To the Graduate Council:

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PARENTING STYLES AND STUDENT ACHIEVEMENT IN NORMAL AND MENTAL HEALTH POPULATIONS: A RELIABILITY AND VALIDITY STUDY OF THE HOME ENVIRONMENT PROFILE

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ABSTRACT

The primary purpose of this study was to assess the reliability and validity of the Home Environment Profile (HEP) and to determine the most effective use of items and scales in predicting school achievement.

The HEP is a 69-item test that measures nine parenting styles. Most of the items used in the HEP were selected from actions that research on parent training had shown to have "treatment validity." Items reflect a learning theory paradigm. Items were grouped by judges into 9 scales: (a) Modeling Attitudes and Behavior, (b) Monitoring Social Behavior, (c) Monitoring Academic Behavior, (d) Rewarding School Work and Behavior, (e) Disciplining, (f) Problem Solving and Communicating, (g) Nurturing, (h) Self-Managing, and (i) Teaching and Motivating. Parents completed the untimed instrument using a 5-point rating scale for each item. Student grades were rated on a 4-point scale.

Initially, the subjects (N = 196) in this study consisted of three groups of parents: (a) parents of high-achieving students making at least 75% As and B+s (n = 127), (b) parents of low-achieving students making at least 75% Cs, Ds, and Fs (n = 69), and (c) a group of parents whose children were being served by mental health facilities for emotional and behavioral problems (n = 24). Due to insufficient sample size, the Mental Health group was combined with the high and low groups for a total sample of 196.

Items of the HEP were judged by two independent raters to be in 1 of 9 parenting scales. Rater agreement was 93% across all items, with judges agreeing on the placement of 65 of 69 items.

Test-retest reliability for the HEP was r = .77, with item coefficients ranging from .03 to .98 (two-week interval for a sample of 30). Scale reliability was also determined by test-retest, with correlation coefficients ranging from .44 to .93. To assess the validity of the HEP, all items were then correlated to school achievement. Forty-five items correlated (Spearman's Rho) significantly with ranks of grades. Scales formed from rater judgments were then used to determine the degree of association between scales and grades.

All but one scale (Problem Solving and Communicating) were found to correlate (Spearman's Rho) at a statistically significant level with student grades. Logistic regression analyses were then performed to predict parent membership of the High Achievement (As and B+s) and Low Achievement (Cs, Ds, and Fs) groups. Of the 8 HEP scales having at least 3 items, 3 scales (Monitoring Academic Behavior, Rewarding School Work and Behavior, and Nurturing) increased the prediction rate above the base rate of 63.84%. Using only these 3 scales increased the prediction rate to 83.05%. No other scales contributed to the improvement in the prediction of group membership.

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CHAPTER I

INTRODUCTION

Purpose

The primary purpose of this study was to investigate the psychometric properties of the Home Environment Profile (HEP) (Dickinson, 1995). The investigation concentrated on the reliability and predictive validity of the instrument.

Rationale

It is well known that parents and the home environment they create influence the academic achievement and behavior of children (Baumrind, 1993; Bradley & Caldwell, 1984; Dickinson, 1995; Dornbush, Ritter, Leiderman, Roberts, & Fraleigh, 1987; Maccoby & Martin, 1983; Shea & Hoffman, 1982). However, the nature of these influences remains uncertain (Maccoby 1992), and expert opinion has been inconsistent concerning parenting, for example in the areas of discipline and teaching. (Dinkmeyer & McKay, 1976, Ginott, 1956, Patterson 1976). Yet parents who experience difficulty with their children often realize that their concern is related in some way to their behavior and the home situation, leading them to seek professional guidance (Clarke-Steward, 1978; Yankelovich, Srelly, & White, Inc. 1977).

Parents use many resources to facilitate child rearing and child learning. Media resources, such as television, educational programs, self-help books and tapes, are available to an extent that these have become a "parade of pop-psychology" remedies (Dembo, Lauritzen, & Sweitzer, 1985, p. 7). Given these varied resources and

inconsistent expert opinion, empirically grounded investigations, especially studies clarifying parenting variables, may be of assistance to parents and practitioners.

