^a

Annual household income	EBP Students		RED Students	
	Missing cases	Complete cases	Missing cases	Complete cases
\$0 thru \$9,999	0	3	0	3
\$10,000 thru \$15,999	2	3	0	5
\$16,000 thru \$22,999	0	3	0	1
\$23,000 thru \$29,999	2	3	1	7
\$30,000 thru \$36,999	0	6	0	3
\$37,000 thru \$43,999	0	4	2	5
\$44,000 thru \$50,999	0	0	0	0
\$51,000 and above	1	3	0	3
Column total and percentage by student group	5 (16.7)	25 (83.3)	3 (10.0)	27 (90.0)

^a8th-grade EBP students $n = 30$; 8th-grade RED students $n = 30$

category of "some college or Associate degree," and three of the four nonrespondents from families of RED students were from the educational category of "4-year college degree."

Table 17 shows the distribution of respondents and nonrespondents for mothers from families of seventh-grade EBP and RED students on the demographic variable of reported annual household income. Table 18 shows

Table 15

Descriptive Demographic Analysis of Complete and Missing Cases for Mother Satisfaction Variables for Seventh-Grade Students' Families: Education of Mother^a

Education of mother	EBP Families		RED Families	
	Missing cases	Complete cases	Missing cases	Complete cases
< 8 years	0	0	0	0
8th grade to some high school	0	2	0	1
High school graduate	1	7	1	7
Post-high school training	0	3	0	5
Some college or Associate degree	1	10	0	8
4-year college degree	0	0	1	1
Some graduate school	0	3	0	5
Graduate degree	1	2	0	1
Column total and percentage by family group	3 (10.0)	27 (90.0)	2 (6.7)	28 (93.3)

^a7th-grade EBP families $n = 30$; 7th-grade RED families $n = 30$

the distribution of respondents and nonrespondents for mothers from families of eighth-grade EBP and RED students on this same demographic variable. No bias is apparent for the nonrespondents from either EBP or RED families on this demographic variable.

Father Satisfaction Dependent Variables

The pertinent demographic variables considered in this descriptive analysis of nonrespondent versus respondent fathers are level of education of the father and annual household income. Tables 19 and 20 display the

Table 16

Descriptive Demographic Analysis of Complete and Missing Cases for Mother Satisfaction Variables for Eighth-Grade Students' Families: Education of Mother^a

Education of mother	EBP Families		RED Families	
	Missing cases	Complete cases	Missing cases	Complete cases
< 8 years	0	0	0	0
8th grade to some high school	0	3	0	2
High school graduate	0	5	1	5
Post-high school training	1	3	0	5
Some college or Associate degree	3	7	0	8
4-year college degree	1	3	3	1
Some graduate school	0	2	0	3
Graduate degree	0	2	0	2
Column total and percentage by family group	5 (16.7)	25 (83.3)	4 (13.3)	26 (86.7)

^a8th-grade EBP families $n = 30$; 8th-grade RED families $n = 30$

pattern of father respondents versus father nonrespondents from families of seventh-grade EBP and RED students, and eighth-grade EBP and RED students, respectively. For fathers of both seventh- and eighth-grade EBP and RED students, some educational level response bias is apparent. Four of the eight nonrespondent fathers of seventh-grade EBP students were from the educational category, "some college or Associate degree," and three of the seven nonrespondent fathers of seventh-grade RED students were from the same educational category.

Table 17

Descriptive Demographic Analysis of Complete and Missing Cases for Mother Satisfaction Variables for Seventh-Grade Students' Families: Annual Household Income^a

Annual household income	EBP Families		RED Families	
	Missing cases	Complete cases	Missing cases	Complete cases
\$0 thru \$9,999	0	3	0	1
\$10,000 thru \$15,999	1	1	0	5
\$16,000 thru \$22,999	1	10	0	6
\$23,000 thru \$29,999	0	6	0	8
\$30,000 thru \$36,999	0	3	1	2
\$37,000 thru \$43,999	1	2	1	3
\$44,000 thru \$50,999	0	1	0	2
\$51,000 and above	0	1	0	1
Column total and percentage by family group	3 (10.0)	27 (90.0)	2 (6.7)	28 (93.3)

^a7th-grade EBP families $n = 30$; 7th-grade RED families $n = 30$

Table 20 shows that 4 of the 10 nonrespondent fathers of eighth-grade EBP students were from the educational category, "post-high school training;" and 3 of these 10 nonrespondent fathers were from the educational category, "some college or Associate degree." Finally, three of the nine nonrespondent fathers of eighth-grade RED students were from the educational category, "some college or Associate degree."

Table 18

Descriptive Demographic Analysis of Complete and Missing Cases for Mother Satisfaction Variables for Eighth-Grade Students' Families: Annual Household Income^a

Annual household income	EBP Families		RED Families	
	Missing cases	Complete cases	Missing cases	Complete cases
\$0 thru \$9,999	0	3	0	3
\$10,000 thru \$15,999	1	4	1	4
\$16,000 thru \$22,999	0	3	0	1
\$23,000 thru \$29,999	1	4	2	6
\$30,000 thru \$36,999	0	6	0	3
\$37,000 thru \$43,999	1	3	1	6
\$44,000 thru \$50,999	0	0	0	0
\$51,000 and above	2	2	0	3
Column total and percentage by family group	5 (16.7)	25 (83.3)	4 (13.3)	26 (86.7)

^a8th-grade EBP families $\underline{n} = 30$; 8th-grade RED families $\underline{n} = 30$

Tables 21 and 22 show annual household income patterns of nonrespondent fathers of seventh-grade EBP and RED students and eighth-grade EBP and RED students, respectively. Because mothers were the heads of household for all nonintact families in this study, data in this demographic variable category are based on mothers' reports of the annual household incomes of the mothers' households.

Table 19

Descriptive Demographic Analysis of Complete and Missing Cases for Father Satisfaction Variables for Seventh-Grade Students' Families: Education of Father^a

Education of father	EBP Families		RED Families	
	Missing cases	Complete cases	Missing cases	Complete cases
< 8 years	0	0	0	0
8th grade to some high school	0	2	0	2
High school graduate	0	6	0	2
Post-high school training	2	4	0	8
Some college or Associate degree	4	3	3	4
4-year college degree	0	6	1	4
Some graduate school	1	1	1	2
Graduate degree	1	0	2	1
Column total and percentage by family group	8 (26.7)	22 (73.3)	7 (23.3)	23 (76.7)

^a7th-grade EBP families $n = 30$; 7th-grade RED families $n = 30$

Thus, it is important to note that data in this demographic variable category (annual household income), when used to compare nonrespondent versus respondent fathers, may or may not reflect the annual household incomes of nonrespondent fathers from nonintact families who were nonresident (i.e., not living with the mother and child). With this important

Table 20

Descriptive Demographic Analysis of Complete and Missing Cases for Father Satisfaction Variables for Eighth-Grade Students' Families: Education of Father^a

Education of father	EBP Families		RED Families	
	Missing cases	Complete cases	Missing cases	Complete cases
< 8 years	0	0	0	0
8th grade to some high school	0	3	0	1
High school graduate	1	1	1	4
Post-high school training	4	5	1	3
Some college or Associate degree	3	6	3	3
4-year college degree	1	2	1	8
Some graduate school	0	0	1	0
Graduate degree	1	3	2	2
Column total and percentage by family group	10 (33.3)	20 (66.7)	9 (30.0)	21 (70.0)

^a8th-grade EBP families $n = 30$; 8th-grade RED families $n = 30$

caveat in mind, there are some indications of bias for nonrespondent only for fathers of seventh-grade EBP students on this demographic variable. Five of these eight father nonrespondents were from the income category, "\$16,000 thru \$22,999." In the next section, the rationale for using a multivariate approach to study aspects of adolescence is explicated, and the results of multivariate analyses of self-report data in this study are presented.

Table 21

Descriptive Demographic Analysis of Complete and Missing Cases for Father Satisfaction Variables for Eighth-Grade Students' Families: Annual Household Income^a

Annual household income	EBP Families		RED Families	
	Missing cases	Complete cases	Missing cases	Complete cases
\$0 thru \$9,999	0	3	0	1
\$10,000 thru \$15,999	1	1	0	5
\$16,000 thru \$22,999	5	6	2	4
\$23,000 thru \$29,999	1	5	3	5
\$30,000 thru \$36,999	0	3	1	2
\$37,000 thru \$43,999	1	2	1	3
\$44,000 thru \$50,999	0	1	0	2
\$51,000 and above	0	1	0	1
Column total and percentage by family group	8 (26.7)	22 (73.3)	7 (23.3)	23 (76.7)

^a7th-grade EBP families $n = 30$; 7th-grade RED families $n = 30$

Multivariate Analyses of Variance (MANOVA)

We live in a world of not univariate, but multivariate influences. Hence, as Thompson (1986) noted, the reality in which social scientists (including educational researchers) are interested is usually one "in which the researcher cares about multiple outcomes, in which most outcomes have multiple causes, and in which most causes have multiple effects" (p. 9). Fish

Table 22

Descriptive Demographic Analysis of Complete and Missing Cases for Father Satisfaction Variables for Eighth-Grade Students' Families: Annual Household Income^a

Annual household income	EBP Families		RED Families	
	Missing cases	Complete cases	Missing cases	Complete cases
\$0 thru \$9,999	0	3	0	3
\$10,000 thru \$15,999	3	2	3	2
\$16,000 thru \$22,999	1	2	0	1
\$23,000 thru \$29,999	2	3	3	5
\$30,000 thru \$36,999	0	6	0	3
\$37,000 thru \$43,999	2	2	3	4
\$44,000 thru \$50,999	0	0	0	0
\$51,000 and above	2	2	0	3
Column total and percentage by family group	10 (33.3)	20 (66.7)	9 (30.0)	21 (70.0)

^a8th-grade EBP families $n = 30$; 8th-grade RED families $n = 30$

(1988) stated that the most important reason for using multivariate methods is not that these methods control inflation of experimentwise error rate (Huberty & Morris, 1989), but, instead, is the fact that "multivariate methods often best honor the reality about which the researcher is purportedly trying to generalize" (p. 132). Hopkins (1980) noted that multivariate methods permit understanding of

relationships among several variables not possible with univariate analysis....Factor analysis, canonical correlation, discriminant analysis--and modifications of each procedure--allow researchers to study complex data....Such is the case with questions based in the education of human beings. (p. 374)

Finally, Fish (1988) concluded that

improved research practice would see the use of more multivariate analyses even in studies already reporting Bonferroni corrections of error rates, and also would involve more considered interpretation of structure coefficients as part of the interpretation process. (p. 136)

A goal of a multivariate analysis may be to identify and interpret a construct that underlies a collection of outcome variables (Huberty & Morris, 1989). In using multivariate analyses, such as multivariate analysis of variance (MANOVA), the investigator can determine whether two or more groups differ with respect to a combination of several different variables simultaneously in an optimal way (Crowl, 1993; Harris, 1985; Stevens, 1992).

Stevens (1992) noted that the assumptions in MANOVA are (a) the observations are independent; (b) the population covariance matrices for the p dependent variables in each group are equal (homogeneous); and (c) the observations on the p dependent variables follow a multivariate normal distribution in each group. With respect to the first assumption, independence of observations, all of the student participants in the present study were individually administered self-report questionnaires, and the mother and father participants in the study were requested to complete their parent self-report questionnaires independently. Thus, as Glass and Hopkins

(1984) have noted, "Whenever the treatment [or questionnaire, in the present study] is individually administered, observations are independent" (p. 353).

Regarding the second assumption in MANOVA, homogeneity of within-group covariance matrices, Stevens (1992) noted that this assumption "is a very restrictive one" (p. 256), and that "it is very unlikely that the equal covariances assumption would ever literally be satisfied in practice" (p. 256). Tabachnick and Fidell (1996) noted that, if there is a violation of the assumption of homogeneity of covariance, a plausible interpretive strategy for the MANOVA results in such a case is

a more stringent adjustment of the statistical criterion leading to a more honest Type I error rate, but lower power. This strategy has the advantage of simplicity of interpretation (because familiar main effects and interactions are evaluated) and simplicity of decision-making (you decide on one of the strategies before performing the analysis and then take your chances with respect to power). (p. 475)

Also, Olson (1974, 1976, 1979) and Tabachnick and Fidell (1996) suggested use of the Pillai test statistic in MANOVA because of its greater robustness against heterogeneous covariance matrices. Tabachnick and Fidell (1996) asserted that, if the Box's M multivariate test for homogeneity of covariance matrices is statistically significant in a MANOVA, but the group sizes are equal or nearly equal (ratio of largest n to smallest n < 1.5), then "robustness of [statistical] significance tests is expected; disregard the Box's M test, a notoriously sensitive test of homogeneity of variance-covariance matrices available through SPSS MANOVA" (p. 382).

With respect to the third assumption in MANOVA, multivariate normality of the dependent variables in each group, Stevens (1992) stated that results from sundry studies indicate that "deviation from multivariate normality has only a small effect on type I error [e.g., finding a difference that is not really extant between the groups under study]" (p. 247). Stevens (1992) also noted that the F statistic in MANOVA is "robust with respect to type I error against non-normality" (p. 247). Tabachnick and Fidell (1996) stated that "even with unequal n and only a few DVs [dependent variables], a sample size of about 20 in the smallest cell should ensure robustness" (p. 381).

In general, a MANOVA should be performed with a relatively small number of dependent variables (≤ 10 ; Borg & Gall, 1989; Stevens, 1992). Reasons for limiting the number of dependent variables in a MANOVA include maximization of statistical power (Stevens, 1992), reduction of variable system error which may mask real group differences (Pruzek, 1971; Stevens, 1992), and facilitation of interpretation of results (Olson, 1974).

Also, when possible, Stevens (1992) noted that it is preferable to use a two-way (factorial) MANOVA design. Stevens cited at least two advantages of such an approach: First, with a two-way design, the researcher is able to examine the joint effect of the independent variables (in this study, grade [7th and 8th] and student group [EBP and RED]) on the dependent variables. A statistically significant interaction (e.g., grade by student group) tells us that

the effect that one independent variable (e.g., grade) has on a dependent variable is not the same for all levels of the other independent variable (e.g., student group).

A second advantage of a two-way design, according to Stevens (1992), is that it "can lead to more powerful tests by reducing error (within cell) variance" (Stevens, 1992, p. 305). Finally, Carlson and Timm (1974), Myers (1979), and Stevens (1992) all recommended using unique decomposition of the sums of squares (SS) for MANOVA, "where we are obtaining the unique contribution of each effect" (Stevens, 1992, p. 314).

Thus, following the recommended practices of Borg and Gall (1989) and Stevens (1992), to investigate between-group differences, 2 x 2 MANOVAs by grade (7th/8th) and student group (EBP/RED) were performed on the seven logical subsets of dependent variables (DV) of the 32 dependent variables in the study:

1. Academic domain control beliefs (8 DV; students' self-reports).
2. Social domain control beliefs (6 DV; students' self-reports).
3. General domain control beliefs (6 DV; students' self-reports).
4. Perceptions of maternal bonding (3 DV; students' self-reports).
5. Perceptions of paternal bonding (3 DV; students' self-reports).
6. Maternal parenting satisfaction (3 DV; mothers' self-reports).
7. Paternal parenting satisfaction (3 DV; fathers' self-reports).

The MANOVA procedure was used in the present study (a) to take into

account the high level of intercorrelations among dependent variables (DV) comprising a single construct (i.e., academic domain control beliefs, social domain control beliefs, general domain control beliefs, maternal bonding perceptions, paternal bonding perceptions, mother satisfaction, father satisfaction), and (b) to control for an inflated experiment-wise alpha (α) level believed to result from repeated t tests on nonindependent comparisons (Kerlinger & Pedhazur, 1973; Stevens, 1992; Timm, 1975; Winer, 1971).

A conventional a priori experiment-wise (pretest) α level of $p \leq .05$ was set as the statistical significance criterion for MANOVA main and interaction effects in this study (Abelson, 1995; Stevens, 1992; Timm, 1975). This a priori α level ($\leq .05$) has been employed in recent clinical multivariate research on boys with externalizing behavior disorders (e.g., Loeber et al., 1995).

Although the MANOVA procedure provides some extra protection against Type I errors (i.e., finding a between-groups difference that is not really there), because MANOVA is not a perfect solution to the problem of Type I errors in research studies with multiple measures, Bonferroni inequality corrections for pretest alpha (α) were used for gauging the statistical significance of the univariate F values for the dependent variables under the MANOVA main effects (Bird & Hadzi-Pavlovic, 1983; Cohen, 1977, 1988; Harris, 1985, 1993; Huberty & Morris, 1989; Kortering & Blackorby, 1992; Larntz, 1993; Miller, 1981; Ramsey, 1993; Stevens, 1992).

Cell sizes in the three control beliefs dependent variable subsets were equal. However, due to missing data, cell sizes in the four other dependent variable subsets were slightly unequal (see Chapter IV). Stevens (1992) has noted that slight inequality of cells in a MANOVA is not a threat to the robustness of the F statistic against heterogeneous variances. He noted that "as long as the group sizes are relatively equal (largest/smallest < 1.5), F is robust" (Stevens, 1992, p. 239).

Backward Stepwise Discriminant Function Analysis (BSDFA)

Because they are considered valuable in obtaining a more accurate understanding of a data set (Borgen & Seling, 1978; Bray & Maxwell, 1982), as well as for describing major differences among the groups in a MANOVA (Harnadek & Rourke, 1994; Stevens, 1992), additional statistical analyses of a multivariate nature were conducted using backward stepwise discriminant function analysis (BSDFA). Discriminant function analysis is a special case of multiple regression (Bordens & Abbott, 1988) and like multiple regression is used as an exploratory tool (Norusis, 1988). Unlike classical regression analysis, however, which uses a continuous dependent variable, discriminant function analysis is used when a dependent variable is (a) nominal or categorical (for example, behavior problem/non-behavior problem), and (b) the researcher has several predictor variables (e.g., control-related beliefs, parental perceptions) (Bordens & Abbott, 1988; Harnadek & Rourke, 1994;

King, Brown, & Gibson, 1986; Kleinbaum, Kupper, & Muller, 1988; Thomas, 1992).

Discriminant analysis allows a researcher to predict membership in a group (one of the discrete categories of the dependent variable) based on knowledge of a set of discrete predictor variables (Bordens & Abbott, 1988; Norusis, 1988; Thomas, 1992). Crowl (1993) wrote, with respect to discriminant analysis, that "one examines the differences in subjects' scores on several variables and determines if these differences separate the subjects into their respective groups" (p. 266). Discriminant analysis can be used to identify a simple rule for classifying subjects into groups, or to determine which of the predictor variables contributes most heavily to the separation of groups (Bordens & Abbott, 1988).

Borg and Gall (1989) wrote, "Discriminant analysis is elegant in its conciseness because it yields a single equation linking the predictor variables and criterion variable" (p. 611). For each dependent variable group (e.g., EBP, RED), a discriminant function score is calculated according to the following formula (Tabachnick & Fidell, 1983, 1996):

$$D_i = d_{i1}z_1 + d_{i2}z_2 + \dots + d_{in}z_n$$

In the foregoing formula, D_i is the discriminant function score calculated for each subject in the analysis, d_i is the regression weight, and z_i is the standardized raw score on a particular predictor. In discriminant analysis, a new variable (D_i) is calculated for each subject. Similar to multiple

regression analysis, this variable (D) is the optimal linear combination of the predictor variables. When the discriminant function scores have been calculated for each group, the average (centroid) of the discriminant function scores within a group is then determined (Bordens & Abbott, 1988).

A backward stepwise discriminant function analysis (BSDFA) minimizing Wilk's lambda was performed in this study to endeavor to explicate conceptually the statistically significant results of the MANOVAs (Tatsuoka, 1971). In this study, BSDFA allowed the researcher to look across the seven subsets of DV and to attempt the manifestation of a sample-specific predictive variable profile, which maximally discriminated the EBP and RED groups, from the Bonferroni-adjusted statistically significant MANOVA-derived single variables from the conventionally statistically significant ($p \leq .05$) subsets of DV (Kazdin, 1995b).

Rationale for the BSDFA Strategy

The backward stepwise procedure, sometimes called backward elimination, was used for the discriminant function analysis in this study. While proponents of the stepwise procedure suggest that it may be useful in both predictive and exploratory multivariate research, wherein identification of predictive models or sets of variables predicting membership in identified groups (McKay & Campbell, 1982; Menard, 1995; Share, 1984; Wofford, Elliott, & Menard, 1994) is desired, others deride the stepwise approach as an admission of ignorance about the phenomenon under study. Menard

(1995), however, recently asserted that the stepwise analysis method in multivariate research can be construed as a search "for plausible predictors" (Menard, 1995, p. 57) of group membership, or as a conceptual heuristic for describing and understanding composites of newly measured or recently ascertained factors or variables (Menard, 1995; Wofford et al., 1994).

The backward stepwise method (a) is an accepted procedure in fields where substantive theory provides little or no guidance for model building or group membership prediction, and (b) is commonly used as a practical procedure when there are a large number of candidate variables (Hosmer & Lemeshow, 1989; Huberty, 1984; Marascuilo & Levin, 1983; Marascuilo & Serlin, 1988; Menard, 1995; O'Gorman & Woolson, 1991; Thompson, 1989). The backward stepwise procedure can produce a statistically optimal set of discriminating variables (Klecka, 1980) or indicator variables (Norusis, 1993) for the dependent groups (EBP/RED). The backward stepwise procedure starts with all of the independent (predictor) variables in the model. Then, at each step, the variables are evaluated for entry and removal. Menard (1995) asserted that, in addition to using a backward stepwise procedure "to further prevent the failure to find a relationship when one exists, the usual .05 [α] criterion for statistical significance should probably be relaxed" (p. 55). Bendel and Afifi (1977), in their studies of models in forward inclusion stepwise regression, suggested that an α of .05 is too low and often excludes important variables from the model. Bendel and Afifi instead

recommended that the statistical significance inclusion criterion (α) for variables be set in a range from .15 to .20.

As Menard (1995) explained, such relaxation of the inclusion criterion, results in an increased risk of rejecting the null hypothesis when it is true (i.e., committing a Type I error or finding a relationship that is not really there), but a lower risk of failing to reject the null hypothesis when it is false (i.e., committing a Type II error or not finding a relationship that really is there). However, in research with new measures or measures which have not been used with certain populations or subgroups, "there tends to be a greater emphasis on finding good predictors than on eliminating bad ones" (Menard, 1995, p. 55). Recently, research by Wofford et al. (1994) has provided support for relaxation of the statistical inclusion criterion (α) in exploratory research utilizing backward stepwise procedures.

In particular, the backward elimination form of stepwise analysis, rather than the forward inclusion method, is often preferred. In some analyses, a variable may appear to have a statistically significant effect only when another variable is held constant or controlled (Menard, 1995). Agresti and Finlay (1986, pp. 304-305) referred to this as the "suppressor effect." Menard (1995), speaking in particular about stepwise regression, described a major disadvantage to the forward inclusion method. He explained:

One disadvantage to forward inclusion as a method for stepwise regression is the possible exclusion of variables involved in suppressor effects. With backward elimination, because both variables will already be in the model, there is less risk of failing

to find a relationship when one exists....[B]ackward elimination may uncover relationships missed by forward inclusion. (Menard, 1995, p. 55)

Given the foregoing support for a more liberal statistical inclusion for exploratory research using stepwise methods (e.g., Bendel and Affi, 1977; Menard, 1995; Wofford et al., 1994), an α value of $\leq .15$ was used for the entry (inclusion) probability criterion for a predictor variable in the BSDFA. The statistical probability criterion for removal of a predictor variable from the BSDFA was $\alpha > .15$.

Inclusion of Cases With Missing Data in the BSDFA

As indicated earlier, despite good faith efforts to prevent its occurrence, research studies with missing data are a fairly common occurrence (Rosnow & Rosenthal, 1993), particularly when studying aspects of families (Grossman et al., 1992). Complete cases existed for all eight predictor variables included in the BSDFA except for the predictor variable of Mother Satisfaction: Parent-Child Relationship (see Chapter IV, Table 27). One method which addresses this problem of missing data is estimation of the missing data values through substitution of the dependent variable sample mean for the missing value (Borg & Gall, 1989; Gall et al., 1996; Huberty & Julian, 1994).

The EBP group had 52 complete cases and 8 missing cases and the RED group had 54 complete cases and 6 missing cases for the predictor

variable of Mother Satisfaction: Parent-Child Relationship. Thus, in the current investigation, to maximize the number of cases available for the backward stepwise discriminant function analysis (BSDFA), inclusion of cases with missing data for the variable of mothers' self-reported satisfaction with the parent-child relationship (EBP = 8; RED = 6) was implemented using the predictor variable sample means (see CHAPTER IV; Table 27) for the EBP and RED groups (Borg & Gall, 1989; Frane, 1976; Huberty & Julian, 1994; Marascuilo & Levin, 1983; Searle, 1993; Stevens, 1992). Comparisons of the missing versus complete cases for the EBP and RED groups on reported demographic variables for this dependent variable (mothers' self-reported satisfaction with the parent-child relationship) were delineated previously (see Tables 15 through 18).

CHAPTER IV

RESULTS

First, the means, standard deviations (SD), and standardized mean differences (SMD) of the dependent measures' 32 subscales are displayed by group and by grade. Second, the results of the multivariate analyses of variance (MANOVA) are presented for each of seven subsets of the 32 dependent variables (DV): academic domain control beliefs (8 DV); social domain control beliefs (6 DV); general domain control beliefs (6 DV); student perceptions of mother bonding (3 DV); student perceptions of father bonding (3 DV); mother parenting satisfaction (3 DV); and father parenting satisfaction (3 DV). Third, the results of a backward stepwise discriminant function analysis (BSDFA), which incorporated eight statistically significant dependent variables based on Bonferroni-corrected α levels for univariate *F*-values derived from the seven subsets of DV analyzed using MANOVA, are presented.

Means, Standard Deviations (SD), and Standardized Mean Differences (SMD) for the Seven Dependent Variable Subsets

The means and standard deviations of the EBP and RED groups for the seven dependent variable subsets (a) Academic Domain Control Beliefs (student self-report), (b) Social Domain Control Beliefs (student self-report),

(c) General Domain Control Beliefs (student self-report), (d) Maternal Bonding (student self-report), (e) Paternal Bonding (student self-report), (f) Mother Satisfaction (parent self-report), and (g) Father Satisfaction (parent self-report) are listed by grade (7th/8th) and by group overall in Tables 23 through 27. An inspection of the means in Tables 23 through 27 indicates neither floor nor ceiling effects for the EBP nor the RED group on the dependent variables within the seven subsets. Also, for the three domains of control beliefs (academic, general, and social), the empirically small differences between grades (7th/8th) in this study support the findings from research conducted by Connell (1985), Skinner et al. (1988b), Skinner, Wellborn et al. (1990), and Weisz et al. (1989), who noted small variability in early adolescents' self-reported control-related beliefs after age 12. The formula used for calculating the SMDs in Tables 9 through 13 was:

$$\frac{EBP_{Mean} - RED_{Mean}}{\text{Pooled } \underline{SD} \text{ of EBP and RED}} = \text{SMD}$$

MANOVA Results for Academic Domain Control Beliefs Dependent Variables

As depicted in Table 28, no statistically significant interaction effect (grade x student group) was found in the academic control beliefs domain. Only one statistically significant main effect ($p < .05$) was found in the academic domain for student group (EBP/RED). For this main effect, inspection of the univariate F values (Table 29) and the group means

Table 23

Means, Standard Deviations (SD), and Standardized Mean Differences (SMD)
for EBP and RED Groups on Academic Domain Control Beliefs Dependent
variables (Students' Anonymous Self-Reports)^a

Dependent variables	Grade	EBP Group			RED Group			SMD
		n	Mean	SD	n	Mean	SD	
Academic control beliefs	7th	30	3.18	0.67	30	3.40	0.44	-0.39
	8th	30	2.96	0.70	30	3.33	0.38	-0.69
	7th+8th	60	3.07	0.69	60	3.36	0.41	-0.53
Strategy beliefs: Attributes	7th	30	2.78	0.49	30	3.00	0.53	-0.43
	8th	30	2.73	0.70	30	2.91	0.49	-0.30
	7th+8th	60	2.76	0.60	60	2.95	0.51	-0.34
Strategy beliefs: Powerful others	7th	30	2.26	0.82	30	2.22	0.64	0.05
	8th	30	2.41	0.83	30	2.18	0.43	0.37
	7th+8th	60	2.33	0.82	60	2.20	0.54	0.19
Strategy beliefs: Luck	7th	30	2.09	0.84	30	1.88	0.53	0.30
	8th	30	2.25	0.92	30	1.74	0.47	0.73
	7th+8th	60	2.17	0.87	60	1.81	0.50	0.52
Strategy beliefs: Unknown	7th	30	2.12	0.88	30	1.77	0.33	0.57
	8th	30	2.27	0.84	30	1.74	0.49	0.79
	7th+8th	60	2.19	0.86	60	1.76	0.41	0.67
Capacity beliefs: Attributes	7th	30	2.98	0.75	30	3.03	0.33	-0.09
	8th	30	2.59	0.88	30	3.10	0.49	-0.74
	7th+8th	60	2.79	0.83	60	3.06	0.42	-0.43
Capacity beliefs: Powerful others	7th	30	2.74	0.80	30	3.14	0.67	-0.54
	8th	30	2.63	0.92	30	2.98	0.61	-0.45
	7th+8th	60	2.68	0.86	60	3.06	0.64	-0.51
Capacity beliefs: Luck	7th	30	2.64	0.55	30	2.74	0.65	-0.17
	8th	30	2.38	0.61	30	2.64	0.68	-0.40
	7th+8th	60	2.51	0.59	60	2.69	0.66	-0.29

^aMinimum and maximum scores possible for each of the dependent variables in this domain are 1.0 and 4.0, respectively.

(EBP/RED; Table 23) for the eight academic domain subscales revealed that, using a Bonferroni correction for α of $p \leq .006$ (Bird & Hadzi-Pavlovic, 1983;

Table 24

Means, Standard Deviations (SD), and Standardized Mean Differences (SMD)
for EBP and RED Groups on Social Domain Control Beliefs Dependent
Variables (Students' Anonymous Self-Reports)^a

Dependent variables	Grade	EBP Group			RED Group			SMD
		n	Mean	SD	n	Mean	SD	
Social: Unknown success	7th	30	2.43	0.93	30	1.95	0.74	0.57
	8th	30	2.73	0.75	30	2.37	0.89	0.44
	7th+8th	60	2.58	0.85	60	2.16	0.84	0.49
Social: Unknown failure	7th	30	2.43	0.86	30	2.22	0.58	0.29
	8th	30	2.50	0.81	30	1.92	0.59	0.83
	7th+8th	60	2.47	0.83	60	2.07	0.60	0.56
Social: Powerful others success	7th	30	2.27	0.89	30	2.12	0.86	0.17
	8th	30	2.37	0.91	30	2.07	0.74	0.36
	7th+8th	60	2.32	0.89	60	2.09	0.79	0.27
Social: Powerful others failure	7th	30	1.80	0.70	30	1.83	0.66	0.04
	8th	30	2.13	0.84	30	1.80	0.76	0.41
	7th+8th	60	1.97	0.79	60	1.82	0.71	0.20
Social: Internal success	7th	30	3.17	0.77	30	3.32	0.48	-0.24
	8th	30	3.22	0.65	30	3.40	0.48	-0.32
	7th+8th	60	3.19	0.71	60	3.36	0.48	-0.28
Social: Internal failure	7th	30	2.95	0.67	30	2.97	0.66	-0.03
	8th	30	2.75	0.57	30	3.27	0.54	-0.93
	7th+8th	60	2.85	0.63	60	3.12	0.61	-0.44

^aMinimum and maximum scores possible for each of the dependent variables in this domain are 1.0 and 4.0, respectively.

Harris, 1993; Larntz, 1993; Miller, 1981; Ramsey, 1993; Stevens, 1992), the dependent variables of academic control beliefs (EBP < RED), academic strategy beliefs for luck (EBP > RED), and academic strategy beliefs for unknown (EBP > RED), were the dependent variables contributing to this statistically significant main effect.

Table 25

Means, Standard Deviations (SD), and Standardized Mean Differences (SMD)for EBP and RED Groups on General Domain Control Beliefs DependentVariables (Students' Anonymous Self-Reports)^a

Dependent variables	Grade	EBP Group			RED Group			SMD
		<u>n</u>	Mean	<u>SD</u>	<u>n</u>	Mean	<u>SD</u>	
General:	7th	30	2.50	0.90	30	2.00	0.73	0.61
Unknown	8th	30	2.68	0.76	30	2.18	0.78	0.65
success	7th+8th	60	2.59	0.83	60	2.09	0.76	0.63
General:	7th	30	2.60	0.68	30	2.35	0.51	0.42
Unknown	8th	30	2.47	0.79	30	2.22	0.75	0.32
failure	7th+8th	60	2.53	0.73	60	2.28	0.64	0.36
General:	7th	30	2.28	0.78	30	2.17	0.59	0.16
Powerful	8th	30	2.37	0.81	30	2.10	0.59	0.39
others	7th+8th	60	2.32	0.79	60	2.13	0.59	0.28
success	7th	30	2.33	0.84	30	2.03	0.79	0.37
General:	8th	30	2.70	0.93	30	2.12	0.72	0.70
Powerful	7th+8th	60	2.52	0.90	60	2.08	0.75	0.53
others	7th	30	3.08	0.80	30	3.28	0.72	-0.26
General:	8th	30	2.82	0.88	30	3.08	0.78	-0.31
Internal	7th+8th	60	2.95	0.84	60	3.18	0.75	-0.29
success	7th	30	2.88	0.68	30	2.98	0.59	-0.16
General:	8th	30	2.82	0.83	30	3.00	0.67	-0.24
Internal	7th+8th	60	2.85	0.75	60	2.99	0.63	-0.20
failure								

^aMinimum and maximum scores possible for each of the dependent variables in this domain are 1.0 and 4.0, respectively.

Partial eta squared (η^2_p) is a measure of effect size available in the SPSS for WindowsTM (Release 6.0) MANOVA procedure (Norusis, 1993).

The justification for using η^2_p is that "partial eta squared is an overestimate of the actual effect size. However, it is a consistent measure of effect size and is applicable to all *F* and *t* tests" (SPSS, Inc., 1988, p. 602). However,

Table 26

Means, Standard Deviations (SD), and Standardized Mean Differences (SMD)
for EBP and RED Groups on Maternal and Parental Bonding Dependent
Variables (Students' Anonymous Self-Reports)^a

Dependent variables	Grade	EBP Group			RED Group			SMD
		n	Mean	SD	n	Mean	SD	
<u>Maternal bonding</u>								
Maternal care	7th	30	29.93	2.94	30	30.00	5.10	-0.02
	8th	30	28.94	3.01	30	31.23	4.45	-0.61
	7th+8th	60	29.43	2.99	60	30.62	4.78	-0.31
Maternal social protection	7th	30	7.70	2.62	30	7.10	4.49	0.17
	8th	30	7.13	2.98	30	5.60	3.22	0.49
	7th+8th	60	7.42	2.79	60	6.35	3.95	0.32
Maternal personal protection	7th	30	4.57	2.58	30	4.13	3.14	0.15
	8th	30	5.60	3.20	30	4.23	3.18	0.43
	7th+8th	60	5.08	2.93	60	4.18	3.13	0.30
<u>Paternal bonding^b</u>								
Paternal care	7th	27	24.85	6.19	27	28.52	6.19	-0.59
	8th	25	24.36	5.67	27	24.85	6.78	-0.08
	7th+8th	52	24.62	5.90	54	26.69	6.75	-0.33
Paternal social protection	7th	27	7.63	2.12	27	7.11	3.30	0.19
	8th	25	8.56	2.06	27	6.81	4.67	0.52
	7th+8th	52	8.08	2.12	54	6.96	4.01	0.36
Paternal personal protection	7th	27	4.11	2.41	27	3.59	2.59	0.21
	8th	25	3.76	1.72	27	3.22	2.03	0.29
	7th+8th	52	3.94	2.09	54	3.41	2.31	0.24

^aMinimum and maximum scores for each of the dependent variables in this domain are: Maternal/Paternal Care (0.0 and 36.0, respectively); Maternal/Paternal Social Protection (0.0 and 24.0, respectively); and Maternal/Paternal Personal Protection (0.0 and 15.0, respectively).

^bMissing cases for paternal bonding variables: EBP group = 8 and RED group = 6, all from "nonintact" families.

Stevens (1992) stated, "Actually partial η^2 and η^2 differ by very little when total sample size is about 50 or more" (p. 177). The formula for calculating

Table 27

Means, Standard Deviations (SD), and Standardized Mean Differences (SMD)
for EBP and RED Groups on Mother and Father Satisfaction Dependent
Variables (Mothers' and Fathers' Anonymous Self-Reports)^a

Dependent variables	Grade	EBP Group			RED Group			SMD
		n	Mean	SD	n	Mean	SD	
<u>Mother satisfaction^b</u>								
Mother:								
Spouse/	7th	27	46.04	4.53	28	47.18	7.73	-0.19
ex-spouse	8th	25	43.16	6.04	26	44.58	9.37	-0.18
support	7th+8th	52	44.65	5.45	54	45.93	8.58	-0.18
Mother:	7th	27	48.15	4.16	28	51.18	3.72	-0.77
Parent-child	8th	25	47.52	4.92	26	49.46	4.89	-0.40
relationship	7th+8th	52	47.85	4.50	54	50.35	4.37	-0.56
Mother:	7th	27	49.33	3.15	28	49.57	3.99	-0.07
Parent	8th	25	48.80	2.78	26	50.92	3.24	-0.70
performance	7th+8th	52	49.08	2.96	54	50.22	3.67	-0.34
<u>Father satisfaction^c</u>								
Father:								
Spouse/	7th	22	48.73	3.09	23	50.65	5.65	-0.44
ex-spouse	8th	20	47.35	4.36	21	47.38	4.71	-0.01
support	7th+8th	42	48.07	3.76	44	49.09	5.42	-0.22
Father:	7th	22	46.91	4.30	23	49.39	5.28	-0.52
Parent-child	8th	20	47.10	4.86	21	48.33	5.77	-0.23
relationship	7th+8th	42	47.00	4.52	44	48.89	5.48	-0.38
Father:	7th	22	50.00	2.86	23	49.91	2.70	-0.03
Parent	8th	20	48.90	4.42	21	51.48	3.04	-0.69
performance	7th+8th	42	49.48	3.68	44	50.66	2.94	-0.36

^aMinimum and maximum scores possible for each of the dependent variables in this domain are 15.0 and 60.0, respectively.

^bMissing cases for mothers' satisfaction variables: EBP group = 8; RED group = 6.

^cMissing cases for fathers' satisfaction variables: EBP group = 18; RED group = 16.

Table 28

MANOVA Main Effects and Interaction for Grade (7th/8th) and Student Group (EBP/RED) for Academic Domain Control Beliefs Dependent Variables (Students' Anonymous Self-Reports)

MANOVA Effect	Pillais Value	F Value ^a
Student group	0.190	3.188*
Grade	0.053	0.768
Student group x Grade	0.066	0.962

*Degrees of freedom (df) for *F* values are 8 and 109.

^aA priori (pretest) alpha (α) set at the .05 level. MANOVA effects so indicated are statistically significant at or below .05.

η^2_p is given by Stevens (1992, p. 177): $\eta^2_p = (df \times F)/(df_h \times F + df_e)$. In this formula for η^2_p , df_h denotes degrees of freedom for hypothesis and df_e denotes degrees of freedom for error.

Regarding interpretation of η^2_p for each univariate *F* test, Cohen (1977, 1988) described $\eta^2 = .01$ as small, $\eta^2 = .06$ as medium, and $\eta^2 = .14$ as large effect size. Multivariate effect sizes (η^2_p) based on the univariate *F* tests, along with two-tailed power values ($\alpha \leq .05$) based on fixed-effects assumptions for the MANOVA main effect for student group (EBP/RED) for the academic domain control beliefs dependent variables are displayed in Table 30.⁵

⁵Statistical "power" is the probability of rejecting the null hypothesis when it is false or, in other words, the probability of making a correct decision (Stevens, 1992).

Table 29

Univariate F Tests for Statistically Significant MANOVA Main Effect for
Student Group (EBP/RED) for Academic Domain Control Beliefs Dependent
Variables (Students' Anonymous Self-Reports)

Dependent Variables	Hypothesis MS and SS	Error MS	F Value*
Control beliefs	2.552	0.317	8.060*
Strategy beliefs: Attributes	1.167	0.317	3.683
Strategy beliefs: Powerful others	0.511	0.491	1.042
Strategy beliefs: Luck	3.912	0.507	7.720*
Strategy beliefs: Unknown	5.779	0.458	12.609*
Capacity beliefs: Attributes	2.269	0.423	5.367
Capacity beliefs: Powerful others	4.219	0.578	7.297
Capacity beliefs: Luck	0.919	0.384	2.361

*Degrees of freedom (df) for F values are 1 and 116.

*A priori (pretest) alpha (α) set at the .05 level. Because Bonferroni inequality corrections for Type I error were performed (Harris, 1993; Ramsey, 1993; Stevens, 1992), only EBP/RED group differences on the dependent variables in this subset at $\alpha \leq .006$ (a priori $\alpha = .05/8$ dependent variables = .006) were accepted as statistically significant for this domain and were interpreted. Univariate F values so designated are statistically significant at or below the p value of .006.

The DV in this subset with "medium" or greater multivariate effect sizes (η^2_p) are academic control beliefs ($\eta^2_p = .07$), academic strategy beliefs for luck ($\eta^2_p = .07$), academic strategy beliefs for unknown ($\eta^2_p = .10$), and academic capacity beliefs for powerful others ($\eta^2_p = .06$). The latter variable, however, did not attain the Bonferroni-corrected α level of $p \leq .006$ for statistical significance. Given the strong internal-consistency reliability

Table 30

Multivariate Effect Sizes (Partial Eta Squared [η^2_p]) Based on Univariate F Tests for MANOVA Main Effect for Student Group (EBP/RED) for Academic Domain Control Beliefs Dependent Variables (Students' Anonymous Self-Reports)^a

Dependent variables	η^2_p	Power
Control beliefs	.07	.80
Strategy beliefs: Attributes	.03	.48
Strategy beliefs: Powerful others	.01	.17
Strategy beliefs: Luck	.07	.79
Strategy beliefs: Unknown	.10	.94
Capacity beliefs: Attributes	.05	.63
Capacity beliefs: Powerful others	.06	.76
Capacity beliefs: Luck	.02	.33

^aRegarding interpretation of η^2_p for each univariate F test, Cohen (1977, 1988) described $\eta^2 = .01$ as a small, $\eta^2 = .06$ as a medium, and $\eta^2 = .14$ as a large effect size. Statistical power values are two-tailed ($\alpha \leq .05$) and are based on fixed-effects assumptions for the MANOVA main effect for student group (EBP/RED).

coefficient obtained for this latter variable (.89), it is unlikely that low reliability played an attenuating role in this nonstatistically significant result.

MANOVA Results for Social Domain Control Beliefs Dependent Variables

No statistically significant interaction effect was found (grade x student group) in the social domain (Table 31). However, statistically significant main effects were found for grade (7th/8th; $p < .05$) and student group (EBP/RED;

Table 31

MANOVA Main Effects and Interaction for Grade (7th/8th) and Student Group (EBP/RED) for Social Domain Control Beliefs Dependent Variables (Students' Anonymous Self-Reports)

MANOVA Effect	Pillais Value	F Value ^a
Student group	0.113	2.349*
Grade	0.104	2.156*
Student group x Grade	0.076	1.516

^aDegrees of freedom (*df*) for *F* values are 6 and 111.

^aA priori (pretest) alpha (α) set at the .05 level. MANOVA effects so indicated have a *p* value \leq .05.

$p < .05$). For the main effect for grade, review of the univariate *F* values (Table 32) for the six social domain subscales revealed that only the dependent variable of unknown success (7th < 8th; Table 24) contributed to the statistically significant MANOVA main effect for grade ($p < .05$). Given the Bonferroni inequality correction for α for the univariate *F* values in this domain, this dependent variable (unknown success) did not meet the statistical significance criterion ($\leq .008$) and, therefore, was not interpreted.

For the main effect for student group, review of the univariate *F* values (Table 33), using the Bonferroni-corrected α criterion of $\leq .008$, and the group means (EBP/RED; Table 24) for the six social domain subscales revealed that the dependent variables of unknown success (EBP > RED) and unknown failure (EBP > RED) contributed to this main effect.

Table 32

Univariate F Tests for Statistically Significant MANOVA Main Effect for Grade (7th/8th) for Social Domain Control Beliefs Dependent Variables (Students' Anonymous Self-Reports)

Dependent variables	Hypothesis MS and SS	Error MS	F Value*
Social: Unknown success	3.852	0.689	5.594*
Social: Unknown failure	0.408	0.519	0.786
Social: Powerful others success	0.019	0.725	0.026
Social: Powerful others failure	0.675	0.554	1.219
Social: Internal success	0.133	0.370	0.360
Social: Internal failure	0.075	0.374	0.200

*Degrees of freedom (df) for F values are 1 and 116.

*A priori (pretest) alpha (α) set at the .05 level. Because Bonferroni inequality corrections for Type I error were performed (Harris, 1993; Ramsey, 1993; Stevens, 1992), only 7th/8th grade differences on the dependent variables in this subset at $\alpha \leq .008$ (a priori $\alpha = .05/6$ dependent variables = .008) were accepted as statistically significant for this domain and were interpreted. The F value for Social: Unknown Success (5.594) had a p value of $> .02$, and thus was not interpreted.

Multivariate effect sizes (η^2_p) based on the univariate F tests for the MANOVA main effect for student group (EBP/RED) for the social domain control beliefs dependent variables are displayed in Table 34. Two DV in this subset had "medium" or greater multivariate effect sizes (η^2_p): social control beliefs for unknown success ($\eta^2_p = .07$), and social control beliefs for unknown failure ($\eta^2_p = .08$).

Low internal consistency reliability coefficients for the dependent variables in this domain may have obscured true between-group (7th/8th;

Table 33

Univariate F Tests for Statistically Significant MANOVA Main Effect for Student Group (EBP/RED) for Social Domain Control Beliefs Dependent Variables (Students' Anonymous Self-Reports)

Dependent variables	Hypothesis <u>MS</u> and <u>SS</u>	Error <u>MS</u>	F Value ^a
Social: Unknown success	5.419	0.689	7.869*
Social: Unknown failure	4.800	0.519	9.241*
Social: Powerful others success	1.519	0.725	2.096
Social: Powerful others failure	0.675	0.554	1.219
Social: Internal success	0.833	0.370	2.250
Social: Internal failure	2.133	0.374	5.704

^aDegrees of freedom (df) for F values are 1 and 116.

^aA priori (pretest) alpha (α) set at the .05 level. Because Bonferroni inequality corrections for Type I error were performed (Harris, 1993; Ramsey, 1993; Stevens, 1992), only EBP/RED group differences on the dependent variables in this subset at $\alpha \leq .008$ (a priori $\alpha = .05/6$ dependent variables = .008) were accepted as statistically significant for this domain and were interpreted. Univariate F values so designated are statistically significant at or below the p value of .008.

EBP/RED) differences (Dr. Carol Strong, personal communication, April 17, 1996; Herzog, 1996; Vockell & Asher, 1995). The following social domain dependent variables had internal consistency reliability coefficients < .70: unknown failure (.65); powerful others failure (.63); and internal failure (.61). Thus, in light of the low internal consistency coefficients for the foregoing four DV in the social control beliefs domain, the results must be interpreted with caution and conclusions regarding true between-group (EBP/RED) differences in this domain must be provisional.

Table 34

Multivariate Effect Sizes (Partial Eta Squared [η^2_p]) Based on Univariate F Tests for MANOVA Main Effect for Student Group (EBP/RED) for Social Domain Control Beliefs Dependent Variables (Students' Anonymous Self-Reports)^a

Dependent variables	η^2_p	Power
Social: Unknown success	.07	.79
Social: Unknown failure	.08	.85
Social: Powerful others success	.02	.30
Social: Powerful others failure	.01	.20
Social: Internal success	.02	.32
Social: Internal failure	.05	.66

^aRegarding interpretation of η^2_p for each univariate F test, Cohen (1977, 1988) described $\eta^2 = .01$ as a small, $\eta^2 = .06$ as a medium, and $\eta^2 = .14$ as a large effect size. Statistical power values are two-tailed ($\alpha \leq .05$) and are based on fixed-effects assumptions for the MANOVA main effect for student group (EBP/RED).

MANOVA Results for General Domain Control Beliefs Dependent Variables

No statistically significant interaction effect (grade x student group) or main effect for grade was found in this general domain (Table 35). A statistically significant main effect was found for student group (EBP/RED; $p \leq .05$). For this main effect, review of the univariate F values (Table 36), using the Bonferroni correction alpha (α) criterion of $\leq .008$, and the group means (EBP/RED; Table 25) for the six general domain subscales revealed that the dependent variables of unknown success (EBP > RED) and powerful

Table 35

MANOVA Main Effects and Interaction for Grade (7th/8th) and Student Group (EBP/RED) for General Domain Control Beliefs Dependent Variables (Students' Anonymous Self-Reports)

MANOVA Effect	Pillais Value	F Value ^a
Student group	0.124	2.219*
Grade	0.071	1.421
Student group x Grade	0.011	0.206

^aDegrees of freedom (*df*) for *F* values are 6 and 111.

^aA priori (pretest) alpha (α) set at the .05 level. MANOVA effects so indicated have a *p* value \leq .05.

others for failure (EBP > RED) contributed to this statistically significant main effect. Multivariate effect sizes (η^2_p) based on the univariate *F* tests for the MANOVA main effect for student group (EBP/RED) for the general domain control beliefs dependent variables are displayed in Table 37. Two DV in this subset had "medium" or greater multivariate effect sizes (η^2_p): general control beliefs for unknown success ($\eta^2_p = .10$), and general control beliefs for powerful others failure ($\eta^2_p = .07$).

Low internal consistency reliability coefficients for some dependent variables in the general domain may have obscured true between-group (7th/8th; EBP/RED) differences (Dr. Carol Strong, personal communication, April 17, 1996; Herzog, 1996; Vockell & Asher, 1995). The following general domain dependent variables had internal consistency reliability coefficients

Table 36

Univariate F Tests for Statistically Significant MANOVA Main Effect for Student Group (EBP/RED) for General Domain Control Beliefs Dependent Variables (Students' Anonymous Self-Reports)

Dependent variables	Hypothesis MS and SS	Error MS	F Value*
General: Unknown success	7.500	0.633	11.839*
General: Unknown failure	1.875	0.475	3.949
General: Powerful others success	1.102	0.493	2.236
General: Powerful others failure	5.852	0.675	8.673*
General: Internal success	1.633	0.631	2.590
General: Internal failure	0.602	0.486	1.240

*Degrees of freedom (df) for F values are 1 and 116.

*A priori (pretest) alpha (α) set at the .05 level. Because Bonferroni inequality corrections for Type I error were performed (Harris, 1993; Ramsey, 1993; Stevens, 1992), only EBP/RED group differences on the dependent variables in this subset at $\alpha \leq .008$ (a priori $\alpha = .05/6$ dependent variables = .008) were accepted as statistically significant for this domain and were interpreted. Univariate F values so designated are statistically significant at or below the p value of .008.

< .70: unknown success (.69); unknown failure (.68); and powerful others failure (.67). Thus, conclusions regarding between-group differences in this domain must be provisional.

MANOVA Results for Maternal and Paternal Bonding Dependent Variables

No statistically significant interaction effects (grade x student group) or main effects (grade or student group) were found for the DV in the

Table 37

Multivariate Effect Sizes (Partial Eta Squared [η^2_p]) Based on Univariate F Tests for MANOVA Main Effect for Student Group (EBP/RED) for General Domain Control Beliefs Dependent Variables (Students' Anonymous Self-Reports)^a

Dependent variables	η^2_p	Power
General: Unknown success	.10	.93
General: Unknown failure	.03	.50
General: Powerful others success	.02	.32
General: Powerful others failure	.07	.83
General: Internal success	.02	.36
General: Internal failure	.01	.20

^aRegarding interpretation of η^2_p for each univariate F test, Cohen (1977, 1988) described $\eta^2 = .01$ as a small, $\eta^2 = .06$ as a medium, and $\eta^2 = .14$ as a large effect size. Statistical power values are two-tailed ($\alpha \leq .05$) and are based on fixed-effects assumptions for the MANOVA main effect for student group (EBP/RED).

maternal bonding subset ($p > .15$; Table 38), nor for the DV in the paternal bonding subset ($p > .10$; Table 39). Thus, no further statistical analyses were performed on any of the dependent variables in this subset (Bock, 1975; Bray & Maxwell, 1982; Kerlinger & Pedhazur, 1973; Stevens, 1992; Timm, 1975).

Low internal consistency reliability coefficients for the dependent variables in this domain may have obscured true between-group (7th/8th; EBP/RED) differences (Dr. Carol Strong, personal communication, April 17, 1996; Herzog, 1996; Vockell, 1995). The maternal bonding dependent variable of maternal personal protection had an internal consistency reliability

Table 38

MANOVA Main Effects and Interaction for Grade (7th/8th) and Student Group (EBP/RED) for Maternal Bonding Dependent Variables (Students' Anonymous Self-Reports)

MANOVA Effect	Pillais Value	F Value ^{a,b}
Student group	0.045	1.781
Grade	0.037	1.479
Student group x Grade	0.022	0.848

^aDegrees of freedom (df) for *F* values are 3 and 114.

^b $\alpha > .15$ for *F* values for the interaction effect (student group x grade) and main effects (grade, student group). Because neither the MANOVA interaction nor main effects were statistically significant at the a priori α level of $\leq .05$, no further analyses were conducted on nor interpretation undertaken of the univariate *F* values for the three dependent variables in this subset (maternal care, maternal social protection, maternal personal protection; Bock, 1975; Bray & Maxwell, 1982; Stevens, 1992).

coefficients of .69, and the paternal bonding dependent variables of paternal social protection and paternal personal protection had internal consistency reliability coefficients of .59 and .58, respectively. Thus, conclusions regarding true between-group differences on the dependent variables in the maternal and paternal bonding domains are provisional. In strictly descriptive terms, however, the means for both the RED group (and its 7th- and 8th-grade subgroups) and the EBP group (and its 7th- and 8th-grade subgroups) fell within the upper one third of the maximum PBI score (36) for care and in the lower one third of the maximum PBI scores for social protection or control (24) and for personal protection or control (15) (see Table 26).

Table 39

MANOVA Main Effects and Interaction for Grade (7th/8th) and Student Group (EBP/RED) for Paternal Bonding Dependent Variables (Students' Anonymous Self-Reports)

MANOVA Effect	Pillais Value	F Value ^{a,b}
Student group	0.055	1.930
Grade	0.038	1.326
Student group x Grade	0.038	1.329

^aDegrees of freedom (df) for F values are 3 and 100.

^b $\alpha > .10$ for F values for the interaction effect (student group x grade) and main effects (grade, student group). Because neither the MANOVA interaction nor main effects were statistically significant at the a priori α level of $\leq .05$, no further analyses were conducted on nor interpretation undertaken of the univariate F values for the three dependent variables in this subset (paternal care, paternal social protection, paternal personal protection; Bock, 1975; Bray & Maxwell, 1982; Stevens, 1992).

MANOVA Results for Mother and Father Satisfaction Dependent Variables

No statistically significant interaction effect (grade x student group) was found for the mother satisfaction dependent variables (Table 40). However, a statistically significant main effect ($p < .05$) was found for student group (EBP/RED). For this main effect, review of the univariate F values (Table 41), using the Bonferroni correction alpha (α) criterion of $\leq .008$, and the group means (EBP/RED; see Table 27) for the the mother satisfaction domain subscales revealed that the dependent variable of mother's satisfaction with the parent-child relationship (EBP < RED) contributed to this statistically significant main effect.

Table 40

MANOVA Main Effects and Interaction for Grade (7th/8th) and Student Group (EBP/RED) for Mother Satisfaction Dependent Variables (Mothers' Anonymous Self-Reports)

MANOVA Effect	Pillais Value	F Value*
Student group	0.097	3.568*
Grade	0.059	2.077
Student group x Grade	0.026	0.880

*Degrees of freedom (*df*) for *F* values are 3 and 100.

*A priori (pretest) alpha (α) set at the .05 level. MANOVA effects so indicated have a *p* value \leq .05.

In strictly descriptive terms, however, the means for both the mothers of students in the RED group (and its 7th- and 8th-grade subgroups) and the mothers of students in the EBP group (and its 7th- and 8th-grade subgroups) fell within the upper one fifth of the maximum CGPSS score (45) for spouse/ex-spouse support and within the upper one fifth of the maximum CGPSS score (45) for parent performance (see Table 27). The low internal consistency reliability of the dependent variable of mother: parent performance (.64) may have mitigated between-group differences (7th/8th; EBP/RED) to an unknown extent in this domain (Dr. Carol Strong, personal communication, April 17, 1996; Herzog, 1996; Vockell & Asher, 1995).

Multivariate effect sizes (η^2_p) based on the univariate *F* tests for the MANOVA main effect for student group (EBP/RED) for the mother satisfaction

Table 41

Univariate F Tests for Statistically Significant MANOVA Main Effect for
Student Group (EBP/RED) for Mother Satisfaction Dependent Variables
(Mothers' Anonymous Self-Reports)

Dependent variables	Hypothesis MS and SS	Error MS	F Value ^a
Mother: Spouse/ex-spouse support	43.288	51.145	0.846
Mother: Parent-child relationship	163.481	19.610	8.337*
Mother: Parent performance	36.869	11.125	3.314

^aDegrees of freedom (df) for F values are 1 and 102.

^aA priori (pretest) alpha (α) set at the .05 level. Because Bonferroni inequality corrections for Type I error were performed (Harris, 1993; Ramsey, 1993; Stevens, 1992), only EBP/RED group differences on the dependent variables in this subset at $\alpha \leq .017$ (a priori $\alpha = .05/3$ dependent variables = .017) were accepted as statistically significant for this domain and were interpreted. Univariate F values so designated are statistically significant at or below the p value of .017.

dependent variables are displayed in Table 42. Only the dependent variable of mother's satisfaction with the parent-child relationship had a greater than "medium" multivariate effect size ($\eta^2_p = .08$).

Table 43 shows that no statistically significant interaction or main effects were found for the three father satisfaction dependent variables ($p > .10$). Thus, no further statistical analyses were performed on any of the dependent variables in this subset (Bock, 1975; Bray & Maxwell, 1982; Kerlinger & Pedhazur, 1973; Stevens, 1992; Timm, 1975). Also, the data in this subset of DV (father-reported parent satisfaction) are limited by smaller group sample sizes and by more missing data than the other subsets of DV.

Table 42

Multivariate Effect Sizes (Partial Eta Squared [η^2_p]) Based on Univariate F Tests for MANOVA Main Effect for Student Group (EBP/RED) for Mother Satisfaction Dependent Variables (Mothers' Anonymous Self-Reports)^a

Dependent variables	η^2_p	Power
Mother: Spouse/ex-spouse support	.01	.15
Mother: Parent-child relationship	.08	.82
Mother: Parent performance	.03	.44

^aRegarding interpretation of η^2_p for each univariate F test, Cohen (1977, 1988) described $\eta^2 = .01$ as a small, $\eta^2 = .06$ as a medium, and $\eta^2 = .14$ as a large effect size. Statistical power values are two-tailed ($\alpha \leq .05$) and are based on fixed-effects assumptions for the MANOVA main effect for student group (EBP/RED).

Finally, in strictly descriptive terms, the means for both the fathers of students in the RED group (and its 7th- and 8th-grade subgroups) and the fathers of students in the EBP group (and its 7th- and 8th-grade subgroups) fell within the upper one fifth of the maximum CGPSS score (45) for spouse/ex-spouse support and within the upper one fifth of the maximum CGPSS score (45) for parent performance (see Table 27).

Results of the Backward Stepwise

Discriminant Function Analysis

Variables were selected for entry into the backward stepwise discriminant function analysis (BSDFA) (a) if they were in a statistically significant MANOVA subset main effect ($p \leq .05$) for student group

Table 43

MANOVA Main Effects and Interaction for Grade (7th/8th) and Student Group (EBP/RED) for Father Satisfaction Dependent Variables (Fathers' Anonymous Self-Reports)

MANOVA Effect	Pillais Value	F Value ^{a,b}
Student group	0.065	1.851
Grade	0.066	1.872
Student group x Grade	0.054	1.521

^aDegrees of freedom (df) for F values are 3 and 80.

^b $\alpha > .12$ for F values for the interaction effect (student group x grade) and main effects (grade, student group). Because neither the MANOVA interaction nor main effects were statistically significant at the a priori α level of $\leq .05$, no further analyses were conducted on nor interpretation undertaken of the univariate F values for the three dependent variables in this subset (spouse/ex-spouse support, parent-child relationship, parent performance; Bock, 1975; Bray & Maxwell, 1982; Stevens, 1992).

(EBP/RED), and (b) if they met the Bonferroni-corrected probability (p) criterion for the univariate F value under the main effect for student group (EBP/RED; see Tables 29, 33, 36, and 41). Table 44 contains the eight predictor variables chosen for inclusion in the BSDFA using the foregoing criteria and Table 45 includes the intercorrelations of these eight predictor variables. The predictor variables in Table 45 were chosen for inclusion in the BSDFA to obtain a multivariate set of group membership predictors membership predictors (EBP/RED) across the four dependent variable subsets in which the selected variables resided: academic control beliefs, social control beliefs, general control beliefs, and mother satisfaction.

Table 44

Eight Dependent Variables Derived from Statistically Significant MANOVAMain Effects for Student Group (EBP/RED) and Bonferroni-correctedUnivariate F Values and Selected for Entry into the Backward StepwiseDiscriminant Function Analysis

Dependent variables	MANOVA-Derived univariate F Value
<u>Academic domain control beliefs</u>	
1. Academic control beliefs	8.06
2. Strategy beliefs: Luck	7.72
3. Strategy beliefs: Unknown	12.61
<u>Social domain control beliefs</u>	
4. Unknown success	7.87
5. Unknown failure	9.24
<u>General domain control beliefs</u>	
6. Unknown success	11.84
7. Powerful others failure	8.67
<u>Parent satisfaction</u>	
8. Mother satisfaction: Parent-child relationship	7.78

All seven of the control beliefs variables (academic domain control beliefs, social domain control beliefs, and general domain control beliefs) in the analysis have moderate intercorrelations (most correlations are $> .30$), while the correlations between the seven control beliefs variables and the variable of mother satisfaction: parent-child relationship are low ($-.15$ to $.12$). Such correlation values indicate moderate relationships among the variables in the control beliefs domains and relatively weak relationships between the control beliefs variables and the sole noncontrol belief variable, mothers' self-

Table 45

Intercorrelations Among the Eight Dependent Variables Selected for Entry
into the Backward Stepwise Discriminant Function Analysis

Dependent variables	Intercorrelations							
	1	2	3	4	5	6	7	8
Academic control beliefs	1.00	-.66	-.73	-.45	-.48	-.49	-.36	.12
Academic strategy beliefs: Luck	-.66	1.00	.73	.28	.50	.40	.36	-.08
Academic strategy beliefs: Unknown	-.73	.73	1.00	.44	.55	.49	.46	-.03
Social control beliefs: Unknown success	-.45	.28	.44	1.00	.39	.56	.27	-.11
Social control beliefs: Unknown failure	-.48	.50	.55	.39	1.00	.36	.39	.01
General control beliefs: Unknown success	-.49	.40	.49	.56	.36	1.00	.35	-.15
General control beliefs: Powerful others failure	-.36	.36	.46	.27	.39	.35	1.00	-.14
Mother satisfaction: Parent-child relationship	.12	-.08	-.03	-.11	.01	-.15	-.14	1.00

reported satisfaction with the parent-child relationship. Finally, as expressed earlier, reliability coefficients lower than .70 may affect the magnitude of correlation coefficients (Dr. Carol Strong, personal communication, April 17, 1996; Herzog, 1996; Vockell & Asher, 1995).

For reasons outlined previously, a less conservative statistical probability inclusion (entry) criterion of $\alpha \leq .15$ and exclusion (removal) criterion of $\alpha > .15$ were used for including and excluding the eight predictor variables in the BSDFA (Bendel & Afifi, 1977; Menard, 1995; Wofford et al., 1994). Similar variable selection procedures for such an exploratory analysis of data have been reported recently in the literature on antisocial children (Kazdin, 1995b).

The results of the BSDFA are displayed in Table 46. The derived two-group (EBP/RED) discriminant function consisted of only three of the eight predictor variables entered into the analysis: (a) mothers' self-reported satisfaction with the parent-child relationship; (b) students' self-reported academic strategy beliefs for unknown; and (c) students' self-reported general control beliefs for unknown success.