In response to parenting needs, parenting services have been and are provided in both the private and public sectors (Hawkins, Catalano, Jones, & Fine, 1987; Haynes, Comer, & Hamilton-Lee, 1989; Hobbs, 1982; O'Donnell, Hawkins, Catalano, Abbott, & Day 1993). A number of investigators, however, hold that social and economic changes are contributing to an increase in parenting problems (U.S. Department of Education, Youth Indicators, 1996), overwhelming the service delivery efforts presently available. Policy makers, impacted by the "feminization of poverty" and spiraling rate of single heads of households (Cranston, 1990; Olson, Banyard, 1993), call for greater consideration of home and community influences. Schools are appealing for parent involvement in their children's education (Bell 1976; Epstein, 1987; The National Education Goals Report, 1994). In the face of social problems impacting families, development of a psychometrically sound instrument for measuring home and parenting influences may assist in administrative and policy planning addressing these social issues.

Within this context, school psychologists, not typically involved in assessing parental and home influences (Carolson & Sincavage, 1987), are being urged to move from intra-individual assessment to intra-familial and interpersonal assessment (Christenson, 1990). Authorities advocating "Best Practices" in School Psychology have focused attention on environmental factors as an area for concern in the process of individual assessment (Christenson, 1990; Christenson & Ysseldyke, 1989; Sattler,

1988). However, even with increased concern regarding the influences of the family on children and professional interest in parenting, measurements specifically designed to differentially assess home influences are wanting, and those that are available fail to provide guidance for specific and prescriptive interventions. School psychology practice would benefit from the availability of a test that could provide information on the home, information that could then be used in structuring and intervention.

Environmental measures historically have been few in number (Wolf, 1966) and characterized as psychometrically inadequate (Bradbury et al., 1990; Goldfreid & Linehau, 1977; Grotevant, 1989; Sabatelli & Bartle, 1995). Typically, these instruments have failed to assess the differential effects of parenting on learning and academic achievement (Dembo, Lauritzen, & Sweitzer, 1985). Existing environment measures, while providing descriptive, "global" classification (Wolf, 1966), have not possessed "treatment validity" (Gresham, 1986). Treatment validity is the capacity of an instrument to predict differences in criterion variables and guide interventions to ameliorate these differences. The use of global measures have instead directed interest towards psychosocial indices, for example, socioeconomic variables (Coleman, 1966) and family structure (Walberg & Anderson, 1972; Waters & Crandall, 1964). These determinants are often inaccessible to modification by school personnel. Additionally, the lack of specific environmental measures has, according to Bloom (1980), contributed to the underestimation of the influences of the environment on human development.

These circumstances have led to the present state in the assessment of parental influences. Herrenstein and Murray (1994) describe the situation as one in which prediction of parenting influences remains more successful for groups of parents than for individual parents. Consequently, there exists a need for a psychometrically sound instrument, sensitive to environmental variation within the home, that will predict academic achievement and behavioral competency, and serve as a guide for corrective interventions.

The HEP (Dickinson, 1995), shown in Appendix A, has been designed to address the need for a diagnostic test of parenting and home environment variables. Derived from empirical studies of parent training and variables demonstrating treatment validity, the HEP measures the directional effects of parenting and environmental factors on student academic achievement and behavioral competency and serves as a guide for corrective interventions.

School psychology is being challenged to extend its interest beyond that of individual assessment (Christenson, 1990). Conoley (1989, p. 556) makes the case for an ecological paradigm in school psychology by the following assertion:

> A psychologist is an expert about children: who they are, where they live, what they need, and what can go wrong. He or she is a family and school system expert, because to fail to know families and schools is to fail to know children. (p. 556)

This prioritization of the family and environment is shared by Bloom (1980) who holds that parents are more important--salient and reliable--to children and

consequently have greater impact than teachers. Changing parenting practices may be more productive than modifying teaching practices. Therefore, the study of parenting practices and their academic and behavioral effects on children is congruent with an ecological orientation within psychology and consistent with contemporary interest in the field of school psychology. From these vantage points, investigation into the psychometric properties of the HEP and its conceptual framework appears needed, timely, and appropriate.