Using these three predictor variables, the percentage of cases in the EBP group correctly classified was 63.3, the percentage of cases in the RED group correctly classified was 80.0, and the overall (total) percentage of grouped cases correctly classified was 71.7. Thus, 38 out of 60 EBP students and 48 out of 60 RED students were classified correctly by the

Table 46

Results of Backward Stepwise Discriminant Function Analysis

Predictor variables ^a	Standardized canonical discriminant function coefficients	Unstandardized canonical discriminant function coefficients	Percent of total "grouped" cases correctly classified by function ^b
Mother satisfaction: Parent-child relationship	-0.622	-0.149	71.7%
Academic strategy beliefs: Unknown	0.542	0.805	----
General control beliefs: Unknown success	0.373	0.469	----
CONSTANT	----	3.845	----
Group centroids (means):			
	EBP Group =	0.481	
	RED Group =	-0.481	
Canonical correlation for function = .44		Wilks' lambda = .81	
Chi-square value = 24.62 ($p < .001$)		Eigenvalue = .24	
Test for equality of group covariance matrices:			
	Box's M =	30.49	
	F value =	4.94 ($p < .001$)	

^aThe eight predictor variables entered in the discriminant analysis are listed in Table 44. Variable inclusion criterion: $p \leq .15$. The EBP group had 52 complete cases and 8 missing cases and the RED group had 54 complete cases and 6 missing cases for the predictor variable of Mother Satisfaction: Parent-Child Relationship. So all cases ($n = 120$) could be included in the discriminant analysis, substitution of group means (EBP/RED) was used for the missing cases of the predictor variable of Mother Satisfaction: Parent-Child Relationship.

^bThirty-eight out of 60 EBP students (63.3%) and 48 out of 60 RED students (80.0%) were classified correctly by the three predictor variables comprising the discriminant function; 22 students in the EBP group and 12 students in the RED group were misclassified by the discriminant function.

discriminant function; 22 students in the EBP group and 12 students in the

RED group were misclassified by the discriminant function.

However, the derived discriminant function, consisting of the three predictor variables of mothers' self-reported satisfaction with the parent-child relationship, students' self-reported academic strategy beliefs for unknown factors, and students' self-reported general control beliefs for unknown success, only provides a partial picture of group differentiation (Stevens, 1992). The derived structure matrix for the discriminant function which contains the linear discriminant function-variable correlations must be examined (Harris, 1993; Huberty, 1986; Stevens, 1992; Thomas, 1992).

The structure matrix for the BSDFA is shown in Table 47. Structure coefficients represent the correlation coefficient between the predictor variables and the discriminant function actually being implicitly related (Fish, 1988; Pedhazur, 1982). Such correlations are called structure coefficients, or loadings, because they are interpreted as factor loadings in factor analysis. The square of a structure coefficient indicates the proportion of variance of the variable with which it is associated that is accounted for by the given discriminant function (Pedhazur, 1982; Stevens, 1992).

As Pedhazur (1982) stated, "Structure coefficients are primarily useful for the purpose of determining the nature of the function(s) or the dimension(s) on which the groups are discriminated" (p. 702) and, as a rule of thumb, it is suggested that structure coefficients $\geq .30$ (9% of variance) be considered meaningful (Pedhazur, 1982; Tabachnick & Fidell, 1983, 1996). Unlike beta weights in multiple regression analysis that are partial coefficients

Table 47

Structure Matrix for Backward Stepwise Discriminant Function Analysis

Predictor variables	Canonical correlation with derived function
1. Academic strategy beliefs: Unknown	.68
2. General control beliefs: Unknown success	.65
3. Mother satisfaction: Parent-child relationship	-.63
4. Academic control beliefs	-.59
5. Academic strategy beliefs: Luck	.53
6. Social control beliefs: Unknown success	.44
7. General control beliefs: Powerful others failure	.38
8. General control beliefs: Unknown failure	.34

(Tabachnick & Fidell, 1983, 1996), the purpose of which is to gauge the contribution of each variable in the company of all other variables, the structure coefficients in discriminant analysis are simple bivariate correlations, so they are not affected by relationships with the other variables (Klecka, 1980).

The structure coefficients can assist the researcher in determining what the two-group discriminant function represents (Bordens & Abbott, 1988). However, the structure coefficients are not good indicators of the predictor's degree of unique contribution to discriminating between the two groups (Tabachnick & Fidell, 1983, 1996). The structure coefficients are often used to name the function in a manner analogous to that done in factor analysis (Klecka, 1980; Pedhazur, 1982; Tabachnick & Fidell, 1983, 1996).

Similar to factor analysis, however, the "naming of a function is a creative act--an attempt to capture the flavor of the dimension that underlies a set of variables even when they appear to be diverse" (Pedhazur, 1982, p. 704). Huberty and Morris (1989) stated that identification of such a dimension or construct "is more a matter of art than statistics" (p. 304).

All of the eight predictor variables had structure coefficients greater than the recommended structure correlation consideration level of .30 (Bordens & Abbott, 1988; Pedhazur, 1982; Tabachnick & Fidell, 1983, 1996). Just as in factor analysis, the absolute values of these coefficients, or loadings, are used in the identification process: "Those variables with high loadings [$\geq .30$] are tied together to arrive at a label for each construct [or linear discriminant function (LDF)]" (Huberty & Morris, 1989, p. 304). If a structure coefficient criterion of $\geq .30$ is chosen for interpretation purposes, in addition to the three predictor variables comprising the discriminant function listed in Table 46, the following five predictor variables are considered in the determination of a multivariate interpretive construct in light of the respective group means (EBP/RED) for these variables (see Tables 23 through 25): academic control beliefs; academic strategy beliefs for luck; social control beliefs for unknown success; general control beliefs for powerful others failure; and general control beliefs for unknown failure.

It is vital to note a critical caveat and limitation of these results from this BSDFA. Given the small subject-to-predictor variable ratio in this study

(approximately 15 subjects to 1 predictor), these results can only be considered specific to this sample and have limited generalizability. Stevens (1992) has noted that "about 20 subjects per variable are needed for reliable results, i.e., to have confidence that the variables selected for interpreting the discriminant functions would again show up in an independent sample from the same population" (p. 300). Also, discriminant function analysis can be sensitive to even small departures from multivariate normality (Norusis, 1993; Stevens, 1992). The Box's M test is the statistical procedure used in discriminant function analysis to assess the equality of the group covariance matrices (EBP/RED). However, Norusis (1993) observed that the Box's M test is extremely sensitive to departures from multivariate normality. That is, the test tends to call group covariance matrices unequal if even slight violations of the normality assumption occur.

Additionally, Tabachnick and Fidell (1983) have asserted that robustness can be expected for discriminant analysis "with respect to the assumption of equal variance-covariance (dispersion) matrices with equally sized or large samples" (p. 300). Stevens (1992) noted:

Linear discriminant analysis is based on the assumption of multivariate normality....Thus, in situations where multivariate normality is particularly suspect, for example, when using some discrete dichotomous variables, an alternative classification procedure is desirable. Logistic regression (Press & Wilson, 1978) is a good choice here. (p. 299, emphasis added)

Thus, because the Box's M test for the BSDFA was statistically significant (Box's M = 30.49, approximate $F = 4.94$, $p < .001$), indicating inequality of the

group covariance matrices and a violation of the multivariate normality assumption, a backward stepwise logistic regression (BSLR) to check the results of the BSDFA was conducted.

The logistic regression procedure regresses a dichotomous dependent variable (e.g., EBP or RED group membership) on a set of independent variables (e.g., control beliefs). Backward stepwise logistic regression (BSLR) requires far fewer assumptions than BSDFA (e.g., multivariate normality of the predictor variables), and, even when the assumptions required for BSDFA are satisfied, BSLR performs well (Menard, 1995; Norusis, 1993; O'Gorman & Woolson, 1991). Stevens (1992) noted that logistic regression is a good and desirable alternative classification procedure "in situations where multivariate normality is particularly suspect" (p. 299). Also, as with the BSDFA, and for reasons outlined previously, a less conservative probability inclusion (entry) criterion of $\alpha \leq .15$ was used for the eight predictor variables (see Table 44) entered into the BSLR.

The results of the confirmatory BSLR are listed in Table 48. An inspection of the results reveals that the BSLR yielded the same three predictor variables as the BSDFA: (a) mothers' self-reported satisfaction with the parent-child relationship; (b) students' self-reported academic strategy beliefs for unknown; and (c) students' self-reported general control beliefs for unknown success. Also, as with the BSDFA, because of the high subject-to-predictor variable ratio (15 subjects to 1 predictor) in the BSLR analysis,

Table 48

Results of Confirmatory Backward Stepwise Logistic Regression^a

Variables in the Equation ^b	Beta	S.E.	Wald	Sig.	R	Odds Ratio ^c	Percent of Total "Grouped" Cases Correctly Classified ^d
Academic Strategy Beliefs: Unknown	-0.803	0.346	5.386	.020	-.14	0.45	70.00%
General Control Beliefs: Unknown Success	-0.475	0.286	2.754	.097	-.07	0.62	-
Mother Satisfaction: Parent-Child Relationship	0.148	0.053	7.934	.005	.19	1.16	-
Constant	-4.630	2.658	3.035	.082	-	-	-

^aThe eight predictor variables entered in the logistic regression are the same as those used in the BSDFA (see Table 44). The variable inclusion criterion was $p \leq .15$.

^bThe EBP group had 52 complete cases and 8 missing cases and the RED group had 54 complete cases and 6 missing cases for the predictor variable of Mother Satisfaction: Parent-Child Relationship. So all cases ($n = 120$) for the eight predictor variables could be included in the BSDFA, substitution of EBP/RED group means was used for the missing cases ($n = 14$) of Mother Satisfaction: Parent-Child Relationship.

^cAn odds ratio greater than 1 indicates that the odds of being a RED student increase when the predictor (independent) variable increases. An odds ratio of less than 1 indicates that the odds of being a RED student decrease when the predictor (independent) variable decreases.

^dThirty-eight out of 60 EBP students (63.3%) and 46 out of 60 RED students (76.7%) were classified correctly by the logistic regression; 22 students in the EBP group and 14 students in the RED group were misclassified by the three predictor variables in the logistic regression (Academic Strategy Beliefs: Unknown; General Control Beliefs: Unknown Success; Mother Satisfaction: Parent-Child Relationship).

these results (a) must be considered sample specific, (b) must be interpreted with caution, and (c) indicate the need for further research in this area (Rencher & Larson, 1980; Stevens, 1992).

Summary of Major Findings

To summarize this section, the major findings of this study are briefly delineated. First, based on extant data from students' archival educational records, the EBP students in this study had substantially lower overall reading, math, and language achievement compared to RED students, as well as a substantially lower overall GPA than RED students. However, the aggregate general ability level of EBP students was more similar to, than different from, RED students.

Second, with respect to self-reported perceptions of control in the academic domain, EBP students perceived themselves as having substantially less general control over academic success than RED students. In this domain, EBP students also endorsed luck as an effective strategy for academic success more than RED students, and EBP students reported substantially greater influence of unknown sources of academic successes and failures than RED students.

Third, with respect to self-reported perceptions of control in the social domain, unknown sources for social (peers, adults) interaction success (e.g., EBP students reported, to a greater degree than RED

students, that they frequently did not know why adults or peers liked them). Also, EBP students possessed statistically significantly greater beliefs than RED students about unknown sources for social (peers, adults) interaction failure (e.g., EBP students reported, to a greater degree than RED students, that if an adult or peer did not like them, they usually did not know why).

Fourth, with regard to self-reported perceptions of control in the general domain, EBP students held significantly greater beliefs than RED students about unknown sources for general failure in their daily lives (e.g., EBP students reported, to a greater degree than RED students, that they frequently could not ascertain why good things happened to them). Also, EBP students, significantly more than RED students, imputed adults (powerful others) in their environment with great restrictiveness and power with respect to preventing them from engaging in general activities (e.g., EBP students reported, to a greater degree than RED students, that if an adult did not want them to do something they wanted to do, they probably would not be able to do what they wished to do).

Fifth, regarding student self-reported perceptions of parental bonding, as assessed by the Parental Bonding Inventory (PBI; Cubis et al., 1989; Parker et al., 1979), no statistically significant differences were found between the EBP student group and RED student group for any of the three PBI domains (care, social control/protection, personal control/protection) for either mothers or fathers).

Sixth, in the present study, no statistically significant differences were found between mothers and fathers in the EBP group and mothers and fathers in the RED group in this domain for the parent self-reported satisfaction variable of spouse/ex-spouse support, and not for the parent self-reported satisfaction variable of parent performance. Mothers of EBP students, but not fathers of EBP students, reported statistically significantly lower mean levels of satisfaction regarding the parent-child relationship.

Seventh, the results of a two-group (EBP/RED) BSDFA, which incorporated the above statistically significant group differences from the various dependent variable domains, revealed that the three dependent variables of mothers' self-reported satisfaction with the parent-child relationship, students' self-reported academic strategy beliefs for unknown, and students' self-reported general control beliefs for unknown success predicted EBP/RED group membership with greater than 70% accuracy. These principal findings are explicated and discussed in greater depth in the next chapter.

CHAPTER V

DISCUSSION

Go ahead, ask yourself how and realize just how many factors had to be taken into account...so that finally the task would loom like a monster in your head, the reminder of...the limit of human intelligence and the fear of a curiosity which might at any time throw the world back into your face. (Jacques Menasché, as cited in Kellert, 1993, p. 29)

This section is organized as follows. First, a discussion of the limitations of this study is presented. Second, the problems, prospects, and perspectives of adolescents with EBP and their families are reviewed. Third, the rationale for multivariate considerations in the study of externalizing behaviors among youth is delineated. Fourth, a delineation of the major differences and commonalities among the EBP and RED student groups and their families in this study are reviewed. Finally, the possible contributions of the methods and results of this study toward enhanced understanding of and provision of services to early adolescents with EBP and their families are proffered.

Limitations of the Present Study and

Directions for Future Research

Before setting out to discuss the findings of this study, it is important to present some important limitations of the results, and thus their interpretation and application. Pyke and Agnew (1991), in their book The Science Game,

made some observations regarding the interpretation and application of research findings. They wisely advised researchers that,

[although] inferential statistics help us defend ourselves from being perpetually hoodwinked by capricious chance...statistically significant findings represent a beginning, not a research climax. A statistically significant finding encourages further investigation but does not bestow a label of truth on your results....[I]t still requires experience, critical judgment, and continued research to determine whether you have obtained a result of scientific import or social consequence. (Pyke & Agnew, 1991, p. 219)

The first limitation of this study pertains to the sample of EBP students.

Based on the enrollment data reported by the participating school districts' special education and research directors for seventh- and eighth-grade students with EBP, the total number of families of EBP students who agreed to participate anonymously in the study represented less than 10% of both the seventh- and eighth-grade boys who were receiving some level of special education services for EBP in the seven participating school districts during March of 1992. These voluntary participation rates are quite low, and greatly limit the generalizability of results obtained in this study. However, as Grossman et al. (1992) have noted, collecting data from parents and their adolescent children from "a middle and working class community that is justifiably wary of psychological research presents inevitable problems in obtaining full participation" (p. 533).

Findings from previous research (e.g., Rosenthal & Rosnow, 1975) suggest that volunteer subjects in research typically are better educated, come from a higher socioeconomic class, are more in need of social

approval, and are more intelligent than those who choose not to volunteer and participate in research studies. In fact, Borg and Gall (1989) have stated, "We know that volunteer subjects are likely to be a biased sample of the target population, since volunteers have been found in many studies to differ from nonvolunteers" (p. 227).

The finding of few statistically significant between-group (EBP/RED) differences in the present study may be attributable to psychosocially "healthier" families (and, thus EBP boys from "healthier" families) volunteering to participate anonymously in the research. Although the self-selection (volunteer) factor introduced potential bias into the present study, obtaining any information on this little-studied group (early adolescent boys with EBP and their families) is of educational and clinical value. However, further research "will be necessary to confirm [these] findings, which must be viewed as exploratory" (Grossman et al., 1992, p. 533).

Second, the subsequent nonresponse (attrition) rate of mothers and fathers who did not complete parent-satisfaction questionnaires in both the EBP and RED groups undoubtedly imposes some limits on the inferences that can be drawn from the data. Gall et al. (1996) observed the following:

All research studies make demands on the subjects who are selected for the sample....[S]ome of them might refuse to participate because they dislike the experimental intervention....Some subjects may refuse to complete even a brief questionnaire....When individuals refuse to be members of a sample, there is very little researchers can do to require their participation. (p. 237)

Although a descriptive analysis revealed that the majority of respondents and nonrespondents did not differ on demographic variables, this information does not reveal whether the respondents and nonrespondents differed on the constructs of interest (dependent variables) in the study.

Third, it is also the case that all of the data, except for those from archival student records, are limited to self-reports from questionnaires. Because self-reports are essentially "second-hand information" (Herzog, 1996; e.g., relevant behavior is not being observed directly by the researcher), their accuracy may be viewed as questionable by some (Bursuck et al., 1996; Herzog, 1996). Also, the influence of common method variance (i.e., all data are from individuals' self-reports) cannot be ruled out (Jessor et al., 1995). Thus, it would be desirable for the self-report findings of this study to be validated in future research using other methods (e.g., direct observation, structured interviewing, triangulation of data from multiple respondents; Jessor et al., 1995).

Fourth, because families of EBP and RED students volunteered for participation in this study, the degree of statistical representativeness of this sample to the extant population of families of seventh- and eighth-grade EBP and RED students during the time period these data were collected is not known.

A fifth limitation of this study is that the subjects were seventh- and eighth-grade EBP and RED boys. The majority of the EBP students in this

study were served in predominantly resource room (Category II) and self-contained special education classroom settings (Category III) in the Utah public schools. Consequently, no inferences can be drawn about the control-related beliefs, domestic perceptions, and parent satisfaction of EBP and RED boys younger or older than the present sample or to EBP or RED girls or to EBP boys in public or private residential facilities. Thus, any generalization of the findings of this study is restricted to seventh- and eighth-grade EBP and RED students attending primarily middle class suburban and urban schools in the state of Utah, or other same-age youth with similar demographic characteristics independent of where they reside.

A sixth limitation of the present study is its causal-comparative research design (Borg & Gall, 1989; Gall et al., 1996). Causal-comparative designs are nonexperimental and are directed at the discovery of possible causes and effects of a behavioral pattern or montage (such as EBP) by comparing individuals in whom this behavior pattern or montage (e.g., EBP) is present with similar individuals in which the behavior pattern is absent or present to a lesser degree (e.g., regular education [RED] students; Borg & Gall, 1989).

Although causal-comparative designs have advantages (e.g., permitting the researcher to study cause-and-effect relationships or group differences under conditions which do not permit experimental manipulation; enabling the study of many intervariable relationships or group differences in a single

research project), such designs do not determine "causal patterns with any degree of certainty" (Borg & Gall, 1989, p. 540). Thus, a single causal-comparative study, such as the present study, can reveal group differences (or relationships) on a substantial number of variables. However, to the extent possible, additional experimental work should be conducted to "verify the causal properties of the most promising relationships [or group differences] discovered" (Borg & Gall, 1989, p. 566).

A seventh limitation of this study, as with most studies of externalizing behavior problems (see for example, Lahey et al., 1995), is that only boys were included for reasons of efficiency and economy. Lahey et al. (1995) have stated such a shortcoming is a critical one, because girls do meet criteria for externalizing behavior disorders, such as Conduct Disorder, even if their rates of such disorders are lower than those of boys, and girls with externalizing behavior disorders need to be studied (Zahn-Waxler, 1993; Zoccolillo, 1993). Lahey et al. (1995) went on to observe, with particular reference to CD, that

only by including both boys and girls in the same samples, moreover, can gender differences in CD be delineated. The understanding of these likely differences is important to the accurate portrayal of CD in girls, as virtually all available evidence on CD is derived from male samples, but also because gender differences in any disorder are likely to be an important source of hypotheses concerning the etiology and maintenance of the disorder. (p. 92)

Also, no data were collected in this study regarding the number of years the EBP students had been receiving public special education services

for their educational and behavioral difficulties; only data on EBP students' current intensity of special education service provision were collected. In light of the observations by Moffitt (1993a) regarding transient versus persistent antisocial or externalizing behavior, such data are important to understanding the nature and manifestation of these problems among youth, and future research of this nature should collect data regarding this aspect of youths' behavioral difficulties.

Moffitt (1993a) noted:

There are marked individual differences in the stability of antisocial behavior. Many people behave antisocially, but their antisocial behavior is temporary and situational. In contrast, the antisocial behavior of some people is very stable and persistent. Temporary, situational antisocial behavior is quite common in the population, especially among adolescents. Persistent, stable antisocial behavior is found among a relatively small number of males whose behavior problems are also quite extreme. (p. 674)

Because the present study was cross-sectional and was not longitudinal, it is not known how many, if any, of the early adolescent boys with identified EBP in the study were declassified (removed from the state of Utah-designated special education category of "behavior disordered") by the special education programs in the seven participating school districts in the ensuing years since data were collected in 1992.

Also, according to propositions proffered by Moffitt (1993a), the "normative" nature of a certain amount of antisocial, externalizing, or delinquent behavior among adolescents at large may provide an additional and partial explanation for the small or even attenuated differences between

the EBP and RED adolescent groups in the present study (Quay, 1987).

Moffitt (1993a) made the following theoretical observations:

According to the theory, natural histories of antisocial behavior should be found at predictable prevalence rates in samples followed from childhood to adolescence. Less than 10% of males should show extreme antisocial behavior that begins during early childhood and is thereafter sustained at a high level across time and across circumstances. A much larger number of males, a majority, should show similar levels of antisocial behavior during the adolescent age period but should fail to meet research criteria for a childhood history of stable and pervasive problem behavior. Teenaged males who abstain from any and all delinquency should be relatively rare....[A]dolescent-limited delinquency does not constitute pathology. Rather, it is a social activity that is normative as well as understandable from the perspective of contemporary teens....Delinquency theories are woefully ill-informed about the phenomenology of modern teenagers from their own perspective. I fear that we cannot understand adolescence-limited delinquency without first understanding adolescents. (pp. 694-696, emphasis in original)

Thus, in light of Moffitt's (1993a) propositions, it is possible that a certain yet unknown number of the early adolescents in the RED group in the present study manifested some "normative" externalizing behavioral problems to varying degrees. However, these problems went unnoticed or the problems were not deemed severe enough by the respective school systems to enable the students to be identified by the respective school systems as needing special education services to mitigate the problems (Walker et al., 1995). Yet, it is important to study comparable groups of peers who do not engage ostensibly in externalizing or delinquent behavior. Because, as Moffitt (1993a) observed, "during adolescence, when delinquent behavior becomes the norm, nondelinquents warrant our scientific scrutiny" (p. 689).

Additionally, an inspection of the school-reported behavioral problems of the EBP students in this study (see Appendix H) will reveal that the students in the EBP group in this study were quite complex and heterogeneous with respect to the behavioral difficulties for which they were receiving special education intervention. Such complexity and heterogeneity of externalizing behavior problems has been reported elsewhere (Hinshaw et al., 1993; Loeber, 1988; Loeber et al., 1993; Moffitt, 1993a). Finally, no data were collected on the developmental history or epidemiology of the identified behavioral problems of the EBP students in the study (Cicchetti & Richters, 1993; Costello & Angold, 1993; Loeber et al., 1993; Richters & Cicchetti, 1993a, 1993b).

An eighth limitation of this study is related to the results of the multivariate analyses of the current investigation, particularly the backward stepwise discriminant function analysis (BSDFA). Stevens (1992) noted that while "discriminant analysis can be of value, there are at least 3 factors that can mitigate it's [sic] usefulness in many instances" (p. 159). The limiting factors identified by Stevens (1992, pp. 159-160) were:

1. There is no guarantee that the linear combination (the discriminant function) will be a meaningful variate (i.e., that it will make substantive or conceptual sense).

2. Sample size must be considerably larger than many researchers realize for the results of a discriminant analysis to be reliable.

3. The researcher may be more interested in what specific variables contributed to the group differences, rather than in some combination of the variables.

Thus, although the BSDFA in this study yielded a subset of three predictor variables (mothers' self-reported satisfaction with the parent-child relationship, students' self-reported academic strategy beliefs for unknown influences, students' self-reported general control beliefs for unknown success) that best discriminated the EBP early adolescents from the RED early adolescents, interpretation of this new variable (the discriminant function) may not "make substantive or conceptual sense" (Stevens, 1992, p. 159). However, given the intended primarily descriptive (as opposed to theoretically confirmatory) nature of the multivariate analyses in the present study, future research needs to be conducted in this area to examine the substantive or conceptual meaningfulness of the multivariate results.

Group membership predictions obtained from discriminant analysis and logistic regression are usually worse for new subjects than for the original sample (Klecka, 1980). Thus, to evaluate fairly the predictive value of the BSDFA and BSLR in this study, replication of this study should be conducted to obtain predictions for new subjects and to examine the resulting correct classification rates (Kortering, Haring, & Klockars, 1992; Shott, 1991).

The nature of the EBP student group, which served as the contrast group for the RED student sample, probably contributed to the moderate

correct classification rate (approximately 70%). Adams (1979) stated that higher rates of correct classification are expected when groups exhibiting extreme differences on the predictor variables are employed in a discriminant function analysis. A final caveat is that discriminant function analysis contributes to inflated accuracy of classification through the minimization of the amount of variance not attributable to between-group differences (Adams, 1979). The concern over possible overfitting of data is accentuated when stepwise procedures are employed (Tabachnick & Fidell, 1983, 1996). Additionally, the groups' sample sizes in this study were not large enough to permit further analyses using procedures to reduce bias that would contribute to overfitting of the data, such as cross-validation with subsamples (Cohen & Cohen, 1983; Lachenbruch, 1975).

A ninth limitation of this study is related to selection of subjects. Because the early adolescent EBP students came from families who volunteered for participation in this research, the EBP students in this study may not be representative of the population of early adolescents with externalizing behavior problems at large. Hence, this presents a potential limitation to generalization of the findings of the study to the entire population of early adolescents with EBP. However, despite these limitations, this study, using data from anonymous self-reports, has illuminated some never or rarely before studied facets of (a) the self-perceived worlds of early adolescents with externalizing behavior problems, who are receiving special education

services in the public schools, and their families, and (b) the self-perceived worlds of early adolescents without identified externalizing behavior problems, who are enrolled only in regular education classes in the public schools, and their families.

**Problems, Prospects, and Perspectives of
Adolescents with EBP and Their Families**

Educational strategies and services for students with externalizing behavioral problems (EBP) need to be planned in the light of what is increasingly clear about the nature of the problems of students with behavior disorders. Students with externalizing behavioral problems frequently experience sundry and pervasive negative outcomes that are associated with high personal and social costs (Blackorby & Wagner, 1996; Brendtro & Ness, 1995; Hocutt, 1996; Knitzer et al., 1990, 1991; Terman, Lerner, Stevenson, & Behrman, 1996; Wagner, 1995; Wagner & Blackorby, 1996). For all too many of these students, less than optimal futures are portended, futures which include high probabilities of major adjustment problems in adulthood (Kazdin, 1987b, 1990, 1993a, 1995a).

Recently, Baumrind (1991) observed that too few investigators "say anything about how the child's cognitive or affective system may act as an intervening variable" (p. 157). Yet, it has been demonstrated that the cognitive apperceptions or generalizations that a youth has about individuals

(e.g., peers, parents, teachers), and that they bring to social interactions with such individuals, can shape the youth's interactions with individuals in the social contexts (Cantor, 1981; Coie & Jacobs, 1993; Collins, 1991; Cooper et al., 1983; Forehand, McCombs, & Wierson, 1988; Fox, Rotatori, Macklin, Green, & Fox, 1983; Gibbs et al., 1996; Hurrelmann, 1988; Jessor, 1981; Roberts et al., 1992).

Also, Lewin (1951) insisted that self-reported descriptions of environments (e.g., school, family) as they are perceived or experienced by the adolescents are imperative to understanding the behavior of these youths. That is, an adolescent's behavior is only partially explained if significant adults (e.g., parents, teachers) in the adolescent's environment do not endeavor to understand the way the adolescent views the world in which he or she lives (Bower, 1988; Cartwright, 1978; Jessor, 1981; Jessor et al., 1995; Lewin, 1951; McConaughy & Achenbach, 1996).

Finally, for special educators and others to work efficaciously with youth, it is important to note that both empirical studies and clinical work have demonstrated that it is often vital to obtain some measure of parents' or caregivers' behaviors. In particular, measures of the parents' perception of the quality of or their satisfaction with the parent-child relationship, as well as satisfaction with the level of spousal support and their own performance in the parental role, may help to shed some light on contributing factors to adolescents' behavior (Dadds, 1995; Forehand et al., 1988; Henggeler &

Borduin, 1990; Home & Sayger, 1990; Lutzer, 1987; Mowder et al., 1995; Noller et al., 1992; Prange et al., 1992; Sayger et al., 1993; Vuchinich et al., 1994; Webster-Stratton & Herbert, 1994).

As with other areas of research in which individuals' beliefs are associated with specific behaviors (e.g., Miller, 1988), Okagaki and Johnson-Divecha (1993) made some observations that are applicable to the findings of the current study:

[I]t is not clear whether beliefs lead to behaviors or whether beliefs are the result of practicing specific behaviors. Assuming the directionality of a link between beliefs and behaviors is not unidirectional, then under what conditions are beliefs and behaviors likely to be linked, what kinds of behaviors follow beliefs, and what kinds of behaviors lead to the addition or modification of beliefs? (p. 61)

Recently, Wang, Reynolds, and Walberg (1995), in a text on how professionals and parents can make a difference for students at risk, commented on a meta-analysis of the research literature, which rated 28 categories of variables in order of their influence on student learning from highest to lowest (Reynolds, Wang, & Walberg, 1992; Wang, Haertel, & Walberg, 1990). They stated that "direct psychological influences have, by far, the greatest effects" (Wang et al., 1995, p. 16). Among these strong, direct psychological influences were (a) students' cognitive abilities, motivation, and behavior, (b) classroom management, climate, and student/teacher interactions, and (c) parental encouragement and support of learning at home.

Nicholas Hobbs (1982), an early pioneer in work with troubled and troubling youth, challenged his colleagues to move beyond their preoccupation with the negative. He observed that although psychologists have amassed a substantial corpus of literature on aggression, depression, and anxiety, they know relatively little about joy or well-being. Following Hobbs' lead in this regard, Gibbs et al. (1996) recently asserted:

By ignoring positive human motivations, we create anemic programming for youngsters. Only by refocusing our attention on their strengths, and by developing competence where it does not yet exist, will we create truly powerful interventions for these powerful young persons who are masters at circumventing our systems of behavioral control. (p. 23)

As researchers continue to search for clearer answers regarding the factors that contribute to the development, maintenance, and progression of problem behaviors among youth, particularly difficulties of an externalizing nature, the observations of Shavelson (1988), regarding educational research, are pertinent to the present discussion:

The contribution of research to policy and practice lies not so much with the immediate and specific applications but rather in constructing, challenging, or changing the ways policy makers and practitioners think about problems. (p. 4)

It is hoped that the results of the present study will not only contribute in a small way to our understanding of the beliefs systems, domestic perceptions, and parent-reported satisfaction of early adolescents with externalizing behavior problems and early adolescents in regular education, but that the results will also inspire educators to explore, via self-reports and

interviews, the worldviews of these youth and the perceptions of their families as well. Such exploration may yield both interesting and programmatically useful insights into students' and families' perceptions, and, conducted in a supportive and facilitative manner, may communicate to both students and parents a desire to understand them better.

Explication and discussion of the findings of this comparison survey of the self-reports provided by EBP and RED students and their families, which examined several of the foregoing areas, are effected using a narrative template of differences and commonalities among the EBP and RED students and their families.

Differences and Commonalities Among the EBP and RED Students and Their Families in This Study

Academic Achievement/Performance

McConaughy and Ritter (1995) noted that children with emotional and behavioral problems may also exhibit other problems, such as learning problems, that contribute to underrachievement. Students with behavior problems are likely to lack independent learning strategies for organizing their assignments and taking tests. One consequence of these skill deficits for students with behavior problems, particularly those youth who exhibit problems of an externalizing nature, is academic underachievement

(Coutinho, 1986; DeBaryshe et al., 1993; Duchnowski et al., 1993; Fessler et al., 1991; Foley & Epstein, 1992; Hinshaw, 1992a, 1992b; Mastropieri et al., 1985; Scruggs & Mastropieri, 1986). Ruhl and Berlinghoff (1992) recently observed that "low achievement in isolation may not automatically result in poor progress for later adult functioning, but add an element of behavioral disorders and the risk for later mental health difficulties increases" (p. 178).

For the archival data collected from students' files for this study, EBP students in this study had statistically significantly lower achievement scores (reading, math, language) and extant academic performance (grade point average). Similar results have been reported in previous studies (Coutinho, 1986; DeBaryshe et al., 1993; Epstein & Foley, 1992; Epstein et al., 1989; Fessler et al., 1991; Foley & Epstein, 1992; Hinshaw, 1992a; Ledingham & Schwartzman, 1984; Mastropieri et al., 1985; Murphy, 1986; Ruhl & Berlinghoff, 1992; Sturge, 1982; Tremblay et al., 1992) of students with externalizing behavior problems. However, as indicated previously, although EBP students, as a group, had statistically significantly lower achievement averages and GPAs than RED students in the present study, the lowest achievement average for the EBP group (45.67 for language achievement for eighth-grade EBP students) was still within one-half of a standard deviation of the mean of 50 (T-score).

Also, the overall GPA of EBP students was above a "C" average (EBP group GPA = 2.26; "C" average = 2.0 GPA). These findings are consistent

with those in recent reports of EBP students' scholastic performance nationally (Wagner, 1995). Foley and Epstein (1992), however, offered a caveat regarding using GPA as an index of academic performance. They asserted that GPA is very insensitive as a measure of academic performance: "Classroom-related variables such as GPA are often influenced by factors other than one's level of academic skill development [e.g., attendance, class participation]" (Foley & Epstein, 1992, p. 15). This concern regarding the insensitivity of GPA as an index of academic performance and lack of consensus regarding which behaviors or performance outcomes constitute the classroom-related variable of GPA has been echoed by others (e.g., Carpenter, Grantham, & Hardister, 1983; Friend & Bursuck, 1996; Vasa, 1981), and has been supported by a recent national survey of classroom practices of elementary and secondary general education teachers who serve students with disabilities (Bursuck et al., 1995). Also, as reported in previous research (e.g., Beitchman et al., 1982; Cullinan et al., 1992; Foley & Epstein, 1992; Kauffman et al., 1987; Lahey et al., 1995; Mattison et al., 1993; McConaughy & Achenbach, 1996; Rutter, 1984; Valdes et al., 1990), the EBP students in this study, although they demonstrated statistically significantly lower general ability than the RED group, had general ability scores within the average range (± 1 SD).

Thus, in summary, the EBP students in this study had substantially lower overall academic achievement in reading, math, and language areas,

as well as a lower GPA. The general ability level of the EBP group was more similar to, than different from, the RED group. However, as McCord (1993) has noted:

Research suggests that no one model of the relationship between school achievement and misbehavior suits the diversity among children. Meaningful ways to identify those whose primary problems are behavioral, those whose primary problems are academic, and those for whom both are secondary to other problems (e.g., physical abnormalities or social deficits) have not been sufficiently identified. (p. 324)

Student Self-Reported Control Beliefs in the Academic Domain

As stated earlier, individuals are often disturbed more by their beliefs or attributions about events rather than the events themselves (Thompson & Rudolph, 1992). More than two decades ago, Orville Brim (1974), in an invited address to the American Psychological Association, observed the following:

Somewhere between the conditions of slavery and omnipotence, the mass of humanity lives out ordinary lives, each person seeking to master his or her own part of the world, and, in the course of this, developing beliefs about how it works, and who, or what, controls the events of life. (p. 1)

Kohl and Kohl (1977) noted that one important key to understanding or decoding someone's behavior is to first understand that individual's organization of experience. Kohl and Kohl (1977) observed that, although two youths may share the same physical environment (e.g., a school), they each live in different worlds of experience, and, thus, they may perceive and

interpret the meaning of events within that environment very differently for reasons influenced by social factors, including relationships with teachers, peers, and parents (de Lone, 1979; Farmer & Hollowell, 1994; Horne & Sayger, 1990; Hurrelmann, 1988; Miller, 1985; Stanger & Lewis, 1993; Zarb, 1992).

In essence, adolescents "construct" reality using the information provided by their senses and the individual meanings they assign to the information from the interactions and experiences with individuals in their social environments (Hurrelman, 1989; Maccoby, 1992; Molnar & Lindquist, 1989; Paulson & Hill, 1989; Robin & Foster, 1984; Wood, 1995). For example, the school environment, where most adolescents spend a significant percentage of their day, and youths' experiences therein, may have a substantial influence on adolescents' construction of reality or worldview (Hellman & Beaton, 1986; Knitzer et al., 1990; Neel, Cheney, Meadows, & Gelhar, 1992; Polk, 1984; Rutter, 1983; Rutter et al., 1979; Webster-Stratton & Herbert, 1994). Foley and Epstein (1992) noted that students with emotional and behavioral problems "appear to experience a substantial amount of academic underachievement throughout their formal education years" (p. 9). They further commented that "the degree of academic competence demonstrated by a student may be influenced by other academically related factors such as locus of control" (Foley & Epstein, 1992, p. 9).

In the present study, in the academic domain, EBP students had lower mean scores than RED students, which indicated that the EBP students perceived themselves as having substantially less general control over academic success than RED students (e.g., "I can't stop myself from doing poorly in school"; "I can't do well in school, even if I want to"). EBP students also had a higher mean score for luck in the academic domain, indicating that they, to a statistically significant degree, endorsed luck as an effective strategy for academic success more than RED students (e.g., "To do well in school, I have to be lucky"; "When I don't do well in a subject, it's because of bad luck").

The mean score of EBP students, reflecting their perceived influence of unknown factors regarding academic successes and failures, was greater to a statistically significant degree than the mean score of RED students in this domain. That is, as a group, EBP students reported that they did not know "what it took" for them to get good grades in school, and, if they got a bad grade in school, they reported that they usually did not understand why they got the bad grade.

Student Self-Reported Control Beliefs in the Social Domain

In the social domain, EBP students manifested statistically significantly greater means about unknown sources for social (peers, adults) interaction success (e.g., "A lot of times, I don't know why people like me"; "A lot of

times there doesn't seem to be any reason why somebody likes me") than RED students. EBP students also evidenced statistically significantly greater means for unknown sources for social (peers, adults) interaction failure (e.g., "If somebody doesn't like me, I usually can't figure out why"; "When another kid doesn't like me, I usually don't know why") than RED students.

Student Self-Reported Control Beliefs in the General Domain

In the general control beliefs domain, EBP students had higher means scores regarding unknown sources for general failure in their daily lives (e.g., "Many times I can't figure out why good things happen to me"; "When good things happen to me, many times there doesn't seem to be any reason why"). Also, EBP students, statistically significantly more than RED students, reported greater social restrictiveness and power among adults (powerful others) in their environment (e.g., "If an adult doesn't want me to do something I want to do, I probably won't be able to do it"; "I don't have much of a chance of doing what I want, if adults don't want me to do it").

Student Self-Reported Parental Bonding

Rohner (1986) noted that "one's psychological construction of reality--or image of life and of the world--seems to be shaped to a large extent through childhood experiences in the home" (pp. 84-85). An attachment generally refers to a close, enduring affectional bond or relationship between two persons (Ainsworth, 1989; Rutter, 1995). Lopez and Gover (1993) noted

that the presence of these bonds or relationships is presumed

to promote human development throughout the life span by providing recipients with emotional support and a sense of closeness and continuity....The nature of the parent-adolescent attachment is thus considered a primary context for understanding late adolescent development. (p. 560)

Lopez and Gover (1993) observed that, in recent years, there has been increasing interest in how dynamics within the family influence the successful development of adolescents (Patterson et al., 1992; Rice, 1990), particularly in relation to separation-individuation (Allison & Sabatelli, 1988; Lopez, 1992). They proffered that

qualities of the parent-adolescent attachment are assumed to either promote or inhibit the process of separation-individuation, which itself presumably furnishes the adolescent with a clear, stable, and separate sense of self. (Lopez & Gover, 1993, p. 560)

Moffitt (1993a) observed that contemporary adolescents are trapped in a maturity gap. As such, the adolescents in our society today are "chronological hostages of a time warp between biological age and social age. This emergent phenomenology begins to color the world for most teens in the first years of adolescence" (Moffitt, 1993a, p. 687). Ryan and Lynch (1989) asserted that more self-report data from early adolescents that "concern the adolescent's phenomenological world" (p. 354) should be collected and that "the study of the adolescent's representation of self and others and its impact on the development of a mature self-concept is significant in its own right" (p. 354). Baumrind (1991) stated that researchers

should be "especially interested in how adolescents perceive their parents" (p. 157). Throughout early to late adolescence, the parent-adolescent relationship in a well-functioning family presumably develops greater tolerance for the adolescent's expressions of autonomy and individuation (separateness) while it concurrently provides him with ongoing support and emotional validation (Bower, 1988; Cooper et al., 1983; Grotevant & Cooper, 1985; Ryan & Lynch, 1989).

Aspects of EBP and RED early adolescents' perceptions of relationships with their mothers and fathers were assessed by the Parental Bonding Inventory (PBI; Parker et al., 1979). The three-factor structure of the PBI recently derived and validated by Cubis et al. (1989) was used. The PBI assesses early adolescents' perceptions regarding the level of care (e.g., "Appears to understand my problems and worries"), social control or protection (e.g., "Likes me to make my own decisions"), and personal control or protection (e.g., "Does not want me to grow up") accorded them by their parents. No statistically significant differences were found between the means of the EBP student group and the RED student group in any of these parental bonding domains.

Also, descriptively, neither the EBP students nor the RED students in this study reported extreme ratings for their mothers or fathers in any of the foregoing domains. Students in both the EBP and RED groups rated their mothers and fathers in the upper one third of the maximum score range for

care, indicating fairly high perceived maternal and paternal caring. Rey (1995), in a recent study of adolescent psychopathology that utilized the PBI with groups of referred adolescents with major depression, dysthymia, oppositional defiant disorder, conduct disorder, attention deficit hyperactivity disorder, and anxiety disorders, found a strong relationship between low parental care, as measured by the PBI, and adolescent depression, an internalizing disorder (Mills, 1996).

Rey (1995) reported that externalizing disorders among adolescents (e.g., oppositional defiant disorder, conduct disorder, attention deficit hyperactivity disorder) were not associated with low levels of parental care. The EBP and RED student groups in the present study also rated their mothers and fathers in the lower one third of the minimum score range for social control/protection and personal control/protection, indicating fairly low perceived control or restriction by parents. Rey and Plapp (1990), in a study that utilized the PBI and in which the authors investigated the quality of perceived parenting among adolescents with oppositional defiant disorder and among adolescents with conduct disorder, found no statistically significant differences between means for the quality of perceived parenting in oppositional and conduct-disordered adolescents who were living with their parents and who were asked to rate their current perceptions of parental behavior. Also, McCord (1993), in a longitudinal study of children's antisocial behavior and parent socialization, reported that "children who had

misbehaved were not more likely to have poor family environments" (p. 323, emphasis in original).

Parent-Reported Satisfaction

In an influential article, Belsky (1984) asserted that parenting behavior is multiply determined and that the factors that influence parental behavior could be grouped into three broad categories: parental personality and psychological well-being; contextual sources of stress and support; and child characteristics. McNaughton (1994) has delineated two reasons for the collection of parent satisfaction information, reasons which have application to and can inform services for children and youth with behavioral disorders: (a) parents have the major responsibility and control of a youth's development, and their levels of satisfaction should receive major attention; and (b) information about parent satisfaction can be used to improve services and to enlist cooperation in educational programs. McNaughton noted that because satisfaction is rooted in parents' perceptions of experiences and events, it is a highly individualized as well as volatile construct. Two primary factors have been identified in the conceptualization of an individual's satisfaction with the another person's behavior: (a) an individual's aspiration regarding the other person (i.e., desired expectations of the other person), and (b) an individual's perception of the other person's actual behavior or actions (Michalos, 1983).

More than three decades ago, Virginia Satir (1964) asserted that "the parents are the architects of the family and the marriage relationship is the

key to all other family relationships. When there is difficulty with the marital pair, there are more than likely problems in parenting" (p. 1). In families with a child who exhibits externalizing behavior problems, the relationship between the parents is often stressed by the necessity of continual monitoring and disciplining of the child (Adams et al., 1995; Early & Poertner, 1993; Webster-Stratton & Herbert, 1994). One critical aspect of a successful parenting partnership that has important implications for parents' ability to meet successfully the demands of rearing a child is what Cohen and Weissman (1984) termed the "parenting alliance" (p. 33). The parenting alliance is the capacity of a spouse to acknowledge, respect, and value the parenting roles and abilities of their partner and serves to regulate self-esteem and to sustain emotional involvement within the parental dyad (Emery & Tuer, 1993).

This aspect of parenting was tapped in the current study by the spouse/ex-spouse support subscale of the CGPSS (Guidubaldi & Cleminshaw, 1985, 1989, 1994). Examples of items on this subscale include, "My spouse thinks parenthood is an important and valuable part of life which pleases me greatly"; "I am satisfied with my spouse's child-rearing skills"; and "I am happy about the amount of interest that my spouse has shown in my child." Guidubaldi and Cleminshaw (1989) reported that results of previous work in this area have suggested that the mother's perception of spousal support in parenting has an impact on the child's relationship with both parents, and their own work revealed that "children whose mothers were

more satisfied with spouse/ex-spouse support reported better relations with both parents" (p. 272).

In the present study, no statistically significant differences were found between the mean scores for mothers and fathers in the EBP group and mothers and fathers in the RED group in this domain (spouse/ex-spouse support). Some support for this finding is found in the research of Loeber et al. (1995) who, in a recent longitudinal study of boys ages 8 through 17 with and without clinically diagnosed conduct disorder (CD), reported that the parent-reported quality of the parents' marital relationship was "not statistically different at conventional levels [$p \leq .05$] for the two groups" (p. 504). In fact, in the current study, the EBP and RED groups, overall, only differed slightly on this variable, indicating more similar than discrepant overall levels of spousal/ex-spousal support.

Some support for this result is found in the report of a recent clinical study of marital satisfaction and adolescent social adjustment by King, Radpour, Naylor, Segal, and Jouriles (1995). Although King et al. found statistically significant differences between their adolescent inpatient group and their adolescent control group on several social adjustment variables (e.g., academic problems, school behavior problems, peer relationship problems) as measured by the Social Adjustment Inventory for Children and Adolescents (SAICA; John, Gammon, Prusoff, & Warner, 1987), they found no statistically significant differences between the two groups on the variable

of parent self-reported satisfaction with spousal support (e.g., satisfaction with spouse's communication of warmth and understanding) for mothers or for fathers as measured by the Marital Satisfaction Inventory (MSI; Snyder, 1981).

When problematic parent-child relations are maintained in the context of other family stressors (e.g., low spousal support, lack of satisfaction with the parental role or performance), subsequent psychological well-being in both children and parents can be compromised (Lewis et al., 1984; Vondra & Belsky, 1993; Weisner et al., 1990). In general, researchers have reported that parents who have supportive marital relationships have more positive attitudes towards their children than those parents who have marriages that are less close and intimate (Cox, Owen, Lewis, & Henderson, 1989; Okagaki & Johnson-Divecha, 1993).

Umberson (1989) stated that "the parent-child relationship is one of the strongest social ties available to individuals" and that "it carries important implications for the parent's behavior, attitudes, values, and adjustment" (p. 999). From her research on the effects of dimensions of the parent-child relationship on parents' psychological well-being, Umberson concluded that "the content of parent-child relationships, particularly positive relational content, is strongly associated with parents' well-being" (p. 1009), and that "relationship content may constitute a pivotal mechanism through which parenting can exert a powerful effect on parents' psychological well-being" (p.

1009). Kazdin and Johnson (1994) asserted that "parent-child relationships are central to social competence in children and adolescents" (p. 227). Paul et al. (1993) have observed:

The parent-child relationship is one of the most basic relationships in the human community...It is in this relationship between parent and child that both learn much about themselves and about the other, where there is the opportunity for human experience, joy, and love not duplicated in the human community. (pp. 4-5).

Guidubaldi and Cleminshaw (1989) noted that reciprocity is an important factor in parent-child relationships. The parent who expects and anticipates a negative relationship (or a positive relationship) may be, in fact, either initiating, maintaining, or accelerating it (Patterson et al., 1992). A parent may communicate (verbally or nonverbally) how he or she expects the child to respond and, thereby, get what he or she expects. Therefore, Guidubaldi and Cleminshaw (1989) observed:

[I]t may be that the quality of the parent-child relationship predicts the quality of a child's social interactions outside the home with both peers and teachers. That is, the child's perceptions of the parent-child relationship set up expectations about relationships in general and thus affect how the child interacts with others. (p. 273)

From the results of their correlational research, Guidubaldi and Cleminshaw (1989) reported that youths whose parent-child relationships were poor were rated as having poorer peer relations and less acceptance from their peers. Conversely, those youths whose parent-child relationships were good were rated as having good peer relations and high levels of

acceptance by peers. Guidubaldi and Cleminshaw found that "satisfaction with parent-child relationships was related concurrently and across time to the child's social competence and, additionally, to concurrent academic performance" (p. 274).

As indicated above, both mothers and fathers of EBP and RED boys in this study did not report statistically significantly different levels of spousal or ex-spousal support. However, with respect to parents' self-reports of their level of satisfaction with their relationships with their early adolescent sons (EBP/RED), mothers of EBP students in this study, statistically significantly more than mothers of RED students in this study, reported lower mean levels of satisfaction (e.g., mothers of EBP students generally disagreed with such statements as, "I am delighted with the relationship I have with my child," and "I am satisfied with the way my child treats me"). Mean differences between fathers of EBP students and RED students for the variable of self-reported satisfaction with the parent-child relationship were not statistically significant.

In their work with children with conduct disorders and their families, Webster-Stratton and Herbert (1994) found that except for unusual situations where the father was the primary caretaker, the mother was the one who was most "under siege" (p. 53) with the child. They wrote:

The father, on the other hand, typically spent less time with the child and therefore had a less intense, somewhat easier relationship with the child. This difference between the mother-child and father-child relationships typically resulted in different perceptions of the child's problems, often creating conflict in the parents' own relationship. (p. 53)

The research and comments of Webster-Stratton and Herbert (1994) lend support to the findings in the present study of lower self-reported satisfaction with the parent-child relationship by mothers of EBP students in contrast to fathers of these students.

Guidubaldi and Cleminshaw (1989) stated that there is a "critical need for parents to feel competent in the role of a parent" (p. 274). Arcus, Schvaneveldt, and Moss (1993) asserted that "most people become parents, most take the role seriously, [and] most want to be successful at it" (p. 204). Because research has documented, in both healthy and disrupted family systems, a relationship between parental behavior (such as parents' efficacy and competence in the parenting role) and youths' developmental outcomes (Goodyer, 1990; Huggins, 1989; Patterson, 1986; Stinnett & DeFrain, 1985; Webster-Stratton & Herbert, 1994), parents' perceptions of their satisfaction in this domain is an area worthy of consideration.

Although parents' ability "to change and manage the family environment effectively" (Kramer, 1990, p. 519) and their efficacy in "teaching their children to do what they think the children need to do" (Kramer, 1990, p. 522) are critical to children's successful psychosocial development, it has been noted in the literature that parents of youth who have externalizing behavior disorders often experience learned helplessness which varies in terms of generality, chronicity, and intensity (Abramson et al., 1978; Kofta & Sedek, 1989; Mikulincer & Casopy, 1986). Recently, Webster-Stratton and

Herbert (1994) asserted that parents of youth with externalizing behavior disorders frequently feel inadequate in childrearing or parent performance.

In the current study, this aspect of parenting was measured by the parent-performance subscale of the CGPSS (Guidubaldi & Cleminshaw, 1985, 1989, 1994). Examples of items on this subscale include, "I am satisfied with my child-rearing skills"; "I think my child would consider me a good parent"; and "I am satisfied with the amount of time I can give my child." Contrary to Webster-Stratton and Herbert's (1994) observation, neither the means scores of the mothers nor the mean scores of the fathers of EBP boys in this study differed to a statistically significant degree from the mean scores of the mothers and fathers of RED boys in their self-reported levels of satisfaction with their parent performance.

In fact, as with the spouse/ex-spouse support parent satisfaction variable, the mean scores of the parents of EBP and RED youth in the current sample differed only slightly in their self-reported levels of satisfaction with their parent performance. One caveat regarding this finding is, however, that the internal consistency reliability coefficients of the scores in this domain (parent performance) were low (mothers' $r^2 = .64$) or marginal (fathers' $r^2 = .70$). Also, these findings are sample specific and provide no information or guidance about how the other parents of EBP students of seventh- and eighth-grade EBP students who did not participate in the study would have responded to these self-report measures. Again, the finding of few

statistically significant between-group (EBP/RED) differences for parents in the present sample in the parent-satisfaction domain may be attributable to psychosocially "healthier" families volunteering to participate anonymously in the research.

**Multivariate Considerations in the Study
of Externalizing Behavior Problems
Among Youth**

Because students' worlds are not univariate but, rather, multivariate and multidimensional, it is important that variables be considered in conjunction with other variables, not treated as though they exist in a vacuum. Thus, in addition to separate MANOVAs for the seven subsets of self-report dependent variables (academic control beliefs, social control beliefs, general control beliefs, maternal bonding, paternal bonding, mother satisfaction, father satisfaction), a backward stepwise discriminant function analysis (BSDFA) was conducted. As outlined previously, variables were selected for entry into the BSDFA (a) if they were in a statistically significant MANOVA subset main effect ($p \leq .05$) for student group (EBP/RED), and (b) if they met the Bonferroni-corrected probability (p) criterion for the univariate F value under the main effect. These variables were chosen for inclusion in the BSDFA to obtain a multivariate set of group membership predictors (EBP/RED) across the four dependent variable subsets in which these

variables conceptually fell: academic control beliefs, social control beliefs, general control beliefs, and mother satisfaction.

From a multivariate perspective, incorporation of EBP and RED students' statistically significant mean scores for control beliefs from the academic, social, and general domains with the mean level of mother's self-reported satisfaction with the parent-child relationship paints an interesting picture. The results of the the BSDFA and BSLR revealed, with approximately 70% accuracy, that the subjects' scores for variables of academic strategy beliefs for unknown factors (EBP group > RED group), general control beliefs for unknown success (EBP group > RED group), and mother's satisfaction with the parent-child relationship (EBP group < RED group) optimally predicted EBP/RED student group membership.

Tables 23 through 25 contain the group means for the five other predictor variables that had interpretable ($\geq .30$) structure coefficients in the BSDFA (academic control beliefs; academic strategy beliefs for luck; social control beliefs for unknown success; general control beliefs for powerful others failure; and general control beliefs for unknown failure) with the derived discriminant function (see Table 46). A review of the group means (EBP/RED) for the foregoing five variables, as well as the group means for the three predictor variables comprising the discriminant function itself (i.e., academic strategy beliefs for unknown factors; general control beliefs for unknown success; mother's satisfaction with the parent-child relationship),

yields the following tentative interpretation contrasting the students in the EBP and RED groups.

In the present study, EBP students perceived substantially less overall control over successful academic outcomes (i.e., getting good grades in school, stopping themselves from doing poorly in school) compared to RED students. Also, EBP students, in contrast to RED students, perceived substantially greater uncertainty or "unknowingness" about how to do well in school (e.g., strategies), and endorsed luck as an effective strategy for ensuring academic success to a greater degree than RED students.

In the social context, EBP students attributed failure in interactions with peers and adults to unknown factors much more than RED students. In the general environment, EBP students in this study, endorsed control by powerful others (i.e., adults in general) over not being able to do what they want to do (e.g., personally failing to get to do what they want to do), and control by unknown factors over what goes wrong for them more than RED students.

In the social context and in general, EBP students endorsed, to a greater degree than RED students, unknown control over personal success (i.e., why people like them, and why "good things" happen to them). Finally, the EBP students in this study had mothers who, on average, reported considerably lower mean levels of satisfaction with their relationships with their adolescents compared to the mothers of RED students.

Huberty and Morris (1989) noted that a multivariate analysis should enable the researcher to "get a handle" (p. 304) on some characteristics of subjects in his or her study and to answer the question, "What are the emerging variables?" (p. 304). So, from the foregoing "emerging variables" which differentiate the EBP and RED groups, what concise picture can be painted of the perceived world of the early adolescents with EBP in this study?

First of all, the EBP students in this study, to a greater degree than RED students, reported perceiving a great deal of "unknowns" in their lives. "Unknowns" regarding, for example, how to do well in school, why peers and adults do not like them, and why things "go wrong" for them in general. Also, the EBP students in this study, to a greater degree than RED students, perceived adults in their environment as exerting control over them, thus preventing them from doing what they want to do, and control by unknown factors over what goes wrong for them in a general sense.

The EBP students in this study also did not feel that they had as much control over doing well (i.e., getting good grades) in school, and the EBP students also held out for luck to help them succeed in school, substantially more than the RED students. Anderson and Prawat (1983), Andrews and Debus (1978), Jones (1987), Skinner (1995), Vispoel and Austin (1995), Weiner (1979, 1985a, 1985b, 1986), Yates et al. (1994), and others have noted that when students attribute their failure on a task (or in a situation) to

luck or to the difficulty of a task (an external locus of control), rather than to effort or to ability (an internal locus of control), they may feel less control over outcomes and, thus, may be less likely to put forth effort on future tasks (Jones, 1987).

Additionally, in their social world, and in general, EBP students reported not knowing why people like them or why positive things happen in their lives. Finally, mothers of EBP students in this study generally indicated that their relationships with their adolescent sons could be better, more than mothers of RED students.

In Search of Enhanced Understanding of and Service
Provision to Adolescents with Externalizing
Behavior Problems

Webster-Stratton and Herbert (1994) noted that externalizing behavior disorders

put children at risk, in terms of blighting their futures; they put parents at risk of abusing (even losing into care) their children; they put society at risk with the seeds of violence and delinquency they propagate for the future. (p. 310)

Also, three years ago, the U.S. Department of Education (1993a) observed:

Our Nation's schools need a reorientation of the fundamental approach to addressing the diverse and complex patterns of psychological and social behavior presented by students, including those with serious emotional disturbance....Schools must be responsible and accountable for ensuring that, rather than develop serious emotional disturbance, students with

emotional and behavioral problems achieve positive academic, personal, and social outcomes. (p. 36580)

That same year, discussing aspects of working with families who have children with disabilities, Paul et al. (1993) noted that their focus on a careful understanding of the present circumstances of learning and behavioral deficits, rather than on whom to hold responsible for things as they are, made them less likely to scapegoat and alienate important members of psychoeducational planning efforts. They observed further that "collaboration between parents and professionals will enable a consistent and mutually agreed upon plan of action in the two most influential areas of a child's life-- home and school" (p. 12). Likewise, Walker et al. (1995) have observed the following:

Because of the central role that family and home conditions play in the etiology of many antisocial behavior patterns, families must become partners with schools and other social agencies if satisfactory solutions to this problem are to be found....[I]t is extremely important to enlist parent involvement in and support of school interventions for antisocial students. (p. 268, emphasis in original)

Also, because of the key role of the school in identification, assessment, and intervention with youth who manifest a variety of problems, including externalizing behavior disorders, Kazdin and Johnson (1994) have delineated a number of considerations in favor of redefining, redesigning, and strengthening mental health treatment and psychoeducational intervention resources for the schools. First, education and academic functioning are intimately related to adjustment and mental health: "Academic dysfunction in

childhood predicts subsequent psychiatric impairment and, conversely, psychiatric symptoms can predict subsequent academic dysfunction" (Kazdin & Johnson, 1994, pp. 239-240). Second, the school is in a special position to evaluate the behavioral, social, and academic functioning of children and adolescents (Reschly, 1996). With respect to this consideration, Kazdin and Johnson (1994) noted that "the scope of the sampling of a child's overall functioning that is evidenced in the school permits one to identify when treatment is needed and to evaluate whether treatment is having impact" (p. 241).

Third, mental health facilities usually are not able to serve many individuals in need of treatment and, for many child and adolescent problems, parents are unavailable or unwilling to participate in treatment: "In such instances, the schools have direct access to the children and hence can reach a broader range of those in need of attention than traditional clinical services" (Kazdin & Johnson, 1994, p. 241). Even for those youth who are in need of care but who may be difficult to reach even through the schools (e.g., youth who are neglected or who are runaways), "the potential for treatment in the schools is much greater than in clinic settings, where parents are required to seek out and to attend treatment" (Kazdin & Johnson, 1994, p. 241).

Walker et al. (1995) noted that, although it is possible to create positive behavioral changes in the school setting without involving parents in specific interventions, any behavioral gains by a student that are achieved in

a school-only intervention will likely be specific to that milieu. Thus, addressing the powerful positive influence of home-school collaboration for students with EBP, Walker et al. (1995, p. 268) have asserted that, whenever possible, parents of students with EBP should participate in the planning and the implementation of school interventions for the following four reasons:

1. Many of the social and emotional adjustment problems that EBP students experience in the school environment have their origins in the home environment.

2. The more settings in which interventions for disruptive and antisocial behavior can be implemented, the more likely there is to be a substantial, ecumenical impact on the student's total behavior, and, thus, a parallel impact on those individuals in the student's environments (e.g., home, classroom).

3. Parental support in coordinating the home and school components of an intervention (e.g., monitoring, praising, issuing home reinforcements) can increase the effectiveness of any school intervention substantially.

4. Parent involvement sometimes opens the door for parent education that can lead to positive parent-child interactions, improved student self-esteem and self-efficacy, and more effective parenting practices.

Psychoeducational Intervention and Adolescents' Cognitions

Amatea and Sherrard (1995) recently noted the vital importance of discerning the "epistemological lenses" (p. 31) through which youths view

their world. They also discussed the weakness of a strictly positivistic paradigm and approach to understanding the problem behavior of children and adolescents (Auerswald, 1987). Amatea and Sherrard (1995) asserted that the positivistic (or mechanistic or technical-rational) perspective on youths' problems is predominant among the majority of educators and mental health professionals in the U.S.

The positivistic perspective of problem behaviors among youth presumes that the world in which we live (the world that contains the problems we are trying to solve) operates similarly to a machine: "That is, everything has a predictable structure with fixed and movable parts, and a problem is an event that occurs as a result of a 'part' malfunctioning" (Amatea & Sherrard, 1995, p. 30). Thus, if a youth or his family is experiencing problems, this situation is a result of some faulty part. That is, someone or a group is not functioning or acting properly, or "someone has put too much pressure on certain parts of the system that cannot bear the load, and thus the system 'breaks down'" (Amatea & Sherrard, 1995, p. 30). They concluded that, to solve problems within this epistemological perspective, an individual must search for the part or parts that are weak, damaged, or missing, and fix or replace them.

In essence, the positivistic/mechanistic perspective assumes that the actions and reactions of the youth in question and of the family (as well as school staff) are arranged in a counterbalanced way and can be objectively

described. While this mode of inquiry creates a sense of certainty in professionals that they can really know how things work and is useful in overcoming demoralization and anxiety regarding the identification of the "source" or the "cause" of the youth's problems, it often risks oversimplification and generalization. For example, the discovery of a strong relationship between a child's tantruming and a mother's style of communication in a parent-child communication task may be latched onto tenaciously as a description of reality and may be utilized to explain a large number of other types of situations (Amatea & Sherrard, 1995; Newmark & Beels, 1994).

However, Newmark and Beels (1994) have proffered the following caveats with respect to this reductionistic, empirical, simplistic, first-order approach:

This kind of simplification is possible when you believe you have got hold of a piece of scientific truth that permits you to ignore complexity and exceptions because it refers to something fundamentally "real"....This danger occurs because in doing research on a question, researchers usually break it down into simple components, such that only a few features of a situation--isolated from the other components--are the focus of investigation. (p. 7)

Among other things, the emergence of social construction theory (Gergen, 1985) has been crucial in the development in psychology of an alternative to the above approach: the second-order perspective. This perspective takes in not only the system, but also the observer, so that second-order views are really views about views (Hoffman, 1990). Amatea and Sherrard (1995)

noted, "When one can take a second-order view of children's social worlds, one thinks about how one thinks about such worlds" (p. 58).

The second-order view also acknowledges the nonreductionistic nature of the youth's (and family's) experience of the world, and emphasizes the multiple perspectives and the changing nature of the youth's social world (Amatea & Sherrard, 1995, p. 58). Several years ago, Anderson and Goolishian (1988) stated it this way:

The conceptualization of reality as a multiverse of means created in dynamic social exchange and conversational interaction moves us away from concerns about issues of unique truths and into a multiverse that includes a diversity of conflicting versions of the world. (p. 378)

Drawing on an adaptation of Piagetian theory developed by Ivey (1986, 1991), Rigazio-DiGilio (1994) described how the thinking and actions of youths, families, and larger social networks (e.g., schools) evolve in a process of dialectical interaction. She observed that "throughout our development, the dialectical interaction that occurs between person and environment continually promotes the co-construction of worldviews that in turn influence how we approach our world, our life tasks, or relationships" (Rigazio-DiGilio, 1994, p. 45). Hence, this underscores the central psychoeducational importance of including youths' worldviews in our considerations of their behavior.

The manner in which educators view the cognitions related to the problem behaviors of youth has been the focus of researchers for several

decades (Safran & Safran, 1988). Yet, it has been only fairly recently that researchers have sought to ascertain and understand the personal cognitions and perceptions of youth with behavioral problems (Dadds, 1995; Dodge, 1993a; Lewis, 1992; Webster-Stratton & Herbert, 1994). The cognitions and perceptions of such youth, as those of individuals in general, are "intrinsically complex, multivariate in nature, and are subject to individual variability" (Safran & Safran, 1988, p. 39). Safran and Safran (1988) noted that, from an ecological perspective, the study of the problem behaviors of youths "would be largely incomplete without a careful analysis of this sometimes elusive concept....[I]t stands to reason that with such variability in what [often] constitutes a behavior problem...these cognitions are an area worthy of investigation" (p. 40).