In summary, the HEP may be classified as an environmental measure (Anastasi, 1976; Wolf, 1966) formatted as a self-administered questionnaire (Bailey, 1982; Marsh & Terdal, 1988; Martin, 1984; Tasto, 1977; Young, 1966). It is purported to assess the impact of parenting styles and the home environment on child academic achievement and behavioral competency and to direct remedial intervention. The HEP is formulated from a learning theory perspective and founded on a nine factor directional model of parenting styles. The purpose of the HEP as well as its item and scale structures, indicates that it is an instrument similar to both norm-referenced and criterion-referenced tests. This study examines the psychometric properties of the HEP and its reliability and validity.

CHAPTER II

REVIEW OF THE LITERATURE

Introduction

It is well accepted that parents play a part in molding the behavior of their children. But what is the most important part or parts of parenting? The following is a review of the literature that considers major studies on which the HEP is conceptually based. The literature covers critical content embodied in the scales including nurturance, discipline, etc. The literature related to the domains, "Monitoring Social Behavior" and "Monitoring Academic Behavior," are considered under one category, "Monitoring." Positive findings of the use of a style are presented first, followed by the negative outcome for lack of use of a style, and the findings of parent training research last.

Domains/Scales

Modeling Attitudes and Behaviors

Parental beliefs and attitudes have had a central position in parenting theory and research (Baldwin et al., 1945; Baumrind, 1967, 1971; Block, 1955; Frenkel-Brunswik, 1951). Attitudes, as the source of behavior, remain as foundations to the parent-education approach for understanding and intervening with parents (Dinkmeyer & McKay, 1976; Ginott, 1956; Gordon, 1975). Attitudes, in the parent-training literature, are secondary to the tenets of operant and social-learning theory (Pinsker, 1981).

Parental beliefs and attitudes impact their children's behavior and academic achievement (Baumrind, 1973; Hess & McDevitt, 1984). Children selectively imitate adult models, choosing the better model for specific skills (Maccoby & Jacklin, 1974). Children imitate adults with reinforcing value to the child (Baer & Sherman 1964; McCabe & Martin, 1983; Patterson, 1982) and who are perceived as warm, powerful, and similar to themselves (Bandura, 1977; Heilburn & Hall, 1964; Mischel, 1970; Sears, Rare, & Alpert, 1965).

High academic performance in the adolescent years has been found to correlate with level of identification with the parent (Kandel & Lesser, 1969; Morrow & Wilson, 1961; Rickberg & Westby, 1967; Shaw & White, 1965; Swift, 1967). Adolescents social competency and emotional adjustment have been associated with the level of adolescent satisfaction with the family (Maccoby and Jacklin, 1974); a variable related to identification with the parent.

Parental belief about the child appears to influence the child's behavior (Drews & Teahan, 1957). Snodgrass (1991), in an attempt to isolate environmental factors coinciding with adolescent academic achievement, reported that parental beliefs concerning the student's achievement potential was highly correlated with student academic accomplishment. Parent perceptions of task difficulty seem to influence their children's evaluation of their own competency and task demands (Ladd & Price, 1986). Parental beliefs of their own self-efficacy and associated mood have been reported to relate to the quality of interaction between parent and child (Bugental, Blue

& Cruzcosa, 1989) and academic achievement of their children (Rimm & Lowe, 1988).

Parental attitudes and beliefs seem to be adopted to some degree by their children. Parental beliefs concerning themselves, as self-directing or conforming, have been correlated with child competency (Shaefer, 1961; Shaefer & Edgerton, 1985). Also, parental beliefs influence their use of discipline and manner of communication (Baumrind, 1989; Radke-Yarrow, 1989; Wasserman, 1967).

Other interactional patterns, including parental teaching activities, are affected by attitudes and beliefs. Della-Prana, Stahmann, and Allen (1966) reported that parents' beliefs concerning a child's competency were correlated with parental teaching activities and that teaching behaviors were associated with actual measures of child competencies. Parental beliefs appear to be impacted by knowledge. Parks and Smerigleo (1986) and Schaefer (1989) reported that parent knowledge of parenting processes influenced their teaching activities and provision of a positive educational environment in the home.