Cantor (1981) observed that youths' behavior

may emerge through a cognitive filter containing generalizations about the self, others, and the situation drawn from past experiences in similar circumstances. To the extent that social behavior is cognitively mediated, the personologist [or psychologist] needs to pay increasing attention to the cognitive generalizations about the world that the lay perceiver [or adolescent] maintains. (pp. 229-230)

Personal construct theorists (PCT; Kelly, 1955) assume that adolescents strive to anticipate their own behavior and the behavior of others by their detection of recurrent themes or behavioral replications within their experience (known as "construction") (Button, 1985). In this sense, the student who has EBP is a "personal scientist" who "formulates, tests, and

elaborates his or her construction of reality" (Neimeyer & Neimeyer, 1985, p. 195) based on his experiences in the school, family, and societal contexts.

Agnew (1985) noted:

A starting point for constructing a model of disorder from within construct theory would be, therefore, that however disordered or distorted a child's behaviour [sic] may appear from the outside, it carries its own unique sense for him and centrally for his construing of his self. (p. 231)

Button (1985) emphasized that the main contribution and strength of PCT to mental health intervention, and to intervention with students who manifest externalizing behavior disorders, is in taking youth seriously. That is, rather than dismissing a student's behavior "as being a reflection of forces beyond his control and which can be 'treated' without reference to him as a person, we are invited to try and understand him, to try and enter his world" (Button, 1985, p. 29, emphasis in original).

Heshusius (1982, 1986a, 1986b, 1988) asserted that phenomenology and holism remind us, as special education professionals, that early adolescents act according to their construction of reality irrespective of the theories and research findings that try to outguess them. Hence, Kelly (1992) has outlined a basic message from school personnel (e.g., school psychologists, school counselors) to parents regarding the individual phenomenologies of young people, a message that can apply to other school staff as well (e.g., special education teachers, school administrators):

These are the ways that Johnny perceives his problems and the events which have influenced them. It doesn't matter whether

these events have actually occurred or what anyone has done to affect his problems. What really matters is that his perceptions are real to him; real enough to significantly affect his life. And, for this reason, we need to work together now to find better ways to communicate our understanding of his perceptions, as well as caring enough to help him change his negative feelings about himself and what he is capable of doing, both as a member of your family and as a student at school. (Kelly, 1992, p. 129)

Recently, Long and Brendtro (1992), in their inaugural commentary in a new journal in the field (Journal of Emotional and Behavioral Problems), made the following observations:

Children with emotional and behavioral problems are often blamed for their difficulties. Carrying such labels as disturbed, delinquent, or dropout, these youths come to see themselves as damaged goods. They are hungry for hope, so those who believe in their potential will be most effective in working with them....Only those skilled in decoding the meaning of behavior can successfully guide young people and meet their needs. (p. 3)

Involving the Family in Psychoeducational Interventions

Kelly (1992) has asserted that, from a holistic or phenomenological standpoint that sets forth the importance of understanding an early adolescent's direct experience of the world (Arbuthnot, 1992; Duplass & Smith, 1995; Feagans & Bartsch, 1993), externalizing behavior disorders are self-defined conditions that essentially reflect the adolescent's subjective perceptions of himself as normal or disturbed, as well as his purposive or self-destructive motivations and choices that express such perceptions (Apter, 1982; Farrington, 1993; Millstein, 1993). Simon and Johnston (1987) noted

that problems of youth are always in relation to the immediate contexts and social systems of the child or adolescent.

Contexts of youth include the family, school, peer group, and society, and these systems operate in relation to and interaction with one another in a circular fashion. As such, in working with youth, particularly youth with emotional and behavioral problems, schools cannot afford to ignore the impact of society, the influence of peers, and, particularly, the effect of the family system upon the child (Coie & Jacobs, 1993; Textor, 1983).

Operationalizing psychoeducational interventions for children and adolescents with EBP has the opportunity for changing not only the perceptions of youth with EBP, but those of the school and the home, too. Simon and Johnston (1987) noted, "A systemic approach to programming for the behaviorally disordered impacts on dysfunctional cycles of behavior and focuses attention on the need for shared change among students, their peers, their parents, and teachers" (pp. 89-90)

Webster-Stratton and Herbert (1994) recently asserted that, to obtain an ecumenical understanding of externalizing behavior problems, we "must take into account the behavior, attitudes, and relationships within four interlocking systems...the child, the parents, the family, [and] the school" (p. 78). At about the same time, the Chesapeake Institute (1994), under contract with the U.S. Department of Education, prepared a report entitled, National Agenda for Achieving Better Results for Children and Youth with Serious

Emotional Disturbance. In that report, the dismal findings for youth with serious emotional disturbance (SED) from the National Longitudinal Transition Study (Wagner, 1995) were delineated and seven interdependent strategic targets for significantly improving results for youth with SED were established.

Two of these targets, promotion of appropriate assessment and collaboration with families, are central to the current study. Incorporation of self-reports of SED (or EBP) students regarding control beliefs into initial and ongoing assessments and measures of family functioning, such as, for example, parent-perceived satisfaction, may provide greater understanding of the nature of students' difficulties and family issues. Data from such assessments could more fully inform educational and psychological therapeutic collaborative efforts between schools, families, and other service entities (American Psychological Association, 1994; Steinberg, 1994).

Walker et al. (1995) observed the following with respect to the importance of families in children's development and the importance of involving families in children's education and intervention:

Few would deny that, over the course of their development, children's parents are the most consistent and important caretakers in their lives. Parents have a substantial impact on a child's social and academic growth. They are obviously in a position to exert tremendous influence on their children's development....And for those families where parent involvement [in children's education and intervention plans] might appear hopeless, remember that even the smallest changes in an unhealthy parenting cycle can produce momentous changes down the road. (p. 273)

Thus, an important key in facilitating the psychoeducational growth and

development of children and adolescents is working with parents (Christenson & Conoley, 1992; Epstein & Lee, 1995; Fine, 1983, 1985, 1989; Fish, 1995). Kelly (1992) has noted that although parents can significantly affect adolescents' perceptions of themselves as "normal or disturbed" (p. 112), as well as adolescents' purposive or self-destructive motivations and choices which express their perceptions, parents "do not directly cause them under even the worst circumstances" (p. 112), and "severe conduct and emotional problems can occur in spite of the most positive parental efforts" (p. 112).

However, it may be advantageous for parents of adolescents to be aware of the perceived antecedents or contributing factors of externalizing behavior problems. These antecedents or factors are those that may be triggering or aggravating the adolescent's feelings of "disturbedness and self-devaluation" (Kelly, 1992, p. 128). Kelly also noted that, prior to undertaking any home-school collaborative efforts, "these perceptions [e.g., lack of perceived parental caring, lack of perceived trust because of parental social or personal restrictiveness]—whether they reflect 'real' causative circumstances or not—must be identified" (1992, p. 128), and must be incorporated into a holistic understanding of the youth's problems.

In their research with youth who have externalizing behavior problems and their families, Webster-Stratton and Herbert (1994) utilized and advocated a collaborative approach to assessment. They stated:

Our approach to assessment, based as it is on cognitive behavioral ideas, depends on collaborative empiricism. This

means checking with the person concerned and arriving at a common understanding. It means engaging the person in the explorative process that underlies assessment, discussing data from measures, their meaning and implications...in an atmosphere of "caring interest." (Webster-Stratton & Herbert, 1994, p. 318)

Moreover, Webster-Stratton and Herbert (1994) asserted that clinical assessment of youth who are exhibiting externalizing behavior problems should involve

much more than measures regarding the child's antisocial behaviors, [and] might include assessments of the marriage, peer interactions, parent psychopathology, environmental stressors, and general family functioning. (p. 319)

Kelly (1992) has also noted that the parents of youth with externalizing behavior problems are frequently treated as if they are the sole pathological cause and exclusive responsible party for all of their child's misbehavior, and are treated more like patients rather than partners in educational and therapeutic programming (Berger, 1987; Collins & Collins, 1990; Knitzer et al., 1990; Silverstein, Springer, & Russo, 1992; Simpson & Carter, 1993; Sonnenschein, 1981; Tarico, Low, Trupin, Forsyth-Stephens, 1989; Walker et al., 1995).

Sundry difficulties often present themselves when attempting to include families in the treatment plan or the decision making about the treatment plan for youth with EBP (e.g., parents may be burned out, may be turned off to the "system" or school, or may have mental health problems of their own).

However, in light of the critical psychological and social importance of the

parents and their relationship with the adolescent with EBP (Bower, 1988; Patterson et al., 1992; Walker et al., 1995; Webster-Stratton & Herbert, 1994), every effort must be undertaken to include the family in service efforts (American Psychological Association, 1994; Ashbaker & Roberts, 1994; Blau & Brumer, 1996; Earls & Carson, 1993; Fish, 1995; Kazdin, Siegel, & Bass, 1992; Kutash & Rivera, 1995; Soderlund, Epstein, Quinn, Cumblad, & Petersen, 1995. Kutash and Rivera (1995) in their review of six studies in which they examined the effects of participation in self-help or support groups for families of children with emotional and behavioral disorders (Drier & Lewis, 1991; Fine & Borden, 1992; Koroloff & Friesen, 1991; Lutzer, 1987; Moynihan, Forward, & Stolbach, 1994; Sheridan & Moore, 1991) concluded:

Evaluations of the benefits associated with participation have shown generally positive results, including increased self-esteem, increased awareness of child developmental stages, increased ability to cope, changes in attitude toward discipline, increased family communication, fewer crisis situations, and heightened ability to interact more competently with the child. (p. 466)

Thus, because a youth's family is an integral and powerful component of a his or her environment, the family must be given prime consideration in psychoeducational assessment, treatment, and follow-up efforts.

Final Comments

Richters and Cicchetti (1993) recently noted that "the study of antisocial children is still in its infancy" (p. 2), and that "although the antisocial

problem dates back probably thousands of years, it has been a focus of systematic study for only the past 50 years or so" (p. 2). During the past five decades, many "causal" models of externalizing behavior disorders in children have been proffered and have been supported by research. However, with specific reference to models of family dysfunction and childhood conduct problems, yet applicable to other models, as Frick (1993) has noted, "How can they all be right?" (p. 383). Frick (1993) went on to answer this question by stating that (a) it is likely that not all youth who develop externalizing behavior disorders do so as a result of the same causes, and (b) the utility of a model might depend on which aspects of family dysfunction (or school context, belief systems, personality, peer interaction, etc.) are being studied.

Many professionals who work with early adolescents who have EBP and their families are, out of necessity, practiced eclectics (i.e., revealing an open system of beliefs regarding therapeutic change agents). These professionals frequently utilize effective techniques from a number of compatible theoretical sources. Speaking about youth with conduct disorders, Toth (1990) stated:

There are many therapeutic approaches to children with conduct disorders. No one treatment has been shown to be most effective. Some are notably better than others for a particular child, depending on the child's age, family situation, type of behavior, and contributing stressors....The primary goal should always be kept in mind: to help the child develop in a normal, healthy way. (p. 34)

For youth with EBP, Knitzer et al. (1990) have advocated for a broader,

multivariate perspective of emotional and behavioral problems among youth to be adopted by educators. They observed that "meaningful services to families, transition efforts, and mental health program components are the exception not the rule, yet all our knowledge about how to help troubled children suggests effectiveness will be hampered unless this broader perspective is taken" (p. 35). Psychologist Philip Kendall (1993) also made the following observations:

To assume that there is a single monolithic "right" way to think, behave, and feel is to make a fatal error. Indeed, quite the contrary is true (Kendall, 1992). The human experience, including childhood and adolescence, is replete with opportunities for a diversity of thoughts, feelings, and actions. The definition of what is "normal" is broad and inclusive; thoughts, feelings, and actions are abnormal only when they are maladaptive for the individual or interfering or destructive for others....[I]nterventions are designed to remove detrimental cognitive, affective, or behavioral styles that children may be developing and to offer--at an early point in life--valuable educational experience that can modify unwanted features of their developmental trajectory. Interventions with youth are perhaps best when they mesh effectively with the normal developmental trajectory...[and when they have] incorporated strategies that involve parents, peers, and school personnel. (pp. 242-243)

Researchers continue to search for clearer answers to the prevention of EBP among youth and successful interventions with youth identified with EBP (Dodge, 1993b; Hocutt, 1996; Kazdin, 1993a, 1993b; Losel & Bliesener, 1994; Reid, 1993). As we broaden our search and as our methods become more refined, to paraphrase Frick (1993), we will have a better foundation from which to address more practical questions such as: "Which way of

understanding (family influences, social-cognitive variables, school context, peer relations, academic motivation, etc.) fits this individual child?" and "What aspect of this child's (family context, belief system, school environment, peer relationships, academic skills, etc.) appears to be the most important target of intervention?"

Costello and Angold (1993) asserted that, although a substantial amount of research has been conducted to cast light on the origins of EBP, "we still lack coherent conceptual or research models to help us understand the processes by which so much suffering is generated" (p. 91).

Richters and Cicchetti (1993) have noted that, because of the complexity of the processes and mechanisms under study, much of the research on antisocial behavior in youth has been highly specialized, has included relatively isolated consideration of specific mechanisms, and has focused "only limited attention to the broader matrix of contexts and processes in which those mechanisms exert their influences" (p. 2). They went on to make the following observations:

In a word, the study of childhood antisocial behavior has very much developed along multidisciplinary lines rather than interdisciplinary lines, absent the necessary theoretical and conceptual connective tissue for integrating knowledge across disciplines....[What is needed is an] emphasis on the interplay between normal and abnormal development, continuity and discontinuity, and risk and protective factors, and on influences both within and outside the individual, [that] transcends traditional disciplinary boundaries and provides fertile ground for moving beyond descriptive facts to a process level understanding of antisocial trajectories....[N]o approach, construct, level of analysis, or research strategy alone is

sufficient to address the complex multidetermined phenomenon of antisocial behavior. (Richters & Cicchetti, 1993, pp. 2-3, emphasis in original)

As indicated above, Richters and Cicchetti (1993) noted that one of the aspects of the field of developmental psychopathology that needs greater emphasis in future years is understanding of the interplay between risk and protective (resilience) factors. Recently, Losel and Bleisener (1994) recounted the results of an investigation of the psychosocial resilience of 146 adolescents who had grown up under circumstances that have been shown to promote the development of emotional and behavioral disorders. These investigators reported the results of cross-sectional and longitudinal (two-year) comparisons of two groups of 14- to 17-year-olds who were reared in accumulated stressful life events and circumstances (multi-problem environments).

Losel and Bleisener (1994) related that one group ($n = 66$), the resilient group, had not demonstrated any serious emotional and behavior problems. However, they reported that the other group ($n = 80$) had developed manifest disorders, particularly of the externalizing type. The results from psychological tests, self-report questionnaires, and interviews with adolescents in these two groups revealed that the adolescents in the resilient group (a) had somewhat higher intellectual ability, (b) were more flexible and approach-oriented in temperament, (c) had a more positive self-concept, (d) perceived themselves as being less helpless and more

achievement oriented, and (e) tended to engage in more active and less avoidant coping behavior (Losel & Bliesener, 1994).

Ryan and Lynch (1989) have asserted that more self-report data from early adolescents that "concern the adolescent's phenomenological world" (p. 354) should be collected and that "the study of the adolescent's representation of self and others and its impact on the development of a mature self-concept is significant in its own right" (p. 354). Baumrind (1991) stated that researchers should be particularly interested in how adolescents perceive their parents, and that researchers should assess how the adolescents' perceptions of their parents predict the adolescents' own competence and problem behavior.

Also, McCord (1993) has made the following astute observations about the field of developmental psychopathology and its emerging role in understanding problems among youth in our society:

The science of developmental psychopathology should focus on the ways in which external experiences interact with motives and reasoning in order to make sense of why people choose to act as they do. Prior attempts to understand deviance have typically been constructed either as though similar experiences create similar outcomes, without regard for subjective perspectives, or they have been constructed from purely subjective perspectives, without regard to the role of differential experiences. The field of developmental psychopathology should integrate these views, overcoming the legacy of Cartesian dualism. (p. 326)

Walker et al. (1995), speaking about the role of the school in the study of antisocial behavior and provision of interventions to affected youth, observed

that it is important and empowering

to understand the complexity of antisocial behavior patterns and the role of school as a powerful context for intervening with antisocial students. Schools can be highly effective partners with families and community agencies in responding to the needs of antisocial children and youth. We have much to learn, but we have also discovered a great deal that is not being applied consistently or effectively in this regard. If we make a good-faith effort to simply implement what we currently know regarding antisocial children and youth, we can collectively make a huge difference in their lives and the lives of those who relate to them. (p. 69)

Finally, early adolescents who have externalizing behavior problems are not "other parents' children"—they are, in a very real sense, the children of society at large. What they do now and will do in the future as a consequence of their problems, from whatever cause, affects all of us in very real ways (Kean, 1989). Although referring to "at risk" youth, the recent assertions of Hathaway et al. (1993) are instructive to the education of and intervention with early adolescents with externalizing behavior disorders.

They observed that failure to meet the needs of these students is

not only a tragic human waste, but also a mortgaging of the future of our society and our children. By rising to meet this challenge, we can create a more humane society in which all individuals are empowered to reach their full potential and thus become contributing members of the community. (Hathaway et al., 1993, p. 388)

Similarly, Bacchus (1992) observed recently that "every person who will ever occupy a bed in a mental institution, every parent, every professional person, every criminal, every priest, was once in someone's first grade class" (p. 32). So, once, was every early adolescent boy with an externalizing

behavior disorder. Germane to the philosophy of taking care of all children, not just our own offspring, are the words of Kliman and Rosenfeld (1980):

It makes a real difference to you whether my child turns out to be, say, a dedicated teacher or a narcotics peddler. If my child is retarded or delinquent, you--without having any vote in the matter--help foot the bill or could be one of his or her victims. All children are everyone's children, or should be; and all adults, in addition to being the specific rearers of their own biological offspring (or those they choose to adopt), are in a real sense surrogate parents for all children....We, as a social group, ought to be one big extended family...a family whose adults will take joy in every child's triumphs and be distressed at every child's troubles. (pp. ix-x)

Thus, we must go beyond the problem behavior of early adolescents, and enter the multivariate realms of their motivations, their reasons, for acting in self-destructive and socially disruptive ways (Brendtro, Brokenleg, & Van Bockern, 1990), and we must continue to endeavor to understand the family dynamics that contribute to the maladaptive personal and social functioning of these youth. Incorporation of information from such multivariate assessments into an ecumenical psychoeducational intervention plan for students with EBP is consonant with recent recommendations in the educational and psychological literature related to understanding the factors that contribute to the difficulties of this population (e.g., Apter, 1977, 1982; Fine, 1983, 1985; Kauffman, 1991; Kazdin, 1987b, 1993a, 1993b; Kelly, 1992; Phelan et al., 1994; Swisher, 1993; Toth, 1990).

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APPENDICES

Appendix A
Student and Parent Subject Protection Procedures and Research Finding
Dissemination and Application Guidelines Required
by Participating School Districts

**Student and Parent Subject Protection Procedures and Research
Finding Dissemination and Application Guidelines Required
by Participating School Districts**

As per the research agreements made among (a) the principal researcher, Mr. Gary W. Mauk, and members of his graduate supervisory committee (Dr. Richard N. Roberts, chair), (b) participating Utah school district superintendents and special education directors (Box Elder, Cache, Davis, Granite, Ogden, Salt Lake, Weber) and (c) parents of students selected to participate in the research project during March 1992 through July 1992, the following procedures were established to ensure compliance with ethical standards for conducting research in educational settings and perpetual confidentiality and personal anonymity of all data collected on students and parents for this research project:

► The principal researcher, under the direction and with the assistance of representatives of participating school districts, mailed identified parents an approved informed consent letter which:

- (a) explained the study, including the purposes of the research and expected duration of students' participation during school hours;
- (b) outlined the plans to protect the identities of students and parents;
- (c) requested the participation of the parent(s) and child in the study;
- (d) explained that each participating family will be eligible to be selected at random for a research incentive upon completion of the research;
- (e) included a statement that participation in the study by parents and their children was voluntary and that the parent could discontinue participation by notifying the principal researcher at any point prior to the completion of data collection for the project (defined as collection of all archival data from student files (e.g., achievement scores, GPA), student completion of self-report questionnaires, and receipt of completed parent self-report questionnaires); and
- (f) inserted a parent permission (informed consent) form to be marked and signed by the parent as to whether they agreed or did not agree to participate in the research project and a self-addressed, stamped envelope in which the original permission form was to be returned to the principal researcher for relinquishment to school personnel to be placed in the student's cumulative record or special education file prior to permitting access to each student for questionnaire data collection;

- ▶ All original permission forms from parents who agreed to participate in the research were delivered and relinquished by the principal researcher to appropriate school personnel at students' schools to be retained in the schools' possession, (a) in exchange for access to student subjects, (b) prior to collection of information from selected students and their school files, and (c) prior to mailing of self-report questionnaires to students' parents;
- ▶ All information from participating students and parents/guardians was indexed only by an identification (ID) number, known only to the principal researcher, on each questionnaire and/or data entry sheet and was entered into a secured computer file;
- ▶ After collection of all requested data in September of 1992, all identifying information of students and their families was destroyed (including, if any, lists of student names, schools, grades, parent names and addresses, and any materials containing the names of individual students and parents (including, after data entry/verification, individual self-report protocols, and duplicates of consent forms with students'/parents' names), thus eliminating the possibility of linking any data to individual students/families. In sum, all student and parent data are accessible and traceable only by ID number in a secured computer file and have been rendered completely anonymous (personal identity neutral);
- ▶ All of the data from school districts that participate in the project have been pooled, effectively eradicating any links to specific schools and school districts; and,
- ▶ The principal researcher will provide to all participating school districts a copy of the final research report and any recommendations derived from the research, as they would benefit the districts' education programs.

Appendix B
School District Research Clearances



Salt Lake City School District

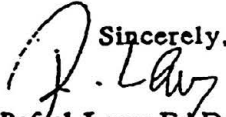
440 East First South
Salt Lake City, Utah 84111-1838
(801) 322-1671

Friday, January 17, 1992

Gary W. Mauk
Research Assoc.
Department of Psychology
Utah State University
EDUC 432-A
Logan UT 84322-2810

Dear Mr. Mauk:

As I have told you on the telephone yesterday, your proposed research is impressive and useful to us. I feel it should be supported. However, it is also somewhat demanding, and to process it, the cooperation of the participating schools must be secured. I am attaching a letter of support I sent to each of our five intermediate school principals in the hope that it facilitates your application. Once you have their agreement to work with you I shall immediately provide a research release.

Sincerely,

Rafael Lewy Ed.D.
Research and Evaluation

Research release granted on March 9, 1992.



**BOX ELDER SCHOOL DISTRICT****STEVEN O. LAING, SUPERINTENDENT •****KIRK ALLEN
SPECIAL EDUCATION COORDINATOR**

January 3, 1992

Gary W. Mauk, M.A., CAGS
Research Associate
Department of Psychology
EDUC 432-A
Utah State University
Logan, Utah 84322-2810

Dear Mr. Mauk

Box Elder School District is very supportive of your research. We feel that the information your research will develop will prove to be very useful to students with behavior disorders. We are pleased that you will be able to work with the students and staff of our district and feel that you will enjoy your association with both groups.

Please contact the special education office when you have identified the sites for your research and we will introduce you to the administration and do whatever we can to help you conduct your research. This letter will serve as your authorization to conduct your research in Box Elder School District.

We look forward to hearing from you and being able to assist you in your research. If you have any need for further help or information from our district, please feel free to contact me.

Sincerely,

Kirk Allen

cc: Superintendent Steven Laing



Cache County School District

2063 North 1200 East
North Logan, Utah 84321
(801) 752-3925

February 3, 1992

Gary W. Mauk
Department of Psychology
Utah State University
Logan, Utah 84322-2810

Dear Mr. Mauk:

Please forgive my delay in getting confirmation to you regarding the conduct of your dissertation study with subjects from Cache County School District. As I mentioned to you when we spoke by telephone, your permission letter to parents should specifically state that student records will be examined. Then we'll place a copy of the parent's signed permission in their child's IEP folder.

Best of luck in the study preparation process. Keep me posted as to how I can facilitate your project.

Sincerely yours,



Julie Landeen, Ed.D.
Director of Special Education

JL:dp



Superintendent
 Dr. James L. West

Asst. Superintendent / Curriculum
 Milton Kendrick

Asst. Superintendent / Support Services
 Allan J. Kap

Business Administrator
 Larry L. Teach

January 22, 1992

Mr. Gary A. Mauk
 School Psychologist/Research Associate
 Department of Psychology
 Utah State University
 EDUC 432-A
 Logan, UT 84322-2810

Dear Mr. Mauk:

The Ogden City School District Research Committee has approved your research project. This letter will suffice as district clearance for your research activities.

Sincerely,

OGDEN CITY SCHOOL DISTRICT

C. W. Freston, Ph.D.
 Director of Special Education/Student Services

ksl

WEBER COUNTY SCHOOL DISTRICT

407

5320 South Adams Avenue
Ogden, Utah 84405-69-98
(801) 479-8889

JED M. WADDOUNS
Research / Testing /
Special Projects

March 6, 1992

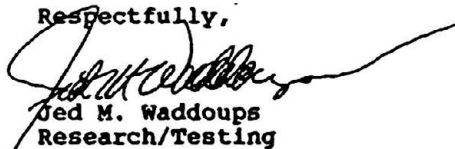
Mr Gary W. Mauk M.A.
Research Association
Department of Psychology
Utah State University
Logan, UT 84322-2810

Dear Mr. Mauk,

Weber School District grants permission for you to contact teachers, parents and students for volunteers to complete your research studies into "Control-Related Beliefs and Parental Perceptions of Behavior Disordered and Normal Early Adolescent Males."

If we can be of any assistance, please contact us at 476-7881. We request a copy of your results be made available to the district upon completion of your study.

Respectfully,



Jed M. Waddoups
Research/Testing

/mb



JAN 10 1992
JAN 10 1992

Learning comes first in....

Davis County Schools

45 East State Street, Farmington, Utah 84025

Board of Education

Lynn Summerhays, Pres.
Louenda Downs, Vice Pres.
Dr. Raymond G. Briscoe
Don Eastman
Robert Thurgood

Superintendent

Dr. Richard E. Kendall

Assistant Superintendents

Dr. Dean A. Penrod

Assistant Superintendents

Dr. Stephen F. Rosenkamp

Assistant Superintendents

Dr. Nancy Fleming

Area Director

Dr. W. Russell Olson

Area Director

Garvin Carlile

Business Administrator

Roger C. Glines

January 6, 1992

Richard N. Roberts, Ph.D.
Associate Professor
Department of Psychology
EDUC 432-A
Utah State University
Logan, UT 84322-2810

Dear Professor Roberts,

In review of the request for Gary Mauk to complete his research project with the help of Davis County Schools students, I would like for the following two conditions to be met before Gary enters into an agreement with any of our parents.

- 1) That the Department of Special Education receive a periodic debriefing of his research before permission is given to publish results. More specifically, we are interested in the progress of the research, and in the results of the data collected as it applies to Davis County School District.
- 2) That a copy of his final dissertation be given to the Davis County School District Special Education Department.

If these two conditions can be met, then we can agree for the research to begin as quickly as possible.

Sincerely,

Dr. Jack Dellastatious
Director of Special Education

cc: Dr. David Steele
Dr. Nancy Fleming

Granite School District
 340 East 3545 South — Salt Lake City, Utah 84115
Application for Permission to Conduct Research Study

(Note: A copy of the Research Proposal and a copy of the instrument must accompany each application.)

(PLEASE TYPE)

Permission will not be granted to conduct research after April 1.

Title: Control-related beliefs and parental perceptions of Date: 1/13/92
~~behavior-disordered and normal early adolescent males~~

Researcher: Gary W. Mauk, Dept. of Psychology, Utah State Univ., Logan, UT 84322-2810 750-1182
(Name) (Address) (Zip) (Telephone)

Sponsoring Institution: Utah State University Psychology Dr. Richard N. Roberts
(University/Organization) (Department) (Chairperson)

Anticipated dates district would be involved: March 1, 1992 through April 30, 1992

Reason for study (Master's Thesis, Doctoral Study, other): Doctoral study

The following Granite District personnel and facilities would be needed:

Number of Students	Grade	School	Teacher (if known)
60-120	7 & 8	Middle/Junior High Schools	

Teachers: 10 Counselors: 2 Principals: 10 Dist. Office Staff: 2 Patrons: 60-120

Time required of students: 60 to 75 minutes Time required of others: (parents 30 to 45 minutes)

Instruments to be used (attach copy):

Instrument: (attached) Administration Time: _____

Who will administer the instrument? Gary W. Mauk, certified school psychologist/research asst.

Will written parent permission be required? Yes No

If yes, state how it is to be obtained and attach copy of parent letter. (attached)

District facilities/equipment/supplies requested: Use of space in individual schools to conduct testing

Research Study Subject to Review by Appropriate Division

Assistant Superintendent
Office of Instructional Services:

Approved: [Signature]
Date: 3/3/92

Deputy Superintendent
Area Operations:

Approved: [Signature]
Date: 3/9/92

Final Approval — Superintendent: [Signature]

Date: 3/9/92

Project Number: 1991-92 21

Copy Distribution: White — Research Applicant Yellow — School Principal Pink — Superintendent's Office

Appendix C

Correspondence Sent to School Districts Regarding the Study

December 19, 1991

Dr. David Steele, Director
Research and Evaluation
Davis School District
Administration Building
45 East State Street
Farmington, Utah 84025

Dear Dr. Steele,

Mr. Gary W. Mauk, a doctoral student in the Department of Psychology at Utah State University, and I, the chair of his Graduate Supervisory Committee, were extremely pleased to receive your letter of November 25, 1991 in which you acknowledged your willingness as a District to assist us with research we are planning to conduct. In your letter you also stated that you were awaiting approval from Dr. Jack Dellastatious to access special education files. Since Mr. Mauk and I have not heard from you recently and since we still are very interested in Davis School District as a research site, I thought I would write to you regarding the status of our request.

As Mr. Mauk has already informed you, he is presently in the process of formulating his dissertation proposal in developmental psychology and we are searching for cooperating school districts from which to draw a sample of students. As the proposal is planned currently, the research will involve a comparison of early adolescent males [ages 11 through 13] with "externalizing" behavior disorders (e.g., conduct disorder, hyperactivity, aggressiveness) with "normal" early adolescent males (those not classified or being served as "behavior-disordered"). As you know so well, the population of "behavior disordered" students is one of, if not the most, difficult special education populations with which to work and ascertaining and understanding the psychological and social variables which may contribute to the problems of these students is imperative, if effective preventive and primary interventions are to be implemented.

In addition to collection of general demographic data (e.g., grade level, achievement data, group/individual I.Q. data (from cumulative files), SES), the dependent (grouping) variables will be group membership ("BD" versus "normal"). The independent (predictor) variables will be:

(1) **CONTROL-RELATED BELIEFS** of "BD" and "normal" early adolescent males in the areas of ---

- (a) **academic (school) ability** (e.g., "I can't seem to stop myself from doing poorly in school");
 - (b) **social ability** (e.g., "If somebody doesn't like me, I usually can't figure out why"); and
 - (c) **general ability** (e.g., "I can pretty much control what will happen in my and
- (2) **PATTERNS and ASPECTS OF PARENTING** (child self-report; parent self-report).

To ensure compliance with ethical standards for conducting research in educational settings, the following procedural safeguards will be implemented:

- (1) All parents/guardians of students who are selected for participation in the research project will be notified and will be sent a letter:
 - (a) explaining the study, including the purposes of the research and expected duration of subjects' participation;
 - (b) outlining plans to protect the identity of each participant;
 - (c) requesting their and their child's participation in the study;
 - (d) containing a statement that participation in the study by parents/guardians and children is voluntary and that the parent/guardian may discontinue participation at any time during the study;
- (2) Informed consent for student participation in the research will be obtained from parent(s)/guardian(s) prior to collection of information from selected students and selected students' school files;
- (3) Participating parent(s)/guardian(s) and students will be identified only by an anonymous number on each questionnaire; and
- (4) Parent/guardian and child data will be entered into a secured computer data file and will be linked by identification numbers only.

Mr. Mauk and I trust that you and other staff of the Davis School District will lend support to this research effort and we look forward to the opportunity to work with you. To this end, I would appreciate it greatly if you would send Mr. Mauk the necessary District research clearance paperwork as well as a letter of support for this project from you and/or other District staff, which Mr. Mauk and I could present to the other committee members and the University's Institutional Review Board.

Mr. Mauk and I will send you a copy of the revised dissertation proposal once it has been approved by Mr. Mauk's Graduate Supervisory Committee. Thank you for your time, assistance, and support and Mr. Mauk and I look forward to hearing from you soon. Please call Mr. Mauk (750-1182) or me (750-3346), if you have any questions. I appreciate any assistance you can provide in expediting this request.

Sincerely,

Richard N. Roberts, Ph.D.
Associate Professor

RNR/gm

cc: Dr. Jack Dellastatious

P.S. - Please send the necessary research clearance paperwork and any queries to Mr. Mauk at the following address:

Gary W. Mauk, M.A., CAGS
Research Associate
Department of Psychology
EDUC 432-A
Utah State University
Logan, UT 84322-2810

December 19, 1991

Mr. Kirk Allen, Director
Special Education Programs
Box Elder School District
Administration Building
203 West 200 South
Brigham City, Utah 84302

Dear Mr. Allen,

Mr. Gary W. Mauk, a doctoral student in the Department of Psychology at Utah State University and on whose Graduate Supervisory Committee I serve as chairperson, is presently in the process of formulating his dissertation proposal in developmental psychology and we are searching for cooperating school districts from which to draw a sample of students. The proposal will involve a comparison of early adolescent males [ages 11 through 13] with "externalizing" behavior disorders (e.g., conduct disorder, hyperactivity, aggressiveness) with "normal" early adolescent males (those not classified or being served as "behavior-disordered"). As you know so well, the population of "behavior disordered" students is one of, if not the most, difficult special education populations with which to work and ascertaining and understanding the psychological and social variables which may contribute to the problems of these students is imperative, if effective preventive and primary interventions are to be implemented.

As the proposal is planned currently, in addition to collection of general demographic data (e.g., grade level, achievement data, group/individual I.Q. data (from cumulative files), SES), the dependent (grouping) variables will be group membership ("BD" versus "normal"). The independent (predictor) variables will be:

- (1) **CONTROL-RELATED BELIEFS** of "BD" and "normal" early adolescent males in the areas of —
 - (a) **academic (school) ability** (e.g., "I can't seem to stop myself from doing poorly in school");
 - (b) **social ability** (e.g., "If somebody doesn't like me, I usually can't figure out why"); and
 - (c) **general ability** (e.g., "I can pretty much control what will happen in my and

(2) **PATTERNS and ASPECTS OF PARENTING** (child self-report; parent self-report).

To ensure compliance with ethical standards for conducting research in educational settings, the following procedural safeguards will be implemented:

- (1) All parents/guardians of students who are selected for participation in the research project will be notified and will be sent a letter:
 - (a) explaining the study, including the purposes of the research and expected duration of subjects' participation;
 - (b) outlining plans to protect the identity of each participant;
 - (c) requesting their and their child's participation in the study;
 - (d) containing a statement that participation in the study by parents/guardians and children is voluntary and that the parent/guardian may discontinue participation at any time during the study;
- (2) Informed consent for student participation in the research will be obtained from parent(s)/guardian(s) prior to collection of information from selected students and selected students' school files;
- (3) Participating parent(s)/guardian(s) and students will be identified only by an anonymous number on each questionnaire; and
- (4) Parent/guardian and child data will be entered into a secured computer data file and will be linked by identification numbers only.

Mr. Mauk and I trust that you will lend your support to this research effort and we look forward to the opportunity to work with you. To this end, I would appreciate it greatly if you would send Mr. Mauk the necessary District research clearance paperwork as well as a letter of support for this project from you and/or other District staff, which Mr. Mauk and I could present to the other committee members and the University's Institutional Review Board.

Mr. Mauk and I will send you a copy of the revised dissertation proposal once it has been approved by Mr. Mauk's Graduate Supervisory Committee. Thank you for your time, assistance, and support and Mr. Mauk and I look forward to hearing from you soon. Please call Mr. Mauk (750-1182) or me (750-3346), if you have any questions. I appreciate any assistance you can provide in expediting this request.

Sincerely,

Richard N. Roberts, Ph.D.
Associate Professor

RNR/gm

P.S. - Please send the necessary research clearance paperwork and any queries to Mr. Mauk at the following address:

Gary W. Mauk, M.A., CAGS
Research Associate
Department of Psychology
EDUC 432-A
Utah State University
Logan, UT 84322-2810

December 19, 1991

Dr. Cy Freston, Director
Special Education Programs
Ogden School District
Administration Building
2444 Adams Avenue
Ogden, Utah 84401

Dear Dr. Freston,

Mr. Gary W. Mauk, a doctoral student in the Department of Psychology at Utah State University and on whose Graduate Supervisory Committee I serve as chairperson, is presently in the process of formulating his dissertation proposal in developmental psychology and we are searching for cooperating school districts from which to draw a sample of students. The proposal will involve a comparison of early adolescent males [ages 11 through 13] with "externalizing" behavior disorders (e.g., conduct disorder, hyperactivity, aggressiveness) with "normal" early adolescent males (those not classified or being served as "behavior-disordered"). As you know so well, the population of "behavior-disordered" students is one of, if not the most, difficult special education populations with which to work and ascertaining and understanding the psychological and social variables which may contribute to the problems of these students is imperative, if effective preventive and primary interventions are to be implemented.

As the proposal is planned currently, in addition to collection of general demographic data (e.g., grade level, achievement data, group/individual I.Q. data (from cumulative files), SES), the dependent (grouping) variables will be group membership ("BD" versus "normal"). The independent (predictor) variables will be:

- (1) **CONTROL-RELATED BELIEFS** of "BD" and "normal" early adolescent males in the areas of —
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 - (b) **social ability** (e.g., "If somebody doesn't like me, I usually can't figure out why"); and
 - (c) **general ability** (e.g., "I can pretty much control what will happen in my and

(2) **PATTERNS and ASPECTS OF PARENTING** (child self-report; parent self-report).

To ensure compliance with ethical standards for conducting research in educational settings, the following procedural safeguards will be implemented:

- (1) All parents/guardians of students who are selected for participation in the research project will be notified and will be sent a letter:
 - (a) explaining the study, including the purposes of the research and expected duration of subjects' participation;
 - (b) outlining plans to protect the identity of each participant;
 - (c) requesting their and their child's participation in the study;
 - (d) containing a statement that participation in the study by parents/guardians and children is voluntary and that the parent/guardian may discontinue participation at any time during the study;
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- (3) Participating parent(s)/guardian(s) and students will be identified only by an anonymous number on each questionnaire; and
- (4) Parent/guardian and child data will be entered into a secured computer data file and will be linked by identification numbers only.

Mr. Mauk and I trust that you will lend your support to this research effort and we look forward to the opportunity to work with you. To this end, I would appreciate it greatly if you would send Mr. Mauk the necessary District research clearance paperwork as well as a letter of support for this project from you and/or other District staff, which Mr. Mauk and I could present to the other committee members and the University's Institutional Review Board.

Mr. Mauk and I will send you a copy of the revised dissertation proposal once it has been approved by Mr. Mauk's Graduate Supervisory Committee. Thank you for your time, assistance, and support and Mr. Mauk and I look forward to hearing from you soon. Please call Mr. Mauk (750-1182) or me (750-3346), if you have any questions. I appreciate any assistance you can provide in expediting this request.

Sincerely,

Richard N. Roberts, Ph.D.
Associate Professor

RNR/gm

P.S. - Please send the necessary research clearance paperwork and any queries to Mr. Mauk at the following address:

Gary W. Mauk, M.A., CAGS
Research Associate
Department of Psychology
EDUC 432-A
Utah State University
Logan, UT 84322-2810

December 19, 1991

Dr. Gayle Richards
Associate Director of Research
Granite School District
Administration Building
340 East 3545 South
Salt Lake City, Utah 84115

Dear Dr. Richards,

Mr. Gary W. Mauk, a doctoral student in the Department of Psychology at Utah State University and on whose Graduate Supervisory Committee I serve as chairperson, is presently in the process of formulating his dissertation proposal in developmental psychology and we are searching for cooperating school districts from which to draw a sample of students. The proposal will involve a comparison of early adolescent males [ages 11 through 13] with "externalizing" behavior disorders (e.g., conduct disorder, hyperactivity, aggressiveness) with "normal" early adolescent males (those not classified or being served as "behavior-disordered"). As you know so well, the population of "behavior-disordered" students is one of, if not the most, difficult special education populations with which to work and ascertaining and understanding the psychological and social variables which may contribute to the problems of these students is imperative, if effective preventive and primary interventions are to be implemented.

As the proposal is planned currently, in addition to collection of general demographic data (e.g., grade level, achievement data, group/individual I.Q. data (from cumulative files), SES), the dependent (grouping) variables will be group membership ("BD" versus "normal"). The independent (predictor) variables will be:

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 - (b) **social ability** (e.g., "If somebody doesn't like me, I usually can't figure out why"); and
 - (c) **general ability** (e.g., "I can pretty much control what will happen in my and

(2) **PATTERNS and ASPECTS OF PARENTING** (child self-report; parent self-report).

To ensure compliance with ethical standards for conducting research in educational settings, the following procedural safeguards will be implemented:

- (1) All parents/guardians of students who are selected for participation in the research project will be notified and will be sent a letter:
 - (a) explaining the study, including the purposes of the research and expected duration of subjects' participation;
 - (b) outlining plans to protect the identity of each participant;
 - (c) requesting their and their child's participation in the study;
 - (d) containing a statement that participation in the study by parents/guardians and children is voluntary and that the parent/guardian may discontinue participation at any time during the study;
- (2) Informed consent for student participation in the research will be obtained from parent(s)/guardian(s) prior to collection of information from selected students and selected students' school files;
- (3) Participating parent(s)/guardian(s) and students will be identified only by an anonymous number on each questionnaire; and
- (4) Parent/guardian and child data will be entered into a secured computer data file and will be linked by identification numbers only.

Mr. Mauk and I trust that you will lend your support to this research effort and we look forward to the opportunity to work with you. To this end, I would appreciate it greatly if you would send Mr. Mauk the necessary District research clearance paperwork as well as a letter of support for this project from you and/or other District staff, which Mr. Mauk and I could present to the other committee members and the University's Institutional Review Board.

Mr. Mauk and I will send you a copy of the revised dissertation proposal once it has been approved by Mr. Mauk's Graduate Supervisory Committee. Thank you for your time, assistance, and support and Mr. Mauk and I look forward to hearing from you soon. Please call Mr. Mauk (750-1182) or me (750-3346), if you have any questions. I appreciate any assistance you can provide in expediting this request.

Sincerely,

Richard N. Roberts, Ph.D.
Associate Professor

RNR/gm

P.S. - Please send the necessary research clearance paperwork and any queries to Mr. Mauk at the following address:

Gary W. Mauk, M.A., CAGS
Research Associate
Department of Psychology
EDUC 432-A
Utah State University
Logan, UT 84322-2810

December 19, 1991

Dr. Julie Landeen, Director
Special Education Programs
Cache School District
Administration Building
2063 North 1200 East
Logan, Utah 84321

Dear Dr. Landeen,

Enclosed please find the requisite research clearance paperwork for Mr. Gary W. Mauk's doctoral dissertation study in the Department of Psychology at Utah State University. As the chair of Mr. Mauk's Graduate Supervisory Committee (GSC), I trust that you will lend your support to this research effort and I look forward to the opportunity to work with you.

As the proposal currently stands, pending formal approval by the entire GSC, the research will involve a comparison of early adolescent males [ages 11 through 13] with "externalizing" behavior disorders (e.g., conduct disorder, hyperactivity, aggressiveness) with "normal" early adolescent males (those not classified or being served as "behavior-disordered"). In addition to collection of general demographic data (e.g., grade level, achievement data, group/individual I.Q. data (from cumulative files), SES), the dependent (grouping) variables will be group membership ("BD" versus "normal"). The independent (predictor) variables will be:

- (1) **CONTROL-RELATED BELIEFS** of "BD" and "normal" early adolescent males in the areas of —
 - (a) **academic (school) ability** (e.g., "I can't seem to stop myself from doing poorly in school");
 - (b) **social ability** (e.g., "If somebody doesn't like me, I usually can't figure out why"); and
 - (c) **general ability** (e.g., "I can pretty much control what will happen in my and
- (2) **PATTERNS and ASPECTS OF PARENTING** (child self-report; parent self-report).

To ensure compliance with ethical standards for conducting research in educational settings, the following procedural safeguards will be implemented:

- (1) All parents/guardians of students who are selected for participation in the research project will be notified and will be sent a letter:
 - (a) explaining the study, including the purposes of the research and expected duration of subjects' participation;
 - (b) outlining plans to protect the identity of each participant;
 - (c) requesting their and their child's participation in the study;
 - (d) containing a statement that participation in the study by parents/guardians and children is voluntary and that the parent/guardian may discontinue participation at any time during the study;
- (2) Informed consent for student participation in the research will be obtained from parent(s)/guardian(s) prior to collection of information from selected students and selected students' school files;
- (3) Participating parent(s)/guardian(s) and students will be identified only by an anonymous number on each questionnaire; and
- (4) Parent/guardian and child data will be entered into a secured computer data file and will be linked by identification numbers only.

If you grant permission to conduct this research in Cache School District, I would appreciate it greatly if you would send Mr. Mauk a letter of support for this project from you and/or other District staff, which Mr. Mauk and I could present to the other committee members and the University's Institutional Review Board.

Mr. Mauk and I will send you a copy of the revised dissertation proposal once it has been approved by Mr. Mauk's Graduate Supervisory Committee. Thank you for your time, assistance, and support and Mr. Mauk and I look forward to hearing from you soon. Please call Mr. Mauk (750-1182) or me (750-3346), if you have any questions. I appreciate any assistance you can provide in expediting this request.

Sincerely,

Richard N. Roberts, Ph.D.
Associate Professor

RNR/gm

P.S. - Please direct any queries and further paperwork to Mr. Mauk at the following address:

Gary W. Mauk, M.A., CAGS
Research Associate
Department of Psychology
EDUC 432-A
Utah State University
Logan, UT 84322-2810

December 19, 1991

Ms. Ann Miller, Director
Special Education Programs
Weber School District
Administration Building
5320 South Adams Avenue
Ogden, Utah 84405

Dear Ms. Miller,

Enclosed please find the requisite research clearance paperwork for Mr. Gary W. Mauk's doctoral dissertation study in the Department of Psychology at Utah State University. As the chair of Mr. Mauk's Graduate Supervisory Committee (GSC), I trust that you will lend your support to this research effort and I look forward to the opportunity to work with you.

As the proposal currently stands, pending formal approval by the entire GSC, the research will involve a comparison of early adolescent males [ages 11 through 13] with "externalizing" behavior disorders (e.g., conduct disorder, hyperactivity, aggressiveness) with "normal" early adolescent males (those not classified or being served as "behavior-disordered"). In addition to collection of general demographic data (e.g., grade level, achievement data, group/individual I.Q. data (from cumulative files), SES), the dependent (grouping) variables will be group membership ("BD" versus "normal"). The independent (predictor) variables will be:

- (1) **CONTROL-RELATED BELIEFS** of "BD" and "normal" early adolescent males in the areas of --
 - (a) **academic (school) ability** (e.g., "I can't seem to stop myself from doing poorly in school");
 - (b) **social ability** (e.g., "If somebody doesn't like me, I usually can't figure out why"); and
 - (c) **general ability** (e.g., "I can pretty much control what will happen in my and

(2) **PATTERNS and ASPECTS OF PARENTING** (child self-report; parent self-report).

To ensure compliance with ethical standards for conducting research in educational settings, the following procedural safeguards will be implemented:

- (1) All parents/guardians of students who are selected for participation in the research project will be notified and will be sent a letter:
 - (a) explaining the study, including the purposes of the research and expected duration of subjects' participation;
 - (b) outlining plans to protect the identity of each participant;
 - (c) requesting their and their child's participation in the study;
 - (d) containing a statement that participation in the study by parents/guardians and children is voluntary and that the parent/guardian may discontinue participation at any time during the study;
- (2) Informed consent for student participation in the research will be obtained from parent(s)/guardian(s) prior to collection of information from selected students and selected students' school files;
- (3) Participating parent(s)/guardian(s) and students will be identified only by an anonymous number on each questionnaire; and
- (4) Parent/guardian and child data will be entered into a secured computer data file and will be linked by identification numbers only.

If you grant permission to conduct this research in Weber School District, I would appreciate it greatly if you would send Mr. Mauk a letter of support for this project from you and/or other District staff, which Mr. Mauk and I could present to the other committee members and the University's Institutional Review Board.

Mr. Mauk and I will send you a copy of the revised dissertation proposal once it has been approved by Mr. Mauk's Graduate Supervisory Committee. Thank you for your time, assistance, and support and Mr. Mauk and I look forward to hearing from you soon. Please call Mr. Mauk (750-1182) or me (750-3346), if you have any questions. I appreciate any assistance you can provide in expediting this request.

Sincerely,

Richard N. Roberts, Ph.D.
Associate Professor

RNR/gm

P.S. - Please direct any queries and further paperwork to Mr. Mauk at the following address:

Gary W. Mauk, M.A., CAGS
Research Associate
Department of Psychology
EDUC 432-A
Utah State University
Logan, UT 84322-2810

December 19, 1991

Dr. Rafael A. Lewy, Director
Research Projects/Supervision
Salt Lake School District
Administration Building
440 East First South
Salt Lake City, UT 84111

Dear Dr. Lewy,

Enclosed please find the requisite research clearance paperwork for Mr. Gary W. Mauk's doctoral dissertation study in the Department of Psychology at Utah State University. As the chair of Mr. Mauk's Graduate Supervisory Committee (GSC), I trust that you will lend your support to this research effort and I look forward to the opportunity to work with you.

As the proposal currently stands, pending formal approval by the entire GSC, the research will involve a comparison of early adolescent males [ages 11 through 13] with "externalizing" behavior disorders (e.g., conduct disorder, hyperactivity, aggressiveness) with "normal" early adolescent males (those not classified or being served as "behavior-disordered"). In addition to collection of general demographic data (e.g., grade level, achievement data, group/individual I.Q. data (from cumulative files), SES), the dependent (grouping) variables will be group membership ("BD" versus "normal"). The independent (predictor) variables will be:

- (1) **CONTROL-RELATED BELIEFS** of "BD" and "normal" early adolescent males in the areas of —
 - (a) **academic (school) ability** (e.g., "I can't seem to stop myself from doing poorly in school");
 - (b) **social ability** (e.g., "If somebody doesn't like me, I usually can't figure out why"); and
 - (c) **general ability** (e.g., "I can pretty much control what will happen in my and
- (2) **PATTERNS and ASPECTS OF PARENTING** (child self-report; parent self-report).

To ensure compliance with ethical standards for conducting research in educational settings, the following procedural safeguards will be implemented:

- (1) All parents/guardians of students who are selected for participation in the research project will be notified and will be sent a letter:
 - (a) explaining the study, including the purposes of the research and expected duration of subjects' participation;
 - (b) outlining plans to protect the identity of each participant;
 - (c) requesting their and their child's participation in the study;
 - (d) containing a statement that participation in the study by parents/guardians and children is voluntary and that the parent/guardian may discontinue participation at any time during the study;
- (2) Informed consent for student participation in the research will be obtained from parent(s)/guardian(s) prior to collection of information from selected students and selected students' school files;
- (3) Participating parent(s)/guardian(s) and students will be identified only by an anonymous number on each questionnaire; and
- (4) Parent/guardian and child data will be entered into a secured computer data file and will be linked by identification numbers only.

If you grant permission to conduct this research in Salt Lake City School District, I would appreciate it greatly if you would send Mr. Mauk a letter of support for this project from you and/or other District staff, which Mr. Mauk and I could present to the other committee members and the University's Institutional Review Board.

Mr. Mauk and I will send you a copy of the revised dissertation proposal once it has been approved by Mr. Mauk's Graduate Supervisory Committee, hopefully during January, 1992. Thank you for your time, assistance, and support and Mr. Mauk and I look forward to hearing from you soon. Please call Mr. Mauk (750-1182) or me (750-3346), if you have any questions. I appreciate any assistance you can provide in expediting this request.

Sincerely,

Richard N. Roberts, Ph.D.
Associate Professor

RNR/gm

P.S. - Please direct any queries and further paperwork to Mr. Mauk at the following address:

Gary W. Mauk, M.A., CAGS
Research Associate
Department of Psychology
EDUC 432-A
Utah State University
Logan, UT 84322-2810

November 9, 1992

Dr. Jack Dellastatious, Director
Special Education Programs
Davis County School District
Administration Building
45 East State Street
Farmington, UT 84025

Dear Dr. Dellastatious,

As per the research agreement I made with you as a representative of Davis County School District and agreements made with representatives of other participating school districts during the Spring of 1992, the following is submitted as a briefing on the progress of my doctoral dissertation research in developmental psychology at Utah State University:

(1) I have completed collection of all of the student data (self-report and file information) and parent data (self-report and demographic information) for the entire project, consisting of a total of 120 male students (those with primarily externalizing behavior disorders and those with no identified disabilities) and their families in several school districts. As agreed: (a) all identifying information of students and their families has been destroyed (including, if any, lists of student names, schools, grades, parent names, addresses, and student and parent/guardian names on individual test materials), thus eliminating the possibility of linking any data to individual students and families; and (b) all of the data from the school districts that participated in the project have been pooled, effectively eradicating any links to specific school districts and schools. In sum, all student and parent data, as per our research agreement, are only accessible and traceable by ID number and have been rendered completely anonymous -- in essence, individual student data cases have been rendered "personal identity neutral."

(2) I am in the process of preparing the data for computer file entry and subsequent analysis, thus I have no preliminary results from the study; and

(3) Finally, as agreed, I plan to provide (a) a copy of my final dissertation to the Davis County School District Special Education Department and (b) any data-based, general recommendations to you, as they would benefit the special education programs of Davis County School District.

During my research activities in the Davis County School District, all of the staff at various schools, from secretaries to principals, and personnel within the Davis County School District central administration were remarkably cooperative and facilitated every facet of the research. On a personal note, I want you to know that I immensely appreciate your support and professional consideration during this project. Thank you for all of your support and assistance with this research.

Sincerely,

Gary W. Mauk, M.A., CAGS

November 9, 1992

Mr. Kirk Allen, Director
Special Education Programs
Box Elder School District
203 West 200 South
Brigham City, UT 84302

Dear Mr. Allen,

As per the research agreement I made with you as a representative of Box Elder School District and agreements made with representatives of other participating school districts and students' parents/guardians during the Spring of 1992, the following is submitted as a briefing on the progress of my doctoral dissertation research in developmental psychology at Utah State University:

(1) I have completed collection of all of the student data (self-report and file information) and parent data (self-report and demographic information) for the entire project, consisting of a total of 120 male students (those with primarily externalizing behavior disorders and those with no identified disabilities) and their families in several school districts. As agreed: (a) all identifying information of students and their families has been destroyed (including, if any, lists of student names, schools, grades, parent names, addresses, and student and parent/guardian names on individual test materials), thus eliminating the possibility of linking any data to individual students and families; and (b) all of the data from the school districts that participated in the project have been pooled, effectively eradicating any links to specific school districts and schools. In sum, all student and parent data, as per our research agreement, are only accessible and traceable by ID number and have been rendered completely anonymous — in essence, individual student data cases have been rendered "personal identity neutral;"

(2) I am in the process of preparing the data for computer file entry and subsequent analysis, thus I have no preliminary results from the study; and

(3) Finally, as agreed, I plan to provide (a) a copy of my final dissertation to the Box Elder School District Special Education Department and (b) any data-based, general recommendations to you, as they would benefit the special education programs of Box Elder School District.

During my research activities in the Box Elder School District, all of the staff at various schools, from secretaries to principals, and personnel within the Box Elder School District central administration were remarkably cooperative and facilitated every facet of the research. On a personal note, I want you to know that I immensely appreciate your support and professional consideration during this project. Thank you for all of your support and assistance with this research.

Sincerely,

Gary W. Mauk, M.A., CAGS

November 9, 1992

Ms. Ann Miller, Director
Special Education Programs
Weber School District
5320 South Adams Avenue
Ogden, UT 84405

Dear Ms. Miller,

As per the research agreement I made with you as a representative of Weber School District and agreements made with representatives of other participating school districts and students' parents/guardians during the Spring of 1992, the following is submitted as a briefing on the progress of my doctoral dissertation research in developmental psychology at Utah State University:

(1) I have completed collection of all of the student data (self-report and file information) and parent data (self-report and demographic information) for the entire project, consisting of a total of 120 male students (those with primarily externalizing behavior disorders and those with no identified disabilities) and their families in several school districts. As agreed: (a) all identifying information of students and their families has been destroyed (including, if any, lists of student names, schools, grades, parent names, addresses, and student and parent/guardian names on individual test materials), thus eliminating the possibility of linking any data to individual students and families; and (b) all of the data from the school districts that participated in the project have been pooled, effectively eradicating any links to specific school districts and schools. In sum, all student and parent data, as per our research agreement, are only accessible and traceable by ID number and have been rendered completely anonymous — in essence, individual student data cases have been rendered "personal identity neutral;"

(2) I am in the process of preparing the data for computer file entry and subsequent analysis, thus I have no preliminary results from the study; and

(3) Finally, as agreed, I plan to provide (a) a copy of my final dissertation to the Weber School District Special Education Department and (b) any data-based, general recommendations to you, as they would benefit the special education programs of Weber School District.

During my research activities in the Weber School District, all of the staff at various schools, from secretaries to principals, and personnel within the Weber School District central administration were remarkably cooperative and facilitated every facet of the research. On a personal note, I want you to know that I immensely appreciate your support and professional consideration during this project. Thank you for all of your support and assistance with this research.

Sincerely,

Gary W. Mauk, M.A., CAGS

November 9, 1992

Dr. Cy Freston, Director
Special Education Programs
Ogden School District
2444 Adams Avenue
Ogden, UT 84401

Dear Dr. Freston,

As per the research agreement I made with you as a representative of Ogden School District and agreements made with representatives of other participating school districts and students' parents/guardians during the Spring of 1992, the following is submitted as a briefing on the progress of my doctoral dissertation research in developmental psychology at Utah State University:

(1) I have completed collection of all of the student data (self-report and file information) and parent data (self-report and demographic information) for the entire project, consisting of a total of 120 male students (those with primarily externalizing behavior disorders and those with no identified disabilities) and their families in several school districts. As agreed: (a) all identifying information of students and their families has been destroyed (including, if any, lists of student names, schools, grades, parent names, addresses, and student and parent/guardian names on individual test materials), thus eliminating the possibility of linking any data to individual students and families; and (b) all of the data from the school districts that participated in the project have been pooled, effectively eradicating any links to specific school districts and schools. In sum, all student and parent data, as per our research agreement, are only accessible and traceable by ID number and have been rendered completely anonymous — in essence, individual student data cases have been rendered "personal identity neutral;"

(2) I am in the process of preparing the data for computer file entry and subsequent analysis, thus I have no preliminary results from the study; and

(3) Finally, as agreed, I plan to provide (a) a copy of my final dissertation to the Ogden School District Special Education Department and (b) any data-based, general recommendations to you, as they would benefit the special education programs of Ogden School District.

During my research activities in the Ogden School District, all of the staff at various schools, from secretaries to principals, and personnel within the Ogden School District central administration were remarkably cooperative and facilitated every facet of the research. On a personal note, I want you to know that I immensely appreciate your support and professional consideration during this project. Thank you for all of your support and assistance with this research.

Sincerely,

Gary W. Mauk, M.A., CAGS

November 9, 1992

Dr. Ginger Rhode
Assoc. Director of Self-Contained/YIC
Granite School District
340 East 3545 South
Salt Lake City, UT 84115

Dear Dr. Rhode,

As per the research agreement I made with you as a representative of Granite School District and agreements made with representatives of other participating school districts and students' parents/guardians during the Spring of 1992, the following is submitted as a briefing on the progress of my doctoral dissertation research in developmental psychology at Utah State University:

(1) I have completed collection of all of the student data (self-report and file information) and parent data (self-report and demographic information) for the entire project, consisting of a total of 120 male students (those with primarily externalizing behavior disorders and those with no identified disabilities) and their families in several school districts. As agreed: (a) all identifying information of students and their families has been destroyed (including, if any, lists of student names, schools, grades, parent names, addresses, and student and parent/guardian names on individual test materials), thus eliminating the possibility of linking any data to individual students and families; and (b) all of the data from the school districts that participated in the project have been pooled, effectively eradicating any links to specific school districts and schools. In sum, all student and parent data, as per our research agreement, are only accessible and traceable by ID number and have been rendered completely anonymous — in essence, individual student data cases have been rendered "personal identity neutral;"

(2) I am in the process of preparing the data for computer file entry and subsequent analysis, thus I have no preliminary results from the study; and

(3) Finally, as agreed, I plan to provide (a) a copy of my final dissertation to the Granite School District Special Education Department and (b) any data-based, general recommendations to you, as they would benefit the special education programs of Granite School District.

During my research activities in the Granite School District, all of the staff at various schools, from secretaries to principals, and personnel within the Granite School District central administration were remarkably cooperative and facilitated every facet of the research. On a personal note, I want you to know that I immensely appreciate your support and professional consideration during this project. Thank you for all of your support and assistance with this research.

Sincerely,

Gary W. Mauk, M.A., CAGS

November 9, 1992

Dr. Julie Landeen, Director
Special Education Programs
Cache School District
2063 North 1200 East
Logan, UT 84321

Dear Dr. Landeen,

As per the research agreement I made with you as a representative of Cache School District and agreements made with representatives of other participating school districts and students' parents/guardians during the Spring of 1992, the following is submitted as a briefing on the progress of my doctoral dissertation research in developmental psychology at Utah State University:

(1) I have completed collection of all of the student data (self-report and file information) and parent data (self-report and demographic information) for the entire project, consisting of a total of 120 male students (those with primarily externalizing behavior disorders and those with no identified disabilities) and their families in several school districts. As agreed: (a) all identifying information of students and their families has been destroyed (including, if any, lists of student names, schools, grades, parent names, addresses, and student and parent/guardian names on individual test materials), thus eliminating the possibility of linking any data to individual students and families; and (b) all of the data from the school districts that participated in the project have been pooled, effectively eradicating any links to specific school districts and schools. In sum, all student and parent data, as per our research agreement, are only accessible and traceable by ID number and have been rendered completely anonymous -- in essence, individual student data cases have been rendered "personal identity neutral;"

(2) I am in the process of preparing the data for computer file entry and subsequent analysis, thus I have no preliminary results from the study; and

(3) Finally, as agreed, I plan to provide (a) a copy of my final dissertation to the Cache School District Special Education Department and (b) any data-based, general recommendations to you, as they would benefit the special education programs of Cache School District.

During my research activities in the Cache School District, all of the staff at various schools, from secretaries to principals, and personnel within the Cache School District central administration were remarkably cooperative and facilitated every facet of the research. On a personal note, I want you to know that I immensely appreciate your support and professional consideration during this project. Thank you for all of your support and assistance with this research.

Sincerely,

Gary W. Mauk, M.A., CAGS

November 9, 1992

Dr. Rafael A. Lewy, Director
Research Projects/Supervision
Salt Lake School District
440 East First South
Salt Lake City, UT 84111

Dear Dr. Lewy,

As per the research agreement I made with you as a representative of Salt Lake City School District and agreements made with representatives of other participating school districts and students' parents/guardians during the Spring of 1992, the following is submitted as a briefing on the progress of my doctoral dissertation research in developmental psychology at Utah State University:

(1) I have completed collection of all of the student data (self-report and file information) and parent data (self-report and demographic information) for the entire project, consisting of a total of 120 male students (those with primarily externalizing behavior disorders and those with no identified disabilities) and their families in several school districts. As agreed: (a) all identifying information of students and their families has been destroyed (including, if any, lists of student names, schools, grades, parent names, addresses, and student and parent/guardian names on individual test materials), thus eliminating the possibility of linking any data to individual students and families; and (b) all of the data from the school districts that participated in the project have been pooled, effectively eradicating any links to specific school districts and schools. In sum, all student and parent data, as per our research agreement, are only accessible and traceable by ID number and have been rendered completely anonymous — in essence, individual student data cases have been rendered "personal identity neutral;"

(2) I am in the process of preparing the data for computer file entry and subsequent analysis, thus I have no preliminary results from the study; and

(3) Finally, as agreed, I plan to provide (a) a copy of my final dissertation to the Salt Lake City School District Special Education Department and (b) any data-based, general recommendations to you, as they would benefit the special education programs of Salt Lake City School District.

During my research activities in the Salt Lake City School District, all of the staff at various schools, from secretaries to principals, and personnel within the Salt Lake City School District central administration were remarkably cooperative and facilitated every facet of the research. On a personal note, I want you to know that I immensely appreciate your support and professional consideration during this project. Thank you for all of your support and assistance with this research.

Sincerely,

Gary W. Mauk, M.A., CAGS

January 28, 1993

Dr. Steven O. Laing, Superintendent
Box Elder School District
Administration Building
230 West 200 South
Brigham City, UT 84302

Dear Dr. Laing,

I hope that this new year finds you and your family well. The principal purpose of this letter is to express my sincere personal and professional appreciation for all of the assistance I was provided by your staff during the entire data collection process for my doctoral dissertation in developmental psychology at Utah State University (USU).

To summarize briefly, the research involved a comparison of early adolescent males [ages 12 and 13] with "externalizing" behavior disorders (e.g., conduct disorder, hyperactivity, aggressiveness) with "normal" early adolescent males (those not classified or being served as "behavior-disordered"). As you know so well, the population of "behavior-disordered" students is probably is one of the most difficult special education population with which to work, and attempts to ascertain and to understand the psychological and social variables which may contribute to the problems of these students are imperative, if effective preventive and primary interventions are to be implemented successfully.