Parents who provide learning experiences, make learning materials readily available, and model learning behaviors have been found to have children who are academically successful (Bradley & Caldwell, 1984; Marjoribanks, 1979b). Parental educational and learning activities are related to their children's educational and learning attitudes and behaviors (Bradley, Rock, Caldwell, Harris, & Hamrick, 1987; Slaughter, 1987). Parents who model attitudes and behaviors, that facilitate learning

and behavioral competency and who provide materials and opportunities may be expected to positively influence their childrens' academic achievement and behavior.

Parental modeling of beliefs and attitudes can have consequences that are problematic for children. For example, parent attitudes toward authority have been found to be associated with juvenile delinquency (Hetherington & Stouwie, 1971; Hewitt & Jenkins, 1946; Lewis, 1954) and parental attitudes concerning alcohol and drug use have been found to coincide with adolescent substance abuse (Barnes, 1979; Barnes & Welte, 1986; Biddle, Bank & Marlin, 1980; Hawkins, Catalano, & Miller, 1992; Simcha-Fagan, Gersten, & Langner, 1986, Tec, 1974; Thompson & Wilsnack, 1987). Parental beliefs have also been correlated with child and adolescent suicidal ideation (Glasser, 1965).

Parent training has incorporated an attitudinal dimension in response to evidence pointing to the importance of perceptions and attitudes on parenting. Included in this evidence are empirical findings that indicate that referrals of children for psychological treatment result from parental attitudes and beliefs, as well as the intensity and frequency of problems presented by the child (Eyberg & Johnson, 1974). Forehand & King (1977) reported that parental attitude is a better predictor of referral for problems than the child's actual behavior. Lobitz and Johnson (1975) observed that parents whose children were referred to clinics for service considered their children deviant even when an independent observer rated the children's actual behavior as not indistinguishable from non-clinic referred children.

Mothers' perceptions of themselves and their children in clinic settings have been found to be different from perceptions of mothers of non-clinic referred children (Griest, Forehand, Wells & McMahon, 1980). Depressed mothers evaluated their children as more behaviorally deviant (Brody & Forehand 1986; Webster-Stratton & Hammond 1988) than mothers who were not depressed. When mothers of conduct disordered children and mothers of normal children were asked to evaluate a videotape of mother-child interaction, the mothers of conduct disordered children noticed substantially more negative behaviors (Lorber, Reid, Simard 1979). Parallel findings were reported by Holleran, Littman, Freund, and Schmaling (1982).

Reilly (1975) reported that parent expectation of adolescent problems was highly correlated with adolescent self-reported problems. This study appears to confirm an assertion made by Sears (1957) that parental positive and negative feelings about themselves influence their relations with their children more than their actions toward the children. These observations provide support for consideration of parental attitudes and beliefs as a component in the determinants of parenting.

Parent training research thus provides support for Dickinson's assertion that parental attitudes and behaviors contribute to child competency and that these behaviors and attitudes can be changed.

Monitoring Social and Academic Behavior

Parental monitoring is frequently referred to in the parenting literature as "supervision" and "surveillance" (Kurdek & Sinclair, 1988). A number of researchers consider monitoring a form of parental control (Dornbusch et al,. 1985; Ginsberg &

Bronstein, 1993). Others address parental monitoring as "structure," and as a "predictable, organized environment" (Hardy, Powers & Jaedicke, 1993, p. 1831). Budd (1985) defines monitoring as " . . . knowing the child's whereabouts and activities." This is a perspective shared by Jensen and Eve (1976) and Nye (1958).

Monitoring is the product of multiple factors. Essential to effective monitoring is the availability of adults and the ratio of adults to children (Dornbusch et al., 1985; Kurdek & Sinclair, 1988). Large family size has been observed to be negatively correlated with academic achievement (Elder & Bowerman, 1963; Rehberg & Westby, 1967; Steinberg, 1990). The larger the ratio of children to adults, the more negative the correlation with child academic performance. (Dornbusch et al., 1985; McFarlane, Bellisaimo, & Norman, 1995).

The nature of the adult-child relationship appears to impact monitoring and child outcome measures. The presence of two natural parents has been found to coincide with higher student grade point average (GPA) (Kurdek & Sinclair, 1988; McCartin & Meyers, 1988). Parental monitoring has been found to relate to parental nurturance. Parental internal locus of control has been associated with parenting practices of frequent monitoring and expressions of nurturance (Luster, Rhoades, & Hass, 1989).

Wahler and Dumas (1989) conclude that failures in parental monitoring, which is associated with problematic outcomes for children, are the result of deficits in parental attending skills. These investigators found that parents failed to attend to both appropriate and inappropriate behavior exhibited by their child. Sansburg and

Wahler (1996) report that maladaptive parenting approaches tended to be related to "poor" or "biased" monitoring, wherein parents fail to attend to behavior considered by professionals as "aversive." Formulated from a different paradigm, Baumrind (1991) asserts that parental attending is the result of parenting style variations. One style, "authoritative," may over-attend while another, "neglectful," may under-attend. Bernieri, Reznick, and Rosenthal (1988) suggest that attending is a reciprocal interaction between parent and child. These investigators point out that attending is a process of synchrony, and they assert that the lack of synchrony results in problematic outcomes.

Monitoring has been found to positively relate to beneficial consequences for children, including behavioral competency and academic achievement (Baumrind, 1991; Darling and Steinberg, 1993; Hess and Holloway, 1984; Vinograd-Bausell et al., 1987). Insufficient parental monitoring has been found to coincide with juvenile delinquency (Jensen & Eve, 1976; Madden & Harbin, 1983; Nye, 1958; Wilson, 1980), drug and alcohol use (Baumrind, 1983), academic failure (Baumrind, 1978, 1993), and conduct problems in children (Loeber & Stouthammer, 1986; Patterson & Stouthammer-Loeber, 1984).

Parental monitoring has been a feature of many parent training activities. These parenting skills have frequently been taught within the behavior management paradigm under such techniques as observation, task analysis, analysis of antecedents, and contingent consequences, (Berkowitz & Graziano, 1972; Moreland, Schwebel, Beck & Wells, 1982; Weisz, Hans, Granger, & Morton, 1995). Teaching attending

skills to parents has been the primary target of some parent training research and practice. Dangel and Polster (1984) developed a curriculum for imparting observation skills in parent training. Parents were trained to attend to specific, well defined child behaviors rather than global incidence of behavior. This training helped parents to define antecedent events and operationalize behaviors in "molecular terms" and contributed to improve child behavior.

Forehand and King (1977) investigated the impact of parent training in attending and behavioral management on parental attitudes and parenting behaviors. Children of parents receiving the training were found to be more compliant than children of parents in the control group. These researchers concluded that the combination of attending skills plus behavior management training was more effective than behavior management training alone. Parents have been trained to enlist others in attending and monitoring via social networks (Kelley, Embry, & Baer, 1979), with the result being improved child behavior.

Monitoring contributes to the prevention of problematic behavior and to the initiation and persistence of desired behavior. Bry (1982) reported on the results of parent training that targeted increasing parental supervision of their child. This investigator found parent training was effective in increasing the target parental behavior and subsequently was associated with both a decrease in undesirable child behavior and an increase in academic competency. Clark (1983) observed a positive relationship between the level of parental supervision and student academic achievement. After parent training, parents were reported to attend more to positive

behaviors of the child, resulting in an increase in desired child behaviors and a decrease in problematic behaviors (Baer et al., 1976; Hall, Lund & Jackson, 1968).

Increasing adult monitoring and providing attention contingent with task performance have been found to be related to increased student on-task behavior (Kazdin & Klock, 1973; Scott & Bushnell, 1974). Increasing parental monitoring has also been associated with improved effort and grades (Bien & Bry, 1980; Blechman, Taylor & Schrader, 1984). Consequently, parents who monitor children's academic and social behavior and act to prevent undesirable behavior may be more effective in promoting social and academic competence in their children than do parents who use less monitoring.