In addition to collection of general demographic data (e.g., achievement data, group/individual ability data (from cumulative files), SES) for the research, the dependent (grouping) variables were group membership ("BD" versus "normal") and age/grade. The independent (predictor) variables in the research were:

- (1) CONTROL-RELATED BELIEFS in the areas of —
 - (a) academic (school) ability (e.g., "I can't seem to stop myself from doing poorly in school");
 - (b) social ability (e.g., "If somebody doesn't like me, I usually can't figure out why");
 - (c) general ability (e.g., "I can pretty much control what will happen in my life"); and
- (2) ASPECTS OF PARENTING
 - (a) parental bonding (reported for mother and/or father via child self-report; e.g., "Speaks to me in a warm and friendly voice"); and
 - (b) parent satisfaction (reported by mother and/or father via self-report; e.g., "I am delighted with the relationship I have with my child").

Although many individuals from Box Elder School District were invaluable (e.g., individual school principals, secretaries, special education teachers, regular education teachers, etc.), I would like to commend, in particular, Mr. Kirk Allen, Director of Special Education. I sent him a personal letter in early November, 1992 expressing my appreciation. I have enclosed some of the pertinent text from that letter for your information, (a) referencing the research agreements with Box Elder School District, other school districts, individual parents/guardians, and the USU Institutional Review Board (IRB; see enclosed copy of IRB form), and (b) assuring the perpetual confidential disposition and "personal identity neutral" nature of all collected student and parent data from Box Elder School District.

Again, I thank you sincerely for your support and cooperation, and the support, cooperation, and assistance of your staff. Looking forward to working with you and your district again, I remain

Respectfully,

Gary W. Mauk

:enclosures

January 28, 1993

Dr. Larry N. Jensen, Superintendent
Cache School District
Administration Building
2063 North 1200 East
Logan, UT 84321

Dear Dr. Jensen,

I hope that this new year finds you and your family well. The principal purpose of this letter is to express my sincere personal and professional appreciation for all of the assistance I was provided by your staff during the entire data collection process (Spring-Summer, 1992) for my doctoral dissertation in developmental psychology at Utah State University (USU).

To summarize briefly, the research involved a comparison of early adolescent males [ages 12 and 13] with "externalizing" behavior disorders (e.g., conduct disorder, hyperactivity, aggressiveness) with "normal" early adolescent males (those not classified or being served as "behavior-disordered"). As you know so well, the population of "behavior-disordered" students is probably the most difficult special education population with which to work, and attempts to ascertain and to understand the psychological and social variables which may contribute to the problems of these students are imperative, if effective preventive and primary interventions are to be implemented successfully.

In addition to collection of general demographic data (e.g., achievement data, group/individual ability data (from cumulative files), SES) for the research, the dependent (grouping) variables were group membership ("BD" versus "normal") and age/grade. The independent (predictor) variables in the research were:

- (1) CONTROL-RELATED BELIEFS in the areas of —
 - (a) academic (school) ability (e.g., "I can't seem to stop myself from doing poorly in school");
 - (b) social ability (e.g., "If somebody doesn't like me, I usually can't figure out why");
 - (c) general ability (e.g., "I can pretty much control what will happen in my life"); and

(2) ASPECTS OF PARENTING

- (a) parental bonding (reported for mother and/or father via child self-report; e.g., "Speaks to me in a warm and friendly voice"); and
- (b) parent satisfaction (reported by mother and/or father via self-report; e.g., "I am delighted with the relationship I have with my child").

Although many individuals from Cache School District were invaluable (e.g., individual school principals, secretaries, special education and regular education teachers), I would like to commend, in particular, Dr. Julie Landeen, Director of Special Education. I sent her a personal letter in early November, 1992 expressing my appreciation. I have enclosed some of the pertinent text from that letter for your information, (a) referencing the research agreements with Cache School District, other school districts, individual parents/guardians, and the USU Institutional Review Board (IRB; see enclosed copy of IRB form), and (b) assuring the perpetual confidential disposition and "personal identity neutral" nature of all collected student and parent data from Cache School District.

Again, I thank you sincerely for your support and cooperation, and the support, cooperation, and assistance of your staff. Looking forward to working with you and your district again, I remain

Respectfully,

Gary W. Mauk

:enclosures

January 28, 1993

Dr. Richard Kendell, Superintendent
Davis School District
Administration Building
45 East State Street
Farmington, UT 84025

Dear Dr. Kendell,

I hope that this new year finds you and your family well. The principal purpose of this letter is to express my sincere personal and professional appreciation for all of the assistance I was provided by your staff during the entire data collection process for my doctoral dissertation in developmental psychology at Utah State University (USU).

To summarize briefly, the research involved a comparison of early adolescent males [ages 12 and 13] with "externalizing" behavior disorders (e.g., conduct disorder, hyperactivity, aggressiveness) with "normal" early adolescent males (those not classified or being served as "behavior-disordered"). As you know so well, the population of "behavior disordered" students is probably the most difficult special education population with which to work, and attempts to ascertain and to understand the psychological and social variables which may contribute to the problems of these students are imperative, if effective preventive and primary interventions are to be implemented successfully.

In addition to collection of general demographic data (e.g., achievement data, group/individual ability data (from cumulative files), SES) for the research, the dependent (grouping) variables were group membership ("BD" versus "normal") and age/grade. The independent (predictor) variables in the research were:

- (1) CONTROL-RELATED BELIEFS in the areas of —
 - (a) academic (school) ability (e.g., "I can't seem to stop myself from doing poorly in school");
 - (b) social ability (e.g., "If somebody doesn't like me, I usually can't figure out why");
 - (c) general ability (e.g., "I can pretty much control what will happen in my life"); and

(2) ASPECTS OF PARENTING

- (a) parental bonding (reported for mother and/or father via child self-report; e.g., "Speaks to me in a warm and friendly voice"); and
- (b) parent satisfaction (reported by mother and/or father via self-report; e.g., "I am delighted with the relationship I have with my child").

Although many individuals from Davis School District were invaluable (e.g., individual school principals, secretaries, special education teachers, regular education teachers, etc.), I would like to commend, in particular, Dr. Jack Dellastatious, Director of Special Education. I sent him a personal letter in early November, 1992 expressing my appreciation. I have enclosed some of the pertinent text from that letter for your information, (a) referencing the research agreements with Davis School District, other school districts, individual parents/guardians, and the USU Institutional Review Board (IRB; see enclosed copy of IRB form), and (b) assuring the perpetual confidential disposition and "personal identity neutral" nature of all collected student and parent data from Davis School District.

Again, I thank you sincerely for your support and cooperation, and the support, cooperation, and assistance of your staff. Looking forward to working with you and your district again, I remain

Respectfully,

Gary W. Mauk

:enclosures

January 28, 1993

Dr. Loren G. Burton, Superintendent
Granite School District
Administration Building
340 East 3545 South
Salt Lake City, UT 84115

Dear Dr. Burton,

I hope that this new year finds you and your family well. The principal purpose of this letter is to express my sincere personal and professional appreciation for all of the assistance I was provided by your staff during the entire data collection process for my doctoral dissertation in developmental psychology at Utah State University (USU).

To summarize briefly, the research involved a comparison of early adolescent males [ages 12 and 13] with "externalizing" behavior disorders (e.g., conduct disorder, hyperactivity, aggressiveness) with "normal" early adolescent males (those not classified or being served as "behavior-disordered"). As you know so well, the population of "behavior disordered" students is probably the most difficult special education population with which to work, and attempts to ascertain and to understand the psychological and social variables which may contribute to the problems of these students are imperative, if effective preventive and primary interventions are to be implemented successfully.

In addition to collection of general demographic data (e.g., achievement data, group/individual ability data (from cumulative files), SES) for the research, the dependent (grouping) variables were group membership ("BD" versus "normal") and age/grade. The independent (predictor) variables in the research were:

- (1) CONTROL-RELATED BELIEFS in the areas of —
 - (a) academic (school) ability (e.g., "I can't seem to stop myself from doing poorly in school");
 - (b) social ability (e.g., "If somebody doesn't like me, I usually can't figure out why");
 - (c) general ability (e.g., "I can pretty much control what will happen in my life"); and

(2) ASPECTS OF PARENTING

- (a) parental bonding (reported for mother and/or father via child self-report; e.g., "Speaks to me in a warm and friendly voice"); and
- (b) parent satisfaction (reported by mother and/or father via self-report; e.g., "I am delighted with the relationship I have with my child").

Although many individuals from Granite School District were invaluable (e.g., individual school principals, secretaries, special education teachers, regular education teachers, etc.), I would like to commend, in particular, Dr. Virginia Rhode, Associate Director of Self-Contained/YIC. I sent her a personal letter in early November, 1992 expressing my appreciation. I have enclosed some of the pertinent text from that letter for your information, (a) referencing the research agreements with Granite School District, other school districts, individual parents/guardians, and the USU Institutional Review Board (IRB; see enclosed copy of IRB form), and (b) assuring the perpetual confidential disposition and "personal identity neutral" nature of all collected student and parent data from Granite School District.

Again, I thank you sincerely for your support and cooperation, and the support, cooperation, and assistance of your staff. Looking forward to working with you and your district again, I remain

Respectfully,

Gary W. Mauk

:enclosures

January 28, 1993

Dr. James L. West, Superintendent
Ogden City School District
Administration Building
2444 Adams Avenue
Ogden, UT 84401

Dear Dr. West,

I hope that this new year finds you and your family well. The principal purpose of this letter is to express my sincere personal and professional appreciation for all of the assistance I was provided by your staff during the entire data collection process for my doctoral dissertation in developmental psychology at Utah State University (USU).

To summarize briefly, the research involved a comparison of early adolescent males [ages 12 and 13] with "externalizing" behavior disorders (e.g., conduct disorder, hyperactivity, aggressiveness) with "normal" early adolescent males (those not classified or being served as "behavior-disordered"). As you know so well, the population of "behavior-disordered" students is probably the most difficult special education population with which to work, and attempts to ascertain and to understand the psychological and social variables which may contribute to the problems of these students are imperative, if effective preventive and primary interventions are to be implemented successfully.

In addition to collection of general demographic data (e.g., achievement data, group/individual ability data (from cumulative files), SES) for the research, the dependent (grouping) variables were group membership ("BD" versus "normal") and age/grade. The independent (predictor) variables in the research were:

- (1) CONTROL-RELATED BELIEFS in the areas of —
 - (a) academic (school) ability (e.g., "I can't seem to stop myself from doing poorly in school");
 - (b) social ability (e.g., "If somebody doesn't like me, I usually can't figure out why");
 - (c) general ability (e.g., "I can pretty much control what will happen in my life"); and

(2) ASPECTS OF PARENTING

- (a) parental bonding (reported for mother and/or father via child self-report; e.g., "Speaks to me in a warm and friendly voice"); and
- (b) parent satisfaction (reported by mother and/or father via self-report; e.g., "I am delighted with the relationship I have with my child").

Although many individuals from Ogden City School District were invaluable (e.g., individual school principals, secretaries, special education teachers, regular education teachers, etc.), I would like to commend, in particular, Dr. Cy Freston, Director of Special Education. I sent him a personal letter in early November, 1992 expressing my appreciation. I have enclosed some of the pertinent text from that letter for your information, (a) referencing the research agreements with Ogden City School District, other school districts, individual parents/guardians, and the USU Institutional Review Board (IRB; see enclosed copy of IRB form), and (b) assuring the perpetual confidential disposition and "personal identity neutral" nature of all collected student and parent data from Ogden City School District.

Again, I thank you sincerely for your support and cooperation, and the support, cooperation, and assistance of your staff. Looking forward to working with you and your district again, I remain

Respectfully,

Gary W. Mauk

:enclosures

January 28, 1993

Dr. John W. Bennion, Superintendent
Salt Lake School District
Administration Building
440 East 100 South
Salt Lake City, UT 84111-1898

Dear Dr. Bennion,

I hope that this new year finds you and your family well. The principal purpose of this letter is to express my sincere personal and professional appreciation for all of the assistance I was provided by your staff during the entire data collection process for my doctoral dissertation in developmental psychology at Utah State University (USU).

To summarize briefly, the research involved a comparison of early adolescent males [ages 12 and 13] with "externalizing" behavior disorders (e.g., conduct disorder, hyperactivity, aggressiveness) with "normal" early adolescent males (those not classified or being served as "behavior-disordered"). As you know so well, the population of "behavior disordered" students is probably the most difficult special education population with which to work, and attempts to ascertain and to understand the psychological and social variables which may contribute to the problems of these students are imperative, if effective preventive and primary interventions are to be implemented successfully.

In addition to collection of general demographic data (e.g., achievement data, group/individual ability data (from cumulative files), SES) for the research, the dependent (grouping) variables were group membership ("BD" versus "normal") and age/grade. The independent (predictor) variables in the research were:

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 - (a) parental bonding (reported for mother and/or father via child self-report; e.g., "Speaks to me in a warm and friendly voice"); and
 - (b) parent satisfaction (reported by mother and/or father via self-report; e.g., "I am delighted with the relationship I have with my child").

Although many individuals from Salt Lake School District were invaluable (e.g., individual school principals, secretaries, special education teachers, regular education teachers, etc.), I would like to commend, in particular, Dr. Rafael Lewy, Director of Research. I sent him a personal letter in early November, 1992 expressing my appreciation. I have enclosed some of the pertinent text from that letter for your information, (a) referencing the research agreements with Salt Lake School District, other school districts, individual parents/guardians, and the USU Institutional Review Board (IRB; see enclosed copy of IRB form), and (b) assuring the perpetual confidential disposition and "personal identity neutral" nature of all collected student and parent data from Salt Lake School District.

Again, I thank you sincerely for your support and cooperation, and the support, cooperation, and assistance of your staff. Looking forward to working with you and your district again, I remain

Respectfully,

Gary W. Mauk

:enclosures

January 28, 1993

Dr. William M. Reese, Superintendent
Weber School District
Administration Building
5320 South Adams Avenue
Ogden, UT 84405

Dear Dr. Reese,

I hope that this new year finds you and your family well. The principal purpose of this letter is to express my sincere personal and professional appreciation for all of the assistance I was provided by your staff during the entire data collection process for my doctoral dissertation in developmental psychology at Utah State University (USU).

To summarize briefly, the research involved a comparison of early adolescent males [ages 12 and 13] with "externalizing" behavior disorders (e.g., conduct disorder, hyperactivity, aggressiveness) with "normal" early adolescent males (those not classified or being served as "behavior-disordered"). As you know so well, the population of "behavior disordered" students is probably the most difficult special education population with which to work, and attempts to ascertain and to understand the psychological and social variables which may contribute to the problems of these students are imperative, if effective preventive and primary interventions are to be implemented successfully.

In addition to collection of general demographic data (e.g., achievement data, group/individual ability data (from cumulative files), SES) for the research, the dependent (grouping) variables were group membership ("BD" versus "normal") and age/grade. The independent (predictor) variables in the research were:

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 - (a) academic (school) ability (e.g., "I can't seem to stop myself from doing poorly in school");
 - (b) social ability (e.g., "If somebody doesn't like me, I usually can't figure out why");
 - (c) general ability (e.g., "I can pretty much control what will happen in my life"); and

(2) ASPECTS OF PARENTING

- (a) parental bonding (reported for mother and/or father via child self-report; e.g., "Speaks to me in a warm and friendly voice"); and
- (b) parent satisfaction (reported by mother and/or father via self-report; e.g., "I am delighted with the relationship I have with my child").

Although many individuals from Weber School District were invaluable (e.g., individual school principals, secretaries, special education teachers, regular education teachers, etc.), I would like to commend, in particular, Ms. Ann Miller, Director of Special Education. I sent her a personal letter in early November, 1992 expressing my appreciation. I have enclosed some of the pertinent text from that letter for your information, (a) referencing the research agreements with Weber School District, other school districts, individual parents/guardians, and the USU Institutional Review Board (IRB; see enclosed copy of IRB form), and (b) assuring the perpetual confidential disposition and "personal identity neutral" nature of all collected student and parent data from Weber School District.

Again, I thank you sincerely for your support and cooperation, and the support, cooperation, and assistance of your staff. Looking forward to working with you and your district again, I remain

Respectfully,

Gary W. Mauk

:enclosures

May 17, 1993

Ms. Shirlene Peck, President
Box Elder District School Board
Administration Building
230 West 200 South
Brigham City, UT 84302

Dear Ms. Peck,

Enclosed please find a certified check in the amount of \$25.00 made out to the Box Elder School District. I would like to donate this money to Box Elder School District in appreciation for the assistance provided to me in my graduate school research at Utah State University during the past year.

The participation of Box Elder School District enabled me to conserve some of my limited, out-of-pocket student research resources, and I would like to contribute something from my realized savings to your student programs. In particular, the assistance provided by Mr. Kirk Allen, Director of Special Education Services, was invaluable. Thus, if possible, I would like the enclosed donation to be earmarked for use in the Box Elder School District special education programs, but you may, of course, channel the funds as you wish.

Thank you for your professional consideration and have a relaxing Summer of 1993.

Sincerely,

Gary W. Mauk, M.A., CAGS

:enclosure (certified check for \$25.00)

May 17, 1993

Ms. Carol Funk, President
Cache District School Board
Administration Building
2063 North 1200 East
Logan, UT 84321

Dear Ms. Funk,

Enclosed please find a certified check in the amount of \$25.00 made out to the Cache School District. I would like to donate this money to Cache School District in appreciation for the assistance provided to me in my graduate school research at Utah State University during the past year.

The participation of Cache School District enabled me to conserve some of my limited, out-of-pocket student research resources, and I would like to contribute something from my realized savings to your student programs. In particular, the assistance provided by Dr. Julie Landeen, Director of Special Education Services, was invaluable. Thus, if possible, I would like the enclosed donation to be earmarked for use in the Cache School District special education programs, but you may, of course, channel the funds as you wish.

Thank you for your professional consideration and have a relaxing Summer of 1993.

Sincerely,

Gary W. Mauk, M.A., CAGS

:enclosure (certified check for \$25.00)

May 17, 1993

Ms. Louenda Downs, President
Davis District School Board
Administration Building
45 East State Street
Farmington, UT 84025

Dear Ms. Downs,

Enclosed please find a certified check in the amount of \$25.00 made out to the Davis School District. I would like to donate this money to Davis School District in appreciation for the assistance provided to me in my graduate school research at Utah State University during the past year.

The participation of Davis School District enabled me to conserve some of my limited, out-of-pocket student research resources, and I would like to contribute something from my realized savings to your student programs. In particular, the assistance provided by Dr. Jack Dellastations, Director of Special Education Services, was invaluable. Thus, if possible, I would like the enclosed donation to be earmarked for use in the Davis School District special education programs, but you may, of course, channel the funds as you wish.

Thank you for your professional consideration and have a relaxing Summer of 1993.

Sincerely,

Gary W. Mauk, M.A., CAGS

:enclosure (certified check for \$25.00)

May 17, 1993

Mr. Robert B. Arnold, President
Granite District School Board
Administration Building
340 East 3545 South
Salt Lake City, UT 84115

Dear Mr. Arnold,

Enclosed please find a certified check in the amount of \$25.00 made out to the Granite School District. I would like to donate this money to Granite School District in appreciation for the assistance provided to me in my graduate school research at Utah State University during the past year.

The participation of Granite School District enabled me to conserve some of my limited, out-of-pocket student research resources, and I would like to contribute something from my realized savings to your student programs. In particular, the assistance provided by Dr. Virginia Rhode, Director of Special Education Services, was invaluable. Thus, if possible, I would like the enclosed donation to be earmarked for use in the Granite School District special education programs, but you may, of course, channel the funds as you wish.

Thank you for your professional consideration and have a relaxing Summer of 1993.

Sincerely,

Gary W. Mauk, M.A., CAGS

:enclosure (certified check for \$25.00)

May 17, 1993

Ms. Donna V. Barker, President
Ogden District School Board
Administration Building
2444 Adams Avenue
Ogden, UT 84401

Dear Ms. Barker,

Enclosed please find a certified check in the amount of \$25.00 made out to the Ogden School District. I would like to donate this money to Ogden School District in appreciation for the assistance provided to me in my graduate school research at Utah State University during the past year.

The participation of Ogden School District enabled me to conserve some of my limited, out-of-pocket student research resources, and I would like to contribute something from my realized savings to your student programs. In particular, the assistance provided by Dr. Cy Freston, Director of Special Education Services, was invaluable. Thus, if possible, I would like the enclosed donation to be earmarked for use in the Ogden School District special education programs, but you may, of course, channel the funds as you wish.

Thank you for your professional consideration and have a relaxing Summer of 1993.

Sincerely,

Gary W. Mauk, M.A., CAGS

:enclosure (certified check for \$25.00)

May 17, 1993

Ms. Ann Clawson, President
Salt Lake District School Board
Administration Building
440 East First South
Salt Lake City, UT 84111-1898

Dear Ms. Clawson,

Enclosed please find a certified check in the amount of \$25.00 made out to the Salt Lake School District. I would like to donate this money to Salt Lake School District in appreciation for the assistance provided to me in my graduate school research at Utah State University during the past year.

The participation of Salt Lake School District enabled me to conserve some of my limited, out-of-pocket student research resources, and I would like to contribute something from my realized savings to your student programs. In particular, the assistance provided by Dr. Rafael Lewy, Director of Research, was invaluable. Thus, if possible, I would like the enclosed donation to be earmarked for use in the Salt Lake School District special education programs, but you may, of course, channel the funds as you wish.

Thank you for your professional consideration and have a relaxing Summer of 1993.

Sincerely,

Gary W. Mauk, M.A., CAGS

:enclosure (certified check for \$25.00)

May 17, 1993

Mr. Richard Sadler, President
Weber District School Board
Administration Building
5320 South Adams Avenue
Ogden, UT 84405

Dear Mr. Sadler,

Enclosed please find a certified check in the amount of \$25.00 made out to the Weber School District. I would like to donate this money to Weber School District in appreciation for the assistance provided to me in my graduate school research at Utah State University during the past year.

The participation of Weber School District enabled me to conserve some of my limited, out-of-pocket student research resources, and I would like to contribute something from my realized savings to your student programs. In particular, the assistance provided by Ms. Ann Miller, Director of Special Education Services, was invaluable. Thus, if possible, I would like the enclosed donation to be earmarked for use in the Weber School District special education programs, but you may, of course, channel the funds as you wish.

Thank you for your professional consideration and have a relaxing Summer of 1993.

Sincerely,

Gary W. Mauk, M.A., CAGS

:enclosure (certified check for \$25.00)

Appendix D

Letters Sent to Families Requesting Their Participation in the Study

Date: _____

Dear Parent(s) of _____:

We, in cooperation with Box Elder School District (Mr. Kirk Allen, Director of Special Education), are conducting a research study to investigate two major areas: (1) what children believe about how much they believe they can control what happens to them in their life at school, in social activities, and in general and (2) how parents and children feel about their relationship with each other. Many children and their families will be asked to participate.

We would like to obtain permission to include your child in this study. A total of 120 families and children will be involved in this study and 3 out of 10 families (36 families altogether) who agree to participate and who complete the study (e.g., complete all questionnaires) will be chosen at random to receive a participation incentive of \$10.00 at the end of the project. However, not every family who agrees to participate will be chosen to complete the study.

If you agree to participate, please sign the attached permission form and return it to us in the enclosed self-addressed, stamped envelope. There will be no risks or discomfort to your child in this study. You and your child's identities will remain completely anonymous in the reporting of the information we collect (an ID number will be used and not your or your child's names).

For the study, your child will be seen for a total of approximately 45 minutes during which time two separate questionnaires will be completed. One questionnaire will ask your child to rate the amount of control your child feels he/she has over what happens to him/her at school, in social activities, and in general; the second questionnaire will ask the child about his/her perception of the family relationship. Also, you (and your spouse, if you are married) will receive a brief parent scale (questionnaire) in the mail to return to us in a postage-paid envelope. We will schedule to meet with your child during school hours and we will gather basic information from school files about your child's achievement and general ability.

If you agree (or do not agree) to participate in this study, please indicate your preference and sign and return the parent permission form enclosed. Also, if you DO AGREE to participate (and have indicated so on the parent permission form), please complete and return the family information form, and the parent permission form, to us at Utah State University within the next week in the self-addressed, stamped envelope we have provided. If you should want to contact us for further information, please call Mr. Gary Mauk at 801-750-1182. Thank you very much for your time and your cooperation. Having you help us is greatly appreciated!

Sincerely,

Richard N. Roberts, Ph.D.
Associate Professor

Gary W. Mauk, M.A., CAGS
Research Associate

Enclosures: Parent permission/family information forms and self-addressed, stamped return envelope

Date: _____

Dear Parent(s) of _____:

We, in cooperation with Cache School District (Dr. Julie Landeen, Director of Special Education), are conducting a research study to investigate two major areas: (1) what children believe about how much they believe they can control what happens to them in their life at school, in social activities, and in general and (2) how parents and children feel about their relationship with each other. Many children and their families will be asked to participate.

We would like to obtain permission to include your child in this study. A total of 120 families and children will be involved in this study and 3 out of 10 families (36 families altogether) who agree to participate and who complete the study (e.g., complete all questionnaires) will be chosen at random to receive a participation incentive of \$10.00 at the end of the project. However, not every family who agrees to participate will be chosen to complete the study.

If you agree to participate, please sign the attached permission form and return it to us in the enclosed self-addressed, stamped envelope. There will be no risks or discomfort to your child in this study. You and your child's identities will remain completely anonymous in the reporting of the information we collect (an ID number will be used and not your or your child's names).

For the study, your child will be seen for a total of approximately 45 minutes during which time two separate questionnaires will be completed. One questionnaire will ask your child to rate the amount of control your child feels he/she has over what happens to him/her at school, in social activities, and in general; the second questionnaire will ask the child about his/her perception of the family relationship. Also, you (and your spouse, if you are married) will receive a brief parent scale (questionnaire) in the mail to return to us in a postage-paid envelope. We will schedule to meet with your child during school hours and we will gather basic information from school files about your child's achievement and general ability.

If you agree (or do not agree) to participate in this study, please indicate your preference and sign and return the parent permission form enclosed. Also, if you DO AGREE to participate (and have indicated so on the parent permission form), please complete and return the family information form, and the parent permission form, to us at Utah State University within the next week in the self-addressed, stamped envelope we have provided. If you should want to contact us for further information, please call Mr. Gary Mauk at 801-750-1182. Thank you very much for your time and your cooperation. Having you help us is greatly appreciated!

Sincerely,

Richard N. Roberts, Ph.D.
Associate Professor

Gary W. Mauk, M.A., CAGS
Research Associate

Enclosures: Parent permission/family information forms and self-addressed, stamped return envelope

Date: _____

Dear Parent(s) of _____:

We, in cooperation with Davis School District (Dr. Jack Dellastatious, Director of Special Education), are conducting a research study to investigate two major areas: (1) what children believe about how much they believe they can control what happens to them in their life at school, in social activities, and in general and (2) how parents and children feel about their relationship with each other. Many children and their families will be asked to participate.

We would like to obtain permission to include your child in this study. A total of 120 families and children will be involved in this study and 3 out of 10 families (36 families altogether) who agree to participate and who complete the study (e.g., complete all questionnaires) will be chosen at random to receive a participation incentive of \$10.00 at the end of the project. However, not every family who agrees to participate will be chosen to complete the study.

If you agree to participate, please sign the attached permission form and return it to us in the enclosed self-addressed, stamped envelope. There will be no risks or discomfort to your child in this study. You and your child's identities will remain completely anonymous in the reporting of the information we collect (an ID number will be used and not your or your child's names).

For the study, your child will be seen for a total of approximately 45 minutes during which time two separate questionnaires will be completed. One questionnaire will ask your child to rate the amount of control your child feels he/she has over what happens to him/her at school, in social activities, and in general; the second questionnaire will ask the child about his/her perception of the family relationship. Also, you (and your spouse, if you are married) will receive a brief parent scale (questionnaire) in the mail to return to us in a postage-paid envelope. We will schedule to meet with your child during school hours and we will gather basic information from school files about your child's achievement and general ability.

If you agree (or do not agree) to participate in this study, please indicate your preference and sign and return the parent permission form enclosed. Also, if you DO AGREE to participate (and have indicated so on the parent permission form), please complete and return the family information form, and the parent permission form, to us at Utah State University within the next week in the self-addressed, stamped envelope we have provided. If you should want to contact us for further information, please call Mr. Gary Mauk at 801-750-1182. Thank you very much for your time and your cooperation. Having you help us is greatly appreciated!

Sincerely,

Richard N. Roberts, Ph.D.
Associate Professor

Gary W. Mauk, M.A., CAGS
Research Associate

Enclosures: Parent permission/family information forms and self-addressed, stamped return envelope

Date: _____

Dear Parent(s) of _____:

We, in cooperation with Granite School District (Dr. Gayle Richards, Associate Director of Special Education), are conducting a research study to investigate two major areas: (1) what children believe about how much they believe they can control what happens to them in their life at school, in social activities, and in general and (2) how parents and children feel about their relationship with each other. Many children and their families will be asked to participate.

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Sincerely,

Richard N. Roberts, Ph.D.
Associate Professor

Gary W. Mauk, M.A., CAGS
Research Associate

Enclosures: Parent permission/family information forms and self-addressed, stamped return envelope

Date: _____

Dear Parent(s) of _____:

We, in cooperation with Ogden School District (Dr. C. W. Freston, Director of Special Education), are conducting a research study to investigate two major areas: (1) what children believe about how much they believe they can control what happens to them in their life at school, in social activities, and in general and (2) how parents and children feel about their relationship with each other. Many children and their families will be asked to participate.

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Sincerely,

Richard N. Roberts, Ph.D.
Associate Professor

Gary W. Mauk, M.A., CAGS
Research Associate

Enclosures: Parent permission/family information forms and self-addressed, stamped return envelope

Date: _____

Dear Parent(s) of _____:

We, in cooperation with Salt Lake City School District (Dr. Rafael Lewy, Director of Research and Evaluation), are conducting a research study to investigate two major areas: (1) what children believe about how much they believe they can control what happens to them in their life at school, in social activities, and in general and (2) how parents and children feel about their relationship with each other. Many children and their families will be asked to participate.

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Sincerely,

Richard N. Roberts, Ph.D.
Associate Professor

Gary W. Mauk, M.A., CAGS
Research Associate

Enclosures: Parent permission/family information forms and self-addressed, stamped return envelope

Date: _____

Dear Parent(s) of _____:

We, in cooperation with Weber County School District (Ms. Ann Miller, Director of Special Education), are conducting a research study to investigate two major areas: (1) what children believe about how much they believe they can control what happens to them in their life at school, in social activities, and in general and (2) how parents and children feel about their relationship with each other. Many children and their families will be asked to participate.

We would like to obtain permission to include your child in this study. A total of 120 families and children will be involved in this study and 3 out of 10 families (36 families altogether) who agree to participate and who complete the study (e.g., complete all questionnaires) will be chosen at random to receive a participation incentive of \$10.00 at the end of the project. However, not every family who agrees to participate will be chosen to complete the study.

If you agree to participate, please sign the attached permission form and return it to us in the enclosed self-addressed, stamped envelope. There will be no risks or discomfort to your child in this study. You and your child's identities will remain completely anonymous in the reporting of the information we collect (an ID number will be used and not your or your child's names).

For the study, your child will be seen for a total of approximately 45 minutes during which time two separate questionnaires will be completed. One questionnaire will ask your child to rate the amount of control your child feels he/she has over what happens to him/her at school, in social activities, and in general; the second questionnaire will ask the child about his/her perception of the family relationship. Also, you (and your spouse, if you are married) will receive a brief parent scale (questionnaire) in the mail to return to us in a postage-paid envelope. We will schedule to meet with your child during school hours and we will gather basic information from school files about your child's achievement and general ability.

If you agree (or do not agree) to participate in this study, please indicate your preference and sign and return the parent permission form enclosed. Also, if you DO AGREE to participate (and have indicated so on the parent permission form), please complete and return the family information form, and the parent permission form, to us at Utah State University within the next week in the self-addressed, stamped envelope we have provided. If you should want to contact us for further information, please call Mr. Gary Mauk at 801-750-1182. Thank you very much for your time and your cooperation. Having you help us is greatly appreciated!

Sincerely,

Richard N. Roberts, Ph.D.
Associate Professor

Gary W. Mauk, M.A., CAGS
Research Associate

Enclosures: Parent permission/family information forms and self-addressed, stamped return envelope

Appendix E
Parent Informed Consent Form

Parent Permission Form

Please check one response and sign your name below:

_____ I DO grant permission for my child to participate in the research project to be conducted this year by Dr. Richard N. Roberts and Mr. Gary W. Mauk of the Department of Psychology at Utah State University. I understand that all information which is collected will be coded in such a way to ensure confidentiality for me and my child. I also understand that the information will be used for research purposes only and that I may withdraw my permission at any time during the project.