Rewarding School Work and Behavior

The control of behavior by reinforcement is axiomatic. The parenting acts of consequenting child behavior is classified as "parental control" (Maccoby & Martin, 1983; Steinberg, Elmen, & Mounts, 1989). Control has been defined by Hardy et al., (1993) as the degree to which parents directly shape or guide the behavior of the child. This is an operational term similar to Dickinson's definition of the construct, "Rewarding School and Social Behavior" (1996).

The efficacy of rewards in shaping behavior is widely substantiated (Adubato, Adams, & Budd, 1981; Feldman & Kazdin, 1995; Hawkins, et al., 1992). Contingent rewarding has been shown to be effective in modifying a variety of children's behaviors, including academic behaviors (Broden, Beasley, & Hall, 1978; Kazdin & Kloch, 1973; O'Leary, Becker, Evans & Saudargas, 1969.

Parental reinforcement has been evidenced to have a strong impact on child behavior and academic achievement. Dornbusch et al. (1987), in reviewing the literature, observed that control strategies are more effective than other parenting processes such as teaching (lecturing) in influencing student academic performance. The potency of parental reinforcement has been reported by others (Baumrind, 1973; Hess & Holloway, 1984; Hess & McDevitt, 1984; Steinberg et al., 1989) and is congruent with the views of Bloom (1980), who holds that the reinforcing potential of the home exceeds that of the school setting.

Descriptive survey investigations provide some verification of the rewarding potential of parents. Adolescents who perceive their parents as praising good grades and providing other rewards and consequenting poor grades with loss of privileges have been found to report higher GPAs than have other adolescents (Dornbusch et al., 1987). These findings are congruent with patterns identified earlier by Baumrind (1973).

Investigations of Tucker, Brady, Harris, Tribble, and Fraser (1993) found that parents of academically successful students provide more verbal praise for grades than parents of low achieving students. Sansbury and Wahler (1996) investigated maladaptive parenting styles (MPS) and reported that one path toward problematic child outcomes is parental reinforcement of antisocial behavior. Investigators comparing normal and clinic-referred groups (Johnson & Lobitz, 1974; Patterson, 1976; Snyder, 1977) found that problematic families exhibit less frequent prosocial

interactions than do normal families, and are more likely to reinforce deviant behaviors and punish prosocial behavior.

Dornbush et al. (1987) also made observations on patterns of dysfunctional parenting. According to these investigators, the parents under study demanded high academic performance of their adolescents and consequented average performance with punishment. The researchers also noted that high performance was followed by higher parental expectations. As a group, these adolescents' academic achievement was lower than that of adolescents in families where parents used an authoritative parenting style.

Effective application of contingent reward for desired behavior is central to parent training (Dadds, Sheffield, & Holbeck, 1990; Grazino & Damaent, 1992; Sayger, Horne, Walker & Passmore, 1988). Many studies have demonstrated that parents could be trained to modify the behavior of their children in the home setting by contingent use of rewards (Christophersen, Arnold, Hill & Quilitech, 1972; Hall et al., 1972). Parents can be trained to use reinforcement procedures to teach specific academic skills (Broden et al., 1978; Ryback & Staats, 1970) and to influence their children's behavior in the classroom by rewards given at home (Barth, 1979; Cohen, Kenworth, Kleiner, & Libert, 1971; Todd, Scott, Boston, & Alexander, 1976). These findings suggest that efficacy of contingent rewards has been broadly demonstrated in the literature.

Disciplining

Discipline, often identified as parental power or parental control, is a major construct in the parent-child literature (Baumrind, 1973; Hardy et al., 1993; Hess & McDevitt, 1984; Maccoby & Martin, 1983; Marjoriebank, 1979b). Different theorists have produced differing operational definitions of discipline (Kandel & Andrews, 1987; Penn & Barnes, 1982; Steinberg, 1987). Even within one paradigm, operational definitions may vary considerably (Hardy et al., 1993; Loeber & Stouthamer-Loeber 1986). However, there is general agreement concerning the powerful effects of parental disciplinary strategies on child outcome measures (Dornbusch et al., 1987; Hetherington & Martin 1986; McCord, McCord & Howard 1961; Pettit, Dodge, Brown 1988; Putallaz 1987; Reid & Patterson 1989).