_____ I DO NOT grant permission for my child to participate in the research project conducted this year by Dr. Richard N. Roberts and Mr. Gary W. Mauk of the Department of Psychology at Utah State University.

Parent's Signature

Date

Appendix F

Family Information Form (Parent Self-Report of Demographic Data)

ID Number: _____

If you have agreed to participate in this study, please complete this form. Fill in the appropriate circle beside your response. The numbers in the circles are for confidential research purposes only and help us to organize the information you provide.

FAMILY INFORMATION FORM

Your relationship to the child selected for the study:

① Mother ② Father ③ Grandfather ④ Grandmother ⑤ Guardian ⑥ Other: _____

Your current marital status:

① Married ② Separated ③ Divorced ④ Widowed ⑤ Never Married

Your current yearly household income:

① \$0 to \$9,999 ② \$10,000 to \$15,999 ③ \$16,000 to \$22,999 ④ \$23,000 to \$29,999
 ⑤ \$30,000 to \$36,999 ⑥ \$37,000 to \$43,999 ⑦ \$44,000 to \$50,999 ⑧ \$51,000 and above

The highest level of education YOU have completed:

① Fewer than 8 years of school ② 8th grade to some high school ③ High school graduate
 ④ Post-high school training ⑤ Some college or Associate degree (2-year) ⑥ College degree (4-year)
 ⑦ Some graduate school ⑧ Graduate school degree (e.g., Master's, Ph.D.)

The highest level of education YOUR SPOUSE has completed (based on knowledge of your spouse, please complete this item even if you are separated or divorced):

① Fewer than 8 years of school ② 8th grade to some high school ③ High school graduate
 ④ Post-high school training ⑤ Some college or Associate degree (2-year) ⑥ College degree (4-year)
 ⑦ Some graduate school ⑧ Graduate school degree (e.g., Master's, Ph.D.)

The current total size of your family/household:

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ more than 10: _____ (please specify)

Appendix G

Letter Sent to Families with Parent Satisfaction Scale

Date: _____

Dear Parent(s) of _____:

We hope that this letter finds you and your family well. Thank you for agreeing to participate in our research study which began during March of 1992. As you remember, the purpose of the study was to investigate (1) what children believe about how much they control what happens to them in their life at school, in social activities, and in general and (2) how parents and children feel about their relationship with each other. The permission form that you returned to us when you agreed to participate in the study was turned over to the principal, school counselor, or other responsible person at your child's school before your child completed any questionnaires for this research study.

Many families agreed to participate in the study and your family is one out of 120 chosen to complete the study. As such, your family is eligible to be one of 36 out of 120 families chosen at random to receive a participation incentive of \$10.00.

In order to complete the study, enclosed please find two copies of a 45-item "Parent Scale" (one for mothers and one for fathers) and a self-addressed, stamped return envelope. The items are the same on both the Mother Version and Father Version of the Parent Scale. If you are currently married, please complete the appropriate version and give your spouse the other version to complete. Please complete the scales separately from each other. If you are currently separated, divorced, or widowed, please complete the version that applies to you and return the other version blank.

In the scale you complete will be items which refer to your "spouse." If you are currently separated, divorced, or widowed, please complete these items as you remember them applying to your spouse or ex-spouse. Also, although it may be difficult because you have more than one child, it is important that you **RESPOND TO THE VARIOUS ITEMS ON THE PARENT SCALE WITH RESPECT ONLY TO THE CHILD WHO IS IN THIS STUDY.**

As stated in a previous letter, your identity and your spouse's identity (if you are married) will remain completely anonymous in the reporting of the information I collect. An ID number will be used and not your (or your spouse's) name. Once we have received your completed questionnaire(s), your ID number will be eligible to be chosen for the \$10.00 participation incentive. Incentives will be mailed to chosen families during the late Summer or early Fall, 1992.

After incentives are mailed to families, all identifying information will be destroyed. If you have any questions about the enclosed questionnaires, please call Mr. Mauk at the number listed below. If he is not in, please leave your name and phone number and he will return your call as soon as possible. If Mr. Mauk does not hear from you, he will presume that you understand and are in agreement with the conditions of the research.

HAVING YOU HELP US IS GREATLY APPRECIATED! Thank you very much for your time and your cooperation and we look forward to receiving the enclosed questionnaires.

Sincerely,

Dr. Richard N. Roberts
Associate Professor

Gary W. Mauk, M.A., CAGS
Research Associate
Phone: (801) 750-1182

Enclosures: Parent questionnaires and self-addressed, stamped return envelope

Appendix H
Brief Behavioral Problem Descriptions of Students in the Study
Who Were Identified by the Utah Public Schools as Exhibiting
Primarily Externalizing Behavior Problems (EBP)

<u>Case Number</u>	<u>School-Reported Behavioral Problems</u>
1	Poor attention; Lack of compliance on assignments; Difficulty dealing with authority and following rules
2	Noncompliance; Refuses to complete assignments and to obey school and classroom rules
3	Physical and verbal aggression toward peers; Talks out and acts up in class; Out-of-seat behavior
4	Loses temper easily; Physically and verbally abusive toward peers; Disrespectful; Noncompliant
5	Excessive aggressiveness; Excessive resistance to requests from authority figures; Hyperactive
6	Conduct disordered; Truant; Disturbs other students; Assaultive behavior; Uses foul language
7	Disturbs peers; Poor attention; Hyperactive; Excessive resistance; Poor anger/impulse control
8	Physically explosive/verbally abusive; Argues/fights; Poor social interaction skills; Hyperactive
9	Off-task behaviors; Poor attention in class; Poor anger control; Physically/verbally abusive
10	Talks out in class; Rude and argumentative; Fails to remain on and complete tasks; Aggressive/resistant
11	Poor social skills; Poor attention in class; Physically and verbally aggressive; Uses foul language
12	Poor anger control; Fights with peers and adults; Swears; Pounds desk; Kicks students
13	Severe problems with following rules and directions; Defiant to authority; Noncompliant/manipulative
14	Extreme hyperactivity; Excessive aggressiveness; Truant; Refuses to complete assignments
15	Does not complete assignments; Easily distracted; Rebellious; Truant; Aggressive behavior
16	Poor attention to class discussions and tasks; Hyperactive and impulsive; Aggressive; Swears
17	Poor verbal and physical impulse control; Excessive resistance to authority; Poor attention; Hyperactive
18	Poor peer interaction skills; Noncompliant; Resists authority; Conduct disordered; Vandalizes/steals
19	Truant; Harasses and intimidates peers; Physical verbal threats and overt aggression; Runs away

<u>Case Number</u>	<u>School-Reported Behavioral Problems</u>
20	Poor impulse control; Constantly fights; Excessive resistance to authority; Poor anger control; Swears
21	Extreme inattentiveness and hyperactivity; Verbally/physically abusive; Noncompliant
22	Uses profane language; Persistent antisocial attitude/behaviors; Disobedient/hostile
23	Poor anger control; Excessive resistance to authority; Fights with peers; Noncompliant
24	Delinquent, truant, and aggressive behavior; Steals; History of running away from home and school
25	Poor anger control; Fights; Impulsive/hyperactive; Conduct disordered
26	Poor attention; Extreme aggression; Poor anger control; Extreme resistance to authority; Swears
27	Constant conflicts with authority figures; Defiant to authority; Temper outbursts; Oppositional behavior
28	Poor impulse control/hyperactivity; Assaultive behavior; History of substance abuse/sexual acting out
29	Noncompliant; Lack of self-control in behavior; Consistent off-task behavior; Hyperactive
30	Constant off-task behavior; Makes derogatory and obscene comments; Defiant to authority
31	Uncontrollable episodes of rage; Destroys school's/peers' property; Disobedient/disrespectful
32	Conduct disordered; History of assault/vandalism; Shows no fear of consequences
33	Frequently disruptive; Makes obnoxious and rude noises; Does not complete assigned work; Lies
34	Significant out-of-seat behavior; Lies; Steals other students' property; Runs away; Temper outbursts
35	Fights with peers/teachers; Refuses to do assigned work; Noncompliant; Resistant/poor anger control
36	Conduct disordered; Physically/verbally assaultive to peers and teachers; Steals; Noncompliant
37	Highly disruptive in class (e.g., is frequently out of seat, talks out); Aggressive; Destructive
38	Engages in fights with peers/adults; Uses obscene language; Noncompliant; Does not complete work
39	Resistant to adult authority/demands; Does not comply with school rules; Hyperactive
40	Oppositional defiant disorder; Disruptive; Noncompliant; Appears unable to control self
41	Delinquent behavior (e.g., stealing, fighting, truancy); Noncompliant; Swears; Poor social skills

<u>Case Number</u>	<u>School-Reported Behavioral Problems</u>
42	Disruptive/aggressive behavior (e.g., out-of-seat behavior, hits other students); Noncompliant
43	Argumentative/noncompliant with adults; Blames others for own mistakes/problems; Disruptive
44	Conduct disordered; Truant; Vandalizes school/community property; Poor social skills
45	Physically/verbally aggressive with peers/adults; Disruptive in class and does not do assigned work
46	Lack of compliance with home/school rules; Lack of respect for authority; Does not complete work
47	Impulsive; Hits, kicks, spits at others; Disrespectful to adults; Truant; Noncompliant; Hyperactive
48	Frequent temper tantrums with accompanying verbal/physical aggression; Swears; Noncompliant
49	Frequently provokes fights and threatens peers; Refuses to do assigned work; Throws objects
50	Conduct disordered; Physically/verbally abusive toward peers/adults; Uses obscene language
51	Consistently rule-violating and truant behavior; Assaults peers in and out of school; Disruptive
52	Poor impulse and anger control; Antisocial/negative attitude toward school; Aggressive; Steals; Swears
53	Oppositional defiant disorder; Hits, kicks, and shoves peers; Noncompliant; Steals; Manipulative
54	Hyperactive; Poor attention span; Does not complete assignments; Excessive anger
55	Disruptive classroom behavior (e.g., out-of-seat, throws objects, makes weird sounds); Steals
56	Apparent inability to control own behavior; Verbally abuses and physically assaults peers; Runs away
57	Attention deficit hyperactivity disorder and conduct disorder; Very disruptive of classroom environment
58	Provokes conflicts in classroom and other school settings; Hyperactive; Noncompliant; Hits students
59	Fights with peers; Talks back to teachers and others in authority; Throws objects; Hyperactive
60	Conduct disordered; Excessively aggressive and argumentative with peers/teachers; Steals

Appendix I

Incentive Award Notification Sent to Families

Dear Parent(s) of _____:

I hope that this letter finds you and your family well. During the Spring of 1992, you agreed to participate in my research study. Many families agreed to participate in the study, but your family was one out of 120 total families chosen to complete the study. As such, your family was eligible to be one of 36 families out of the 120 total families chosen at random to receive a research participation award of \$10.00. Well...

*** CONGRATULATIONS! ***

*** YOUR FAMILY HAS BEEN CHOSEN! ***

In order for me to send you a personal check for the \$10.00 research participation incentive, please write clearly, on the enclosed self-addressed, stamped postcard, the COMPLETE NAME of the person to whom you would like the \$10.00 check made out and then drop the postcard in the mail to me. After I receive your postcard, the person whose name you list on the postcard will be sent a personal check for \$10.00 within one month of the day the postcard is received. Thank you again for your participation and I look forward to receiving the enclosed postcard from you.

Sincerely,

Gary W. Mauk

:enclosure (postcard)

Appendix J
Final Correspondence Sent to Families

Dear Parent(s) of _____:

We hope that this letter finds you and your family well. Thank you for agreeing to participate in our research study which began during the Spring of 1992. If you will remember, the purpose of the study was to investigate (1) what children believe about how much they control what happens to them in their life at school, in social activities, and in general and (2) how parents and children feel about their relationship with each other.

The purpose of this letter is to inform you that we have completed the collection of all necessary information from a total of 120 families in several Utah school districts, and that this is the final letter you will receive from us about this project. As we indicated in a previous letter to you when we sent you parent questionnaire(s) to complete and return to us, the permission form that you returned when you agreed to participate in the study was turned over to the principal, school counselor, or other responsible person at your child's school before your child completed any questionnaires for this research study.

We also indicated in that same letter that your identity, your child's identity, and your spouse's (or ex-spouse's) identity will always remain completely anonymous in the reporting of the information we have collected. An ID number only has been used for all information we have collected, and not you or your child's name (or your spouse's name, if you are married). The actual questionnaires which you and your child (and your spouse or ex-spouse, if they provided one) have been rendered, and the information from the questionnaires has been transferred and entered into a secure, anonymous, and confidential computer file by ID number only. We want you to know that we greatly appreciate you permitting us to include you and your child in this study.

Again, this is the FINAL letter you will receive from us. So, if you have any questions or concerns about the research, including the information we have shared with you in this letter, please contact Mr. Mauk at the phone number listed below. If Mr. Mauk does not hear from you within two months from the date of this letter, we will presume that you continue to be in agreement with all of the conditions of the research explained to you previously. Thank you again for your time and your cooperation.

Sincerely,

Dr. Richard N. Roberts
Associate Professor

Gary W. Mauk, M.A., CAGS
Research Associate
Phone: (801) 750-1182

CURRICULUM VITAE

GARY W. MAUK

D.O.B.: December 26, 1959

Family Status: Married with 1 child

EDUCATION

- **Institution:** Utah State University, Logan, UT
Attended: September 1988 through present
Status: Candidate for the Ph.D. in Developmental Psychology;
 Anticipated graduation, August 1996
- **Institution:** Gallaudet University, Washington, DC
Attended: August 1982 to June 1984
Degree: Master of Arts (M.A.) in Developmental Psychology (1983)
Certificate: Certificate of Advanced Graduate Studies in School Psychology with
 a specialization in youth with hearing disabilities (1984)
- **Institution:** California State University of Pennsylvania, California, PA
Degree: Bachelor of Arts (B.A.) in Psychology (1982)
Attended: August 1980 to August 1982
- **Institution:** Washington College, Chestertown, MD
Attended: August 1977 to December 1978

PROFESSIONAL CERTIFICATIONS

- School Psychologist - State of Utah (Standard Certificate; Expires August, 1999)
- Nationally Certified School Psychologist (NCSP) - National Association of School Psychologists [Certification #28060; Expires March, 1997]

HONORS/AWARDS

Research Assistant of the Year, School of Graduate Studies, Utah State University - 1994
 Research Assistant of the Year, College of Education, Utah State University - 1994
 All-American Scholar, United States Achievement Academy - 1994
 Who's Who in American Education - 1992

UNIVERSITY TEACHING EXPERIENCE

Guest Lecturer in Early Detection of Hearing Loss/Early Intervention: Communicative Disorders 638 (Programming for Young Children Who Are Deaf or Hard of Hearing) - Utah State University - Winter Quarter, 1996

Guest Lecturer in Adolescent Suicide Prevention, Intervention, and Postvention:

Psychology 210 (Adolescent Psychology) - Utah State University - Spring Quarter, 1993

Psychology 321 (Abnormal Psychology) - Utah State University - Spring Quarter, 1991

Teaching Assistant: Psychology 121 (Human Adjustment) - Utah State University -

Fall Quarter, 1989 and Winter Quarter, 1990

REFEREED PUBLICATIONS

- Mauk, G. W., & Sharpnack, J. D. (in press). Grief. In G. Bear, K. Minke, & A. Thomas (Eds.), Children's needs II: Psychological perspectives (pp. ???-???). Silver Spring, MD: National Association of School Psychologists.
- Mauk, G. W., Barringer, D. G., & Mauk, P. P. (1996). Seizing the moment, setting the stage, and serving the future: Toward collaborative models of early identification and early intervention services for children born with hearing loss and their families. Part II: Follow-up and early intervention. Infant-Toddler Intervention: The Transdisciplinary Journal, 6(1), 17-38.
- Mauk, G. W., Barringer, D. G., & Mauk, P. P. (1995). Seizing the moment, setting the stage, and serving the future: Toward collaborative models of early identification and early intervention services for children born with hearing loss and their families. Part I: Early identification of hearing loss. Infant-Toddler Intervention: The Transdisciplinary Journal, 5(4), 367-394.
- White, K. R., Culpepper, B., Maxon, A. B., Vohr, B. R., & Mauk, G. W. (1995). Transient evoked otoacoustic emissions-based screening in typical nurseries: A response to Jacobson and Jacobson. International Journal of Pediatric Otorhinolaryngology, 33, 17-21.
- Mauk, G. W., & White, K. R. (1995). Giving children a sound beginning: The promise of universal newborn hearing screening. The Volta Review, 97(1), 5-32.
- Mauk, G. W., Gibson, D. G., & Rodgers, P. R. (1994). Suicide postvention with adolescents: School consultation practices and issues. Education and Treatment of Children, 17(4), 468-483.
- Mauk, G. W., & Rodgers, P. R. (1994). Building bridges over troubled waters: School-based postvention with adolescent survivors of peer suicide. Crisis Intervention and Time-Limited Treatment, 1(2), 103-123.
- White, K. R., Vohr, B. R., Maxon, A. B., Behrens, T. R., McPherson, M. G., & Mauk, G. W. (1994). Screening all newborns for hearing loss using transient evoked otoacoustic emissions. International Journal of Pediatric Otorhinolaryngology, 29(3), 203-217.
- Mauk, G. W., Taylor, M. J., White, K. R., & Allen, T. S. (1994). Comments on Stack and Gundlach's "The effect of country music on suicide": An "achy breaky heart" may not kill you. Social Forces, 72(4), 1249-1255.

- Mauk, G. W., & Mauk, P. P. (1993). Compounding the challenge: Young deaf children and learning disabilities. Perspectives in Education and Deafness, 12(2), 12-18.
- Merrell, K. W., & Mauk, G. W. (1993). Predictive validity of the Battelle Developmental Inventory as a measure of social-behavioral development for young children with disabilities. Diagnostic, 18, 187-198.
- Mauk, G. W. (1993). Adolescent suicide, peer survivors, and aspects of postvention in schools. Journal of Psychology and the Behavioral Sciences, 7, 47-60.
- Mauk, G. W., & Taylor, M. J. (1993). Counseling services in middle level schools: Issues of recognition, reclaiming, redefinition and rededication. Middle School Journal, 24(5), 3-9.
- Mauk, G. W., & Mauk, P. P. (1992). Somewhere, out there: Preschool children with hearing impairment and learning disabilities. Topics in Early Childhood Special Education, 12, 174-195.
- Mauk, G. W., & Weber, C. (1991). Peer survivors of adolescent suicide: Perspectives on grieving and postvention. Journal of Adolescent Research, 6, 113-131.
- Moore, W. G., Josephson, J. A., & Mauk, G. W. (1991). Identification of children with hearing impairments: A baseline survey. The Volta Review, 93, 187-196.
- Mauk, G. W., White, K. R., Mortensen, L. B., & Behrens, T. R. (1991). The effectiveness of screening programs based on high-risk characteristics in early identification of hearing impairment. Ear and Hearing, 12, 312-319.

NON-REFEREED/INVITED PUBLICATIONS

- Mauk, G. W., & Culpepper, N. B. (1994). Pursuing earlier identification of hearing loss. The Utah Special Educator, 14(5), 10.
- Mauk, G. W., & Behrens, T. R. (1993). Historical, political, and technological context associated with early identification of hearing loss. Seminars in Hearing, 14(1), 1-17.
- Johnson, J. L., Mauk, G. W., Takekawa, K. M., Simon, P. R., Sia, C. C. J., & Blackwell, P. (1993). Implementing a statewide system of services for infants and toddlers with hearing disabilities. Seminars in Hearing, 14(1), 105-119.
- Mauk, G. W. (1993). Perspectives on school-based postvention with peer survivors of an adolescent's suicide. NASP Communiqué, 21(8), 27-29.

PRESENTATIONS AT PROFESSIONAL MEETINGS AND CONFERENCES

- Mauk, G. W., & Sharpnack, J. D. (1996, June). A light unto the darkness: Suicide grief work with adolescents. Paper accepted for presentation at the International Convention of the Alexander Graham Bell Association for the Deaf, Snowbird, UT.

- Mauk, G. W. (1996, April). Young children with hearing loss and concomitant learning disabilities: Perspectives on existential legitimacy, etiology, detection, and intervention. Plenary session presented at the inaugural Gallaudet University conference on Learning Disability, Neuropsychology, and Deaf Youth: Theory, Research, and Practice, Seattle, WA.
- Barringer, D. G., & Mauk, G. W. (1996, March). Toward universal detection of hearing loss in newborns: Current efforts and future needs. Ninety-minute program session presented at Utah's Ninth Annual Statewide Preschool and Early Intervention Conference, Salt Lake City.
- Mauk, G. W., & Barringer, D. G. (1995, November). A model for planning and implementing collaborative early identification and early intervention services for infants born with hearing loss and their families. Seventy-five minute program session presented at the Division for Early Childhood (DEC) Early Childhood Conference on Children with Special Needs, Orlando, FL.
- Mauk, G. W., & Barringer, D. G. (1995, August). Seizing the moment and setting the stage: Linking early identification and intervention for children with hearing loss. Paper presented at the Fourth Biennial International Conference of the International Association of Special Education, Brighton, England.
- Barringer, D. G., Mauk, G. W., Jensen, S., & Woods-Kershner, N. (1995, June). Survey of parents' perceptions regarding newborn hearing screening at Logan Regional Hospital (Logan, Utah). Presented at the meeting of the Utah Task Force on Universal Detection of Infant Hearing Impairment, Utah Department of Health, Division of Speech, Hearing, and Vision Services, Salt Lake City, UT.
- Mauk, G. W., Sharpnack, J. D., & Mauk, P. P. (1995, March). Holy grail? or holy cow! A review of the evidence for learning disabilities in deaf and hard-of-hearing children. Paper presented at the 75th Annual Convention of the Western Psychological Association, Los Angeles, CA.
- Sharpnack, J. D., & Mauk, G. W. (1995, March). Therapeutic aspects and dynamics of school-based suicide postvention work with adolescent survivors of peer suicide. Paper presented at the 75th Annual Convention of the Western Psychological Association, Los Angeles, CA.
- Leopold, G. D., & Mauk, G. W. (1995, January). Evaluating postvention programs: Unique methodologies. Ninety-minute program session presented at the National Conference of Association for Specialists in Group Work (ASGW), Athens, GA.
- Leopold, G. D., & Mauk, G. W. (1994, November). Evaluating postvention programs in schools: A case of special conditions. Roundtable paper presented at the annual meeting of the American Evaluation Association, Boston, MA.

- Culpepper, N. B., Spriet, S. Y., Tidwell, S. O., & Mauk, G. W. (1994, November). Conventional versus TEOAE school hearing screening programs. Paper presented at annual convention of the American Speech-Language-Hearing Association, New Orleans, LA.
- Culpepper, N. B., Spriet, S., Mauk, G. W., & Tidwell, S. L. (1994, April). Use of TEOAEs in an educational audiology setting. Paper presented at the Annual Convention of the American Academy of Audiology, Richmond, VA.
- Mauk, G. W. (1994, March). Universal newborn hearing screening and school psychology: Preparing to serve more children with hearing loss. Paper presented at the 26th Annual Convention of the National Association of School Psychologists (NASP), Seattle. (ERIC Document Reproduction Service No. ED 372 571)
- Mauk, G. W., & Leopold, G. D. (1994, January). Triumphing over tragedy: Adolescent suicide postvention in schools. Ninety-minute program session presented at the National Conference of Association for Specialists in Group Work (ASGW), St. Petersburg Beach, FL.
- Mauk, G. W. (1993, December). The promise of early identification of hearing loss: Neonatal hearing screening using evoked otoacoustic emissions. Paper presented at the First Annual Mini-Conference of the Early Intervention Research Institute (EIRI), Logan, UT.
- Mauk, G. W., & White, K. R. (1993, October). Giving children a sound beginning: The promise of universal newborn hearing screening using evoked otoacoustic emissions. Paper presentation and panel discussion at the Alexander Graham Bell Association for the Deaf's International Conference, "A Sound Beginning: Children with Hearing Impairments - Birth to Five," Denver, CO.
- Taylor, M. J., Mauk, G. W., & Allen, T. S. (1993, August). A generalizability study of the Battelle Developmental Inventory. Poster presented at the annual convention of the American Psychological Association, Toronto, Ontario, Canada.
- Mauk, G. W., Leopold, G. D., & Rodgers, P. L. (1992, April). Survey of school psychologists in the public schools of Utah. Paper presented at the 72nd Annual Convention of the Western Psychological Association, Portland, OR.
- Mauk, G. W., & Leopold, G. D. (1992, April). Adolescent suicide and aspects of school-based postvention with survivors. Paper presented at the 72nd Annual Convention of the Western Psychological Association, Portland, OR.
- Leopold, G. D., & Mauk, G. W. (1992, March). Psychosocial lacunae: Retrospective identification and treatment strategies with maladjusted adolescents. Paper presented at the Biennial Conference of the Southwestern Society for Research in Human Development, Tempe, AZ.

- Mauk, G. W., & Leopold, G. D. (1992, March). Adolescent suicide: Developmental sequelae and postvention with peer survivors. Paper presented at the Biennial Conference of the Southwestern Society for Research in Human Development, Tempe, AZ.
- Mortensen, L. B., & Mauk, G. W. (1991, June). Evoked otoacoustic emissions technology: Principles, application, and demonstration. Poster presented at the 72nd Annual Meeting of the Pacific Division of the American Association for the Advancement of Science, Logan, UT.
- Mortensen, L. B., & Mauk, G. W. (1991, May). Temporal, stimulus, and child parameters of OAE screening results in a neonatal population. Poster presented at the International Symposium on Otoacoustic Emissions: Theory, Techniques, and Application, Kansas City, MO.
- Mauk, G. W. (1991, April). Adolescent suicide postvention in schools: Managing grief of peer survivors. Paper presented at the 71st Annual Convention of the Western Psychological Association, San Francisco, CA. (ERIC Document Reproduction Service No. ED 332 127)
- Mauk, G. W., Mortensen, L. B., & Taylor, M. J. (1991, April). A survey of school counselors of early adolescents in Utah. Paper presented at the 71st Annual Convention of the Western Psychological Association, San Francisco, CA. (ERIC Document Reproduction Service No. ED 332 128)
- Mauk, G. W., & White, K. R. (1990, May). Retrospective survey of identification of hearing impairment in children. Paper presented at the bi-annual conference of the Utah Speech-Language-Hearing Association, Park City, UT.

TECHNICAL REPORTS

- White, K. R., & Mauk, G. W. (1993). Final report for Early Identification of Hearing Impairment in Children: Expanding and Refining Best Practices [MCJ-495037-01-0, Project period: 6/1/89-5/31/92]. Logan, UT: Department of Psychology, Utah State University. (ERIC Document Reproduction Service No. ED 332 128)

WORKSHOP/CONSULTANT PRESENTATIONS

- Mauk, G. W. (1994, December 7-8). Rationale, history, approaches, and prospects in neonatal screening for hearing loss. External consultant presentation to the Ohio State Department of Health, Subcommittee on Infant Hearing and the Ohio Infant Hearing Screening and Assessment Program (IHSAP) Stakeholders Group, Columbus, OH.
- Mauk, G. W. (1993, April 13). Assessment considerations with deaf and hard-of-hearing youth. Given at the Utah School for the Deaf (Ogden) for the Utah State University Multi-University Consortium Teacher Training Program in Sensory Impairments (2 hours).

- Mauk, G. W., & Mauk, P. P. (1992, April 8). Evaluation of and educational intervention with multi-disabled hearing-impaired children. Given at the Utah School for the Deaf (Ogden) for the Utah State University Multi-University Consortium Teacher Training Program in Sensory Impairments (3 hours).
- Mauk, G. W. (1992, February 3). Youth suicide: An information group for parents. Given in Brigham City, UT (Box Elder County), Holy Cross Lutheran Church (3 hours).
- Mauk, G. W. (1991, November 11). Child and adolescent suicide: An information group for parents. Given in Brigham City, UT (Box Elder County), Holy Cross Lutheran Church (3 hours).
- Mauk, G. W., & Mauk, P. P. (1991, May 9). Assessment of and programming for the hearing-impaired child with additional disabilities. Given at the Utah School for the Deaf (Ogden) for the Utah State University Multi-University Consortium Teacher Training Program in Sensory Impairments (3 hours).

MEDIA, UNPUBLISHED MANUSCRIPTS, AND CURRICULA

- VIDEOTAPE (Writer and Director) - Giving your baby a sound beginning. (1995). National Consortium for Universal Newborn Hearing Screening. (Contents: A generic 3 1/2 minute parent education videotape produced for hospital instructional channels to orient parents of newborns to the importance of early detection of hearing loss and hearing screening of their newborn using transient evoked otoacoustic emissions (TEOAEs) prior to hospital discharge).
- VIDEOTAPE (Writer and Director) - Proveyendo su bebé un principio sonoro. (1995). National Consortium for Universal Newborn Hearing Screening. (Contents: A generic 5 minute parent education videotape narrated in Spanish and produced for hospital instructional channels to orient parents of newborns to the importance of early detection of hearing loss and hearing screening of their newborn using transient evoked otoacoustic emissions (TEOAEs) prior to hospital discharge).
- VIDEOTAPE (Writer and Director) - Giving your baby a sound beginning: Newborn hearing screening at Georgetown University Medical Center. (1995). National Consortium for Universal Newborn Hearing Screening. (Contents: Produced for the Georgetown University Medical Center hospital instructional channel. The videotape is shown to new parents and explains the rationale for and demonstrates the procedure of transient evoked otoacoustic emissions (TEOAEs) to screen for hearing loss prior to hospital discharge.)
- VIDEOTAPE (Production Consultant) - Giving your baby a sound beginning: The promise of universal newborn hearing screening. (1993). Utah State University and the Rhode Island Hearing Assessment Project (RIHAP). (Contents: The principles and application of using transient evoked otoacoustic emissions (TEOAEs) to screening hearing loss in all live births in a hospital setting are presented and demonstrated.)

VIDEOTAPE (Director) - Giving your baby a sound beginning: Newborn hearing screening at Logan Regional Hospital. (1993). (Contents: Produced for a hospital instructional channel to be shown to new parents. The video explains the rationale and demonstrates the procedure of transient evoked otoacoustic emissions (TEOAEs) to screen for auditory function in neonates at Logan Regional Hospital, Logan, UT.)

VIDEOTAPE (Production Consultant) - Early identification of hearing loss. (1992). Oregon Newborn Hearing Registry and Teaching Research, Western Oregon State College. (Contents: An overview of the importance of early identification of hearing impairment is presented. Some results from Oregon's baseline retrospective study of hearing impairment in children are presented and components of Oregon's birth certificate-based high-risk registry are described.)

VIDEOTAPE (Writer and Director) - Early identification of hearing impairment in children. (1989). Utah State University, Department of Psychology, Early Identification of Hearing Impairment in Children Project. (Contents: An overview of the importance of early identification of hearing impairment is presented. Utah's birth certificate-based high-risk registry is described.)

MANUSCRIPT (1991) - Multihandicapped hearing impaired children: Assessment considerations.

MANUSCRIPT (1990) - Self-esteem and self-efficacy in middle childhood: Extrapolation of positive and negative psychosocial outcomes.

MANUSCRIPT (1989) - Stress, depression, and suicide among young people: A practical compendium of current research and perspectives.

MANUSCRIPT (1989) - An overview of normal language development.

CURRICULUM (1987) - The fire is dying: Motivating your child. (Contents: A six-week course for parents of elementary and middle/junior high school-age children. Topics include what is motivation, self-concept and motivation, methods of behavioral motivation, and motivation as a function of development.)

CURRICULUM (1986) - Understanding and parenting of the elementary school-age child. (Contents: An eight-week course for parents of elementary school-age children. Normal physical, cognitive, emotional, and social development is highlighted. Other topics include discipline, self-esteem/competence, extra-child influences (e.g., peers, school, media), and emotional and behavioral problems.)

JOURNAL REVIEW EXPERIENCE

Member, Editorial Review Board, Education and Treatment of Children (1995-1997)

Guest Reviewer for Journal of Early Intervention (1995).

Guest Reviewer for Topics in Early Childhood Special Education, Vol. 15, No. 1 (1995).

Guest Reviewer for American Sociological Review (1994).

Guest Reviewer for Topics in Early Childhood Special Education, Vol. 13, No. 4 (1993).

PROFESSIONAL ORGANIZATION MEMBERSHIPS

National Association of School Psychologists (NASP)
Utah Association of School Psychologists (UASP)
Southwestern Society for Research in Human Development (SWSRHD)
Institute for Trauma and Loss in Children (ITLC)
Alexander Graham Bell Association for the Deaf (A.G. Bell)

COMMUNITY SERVICE

Member and School Services Consultant, Community Pro-Youth Organization (CPYO), Youth Depression/Suicide Committee, Brigham City, Utah.

Member, Utah Task Force on Universal Detection of Infant Hearing Impairment, Utah Department of Health, Division of Speech, Hearing, and Vision Services, Salt Lake City, Utah.