Strategies that have been described as "consistent," "firm," "rational," "in synchrony," "predictable," and "nonpunitive" have been found to coincide with positive child and adolescent outcomes, including measures of behavioral and academic competency (Baumrind, 1983; Dornbusch, 1987; Hess & Holloway, 1984; Hess & McDevitt, 1984; Steinberg et al., 1994; Wahler & Dumas, 1989). Consistency between parental figures regarding discipline has been found to correlate with positive child outcomes (Blechman, 1994; Dadds, et al., (1990). Parental disciplinary approaches described as "harsh," "coercive," "excessive use of aversive consequences," "inconsistent," "unpredictable," "failing to take the child's perspective," and "indifferent" have been found to be associated with child and adolescent deficits in

social competency and academic underachievement (Baumrind, 1973; Belsky, 1980; Gilbert, 1972; Joureles et al., 1991).

Parents who incorporate reinforcement principles and social learning principles in their parenting may be more effective than parents who use little or no child management practices. Parents effective in their own self-management attempt to facilitate their children's own self-regulated behavior and self-control (Johnson & McGillicuddy-Delisi, 1983; Steinberg, Morints, Lamborn, & Dornbusch, 1991). Successful parents establish "maturity demand," including performance criteria (Baumrind, 1993), and base behavioral expectations on their internal standards (Bandura, 1977; Baumrind, 1993). By stating their standards, parents can help their children in developing an internal dialogue for behavioral self-management (Michenbaum, 1975).

Ineffective disciplinary strategies have been reported to correlate with adolescent alcohol and drug use (Braucht, Kirby, & Berry, 1978; Gorsuch & Butler, 1976; Kandel, Kesslers, & Marguiles, 1978; Selnow, 1987). Coercive discipline has frequently been identified with juvenile delinquency (Bry, 1982; Gilbert, 1972; Grove & Crutchfield, 1982; Herschi, 1969). Inconsistent parental discipline has been found to be related to specific categories of adolescent psychiatric disorders (Kohn & Clauson, 1956; Parker, 1983; Williams & Lyons, 1976). Harsh and nonempathic parental discipline has been correlated with child abuse (Denicola and Sandler, 1980; Sandler, VanDercar, & Milhoan, 1978) and noncompliant behavior (Barkley, 1981;

Blechman, 1984; Loeber & Stouthamer-Loeber, 1986; Patterson & Stouthammer-Loeber, 1984).

Empirical evidence suggests a relationship between behavior problems and academic problems (Dornbusch et al., 1987; Fesbach & Price, 1984; Gaddy, 1988; Spivack, Swift, & Prewitt, 1971; Steinberg, Lamborn, Darling, Mounts, & Dornbusch, 1994). Consequently, problem behavior and academic behavior often coincide as targets for intervention. Interventions that have proven most effective in reducing behavior problems are based on reinforcement principles (APA Task Force on Behavior Therapy, 1974; Broden et al., 1970; Hopkins, Schutte & Garton, 1971; Johnson & McLaughlin, 1982). Therefore, parents implementing these principles may be more successful in parenting than parents who fail to enact these principles.

Parents have been successfully trained to apply reinforcement principles in managing child behavior (Peed, Roberts, & Forehand 1977; Todreas & Bunston, 1993). Parent training in the use of behavior management has been effective in improving student academic achievement (Coleman, 1973; Schumaker, Melbourne, & Sherman, 1977). Various techniques of behavioral management have been taught to parents through parent training. Parents have successfully implemented contingency contracting, point systems, and token economies (Ayllon & Azrin, 1968; Bailey, Wolf, & Phillips, 1970; Cantrell, Cantrell, Huddleston, & Woodridge, 1969) to bring about desirable child behavior, including academic skills.

Problem Solving and Communicating

Problem solving denotes strategies of thinking and specific knowledge for the purpose of reaching an end or goal but without a specific means for problem solving. (Chi & Glasen, 1982; Derry & Murphy, 1986; Newell & Simon, 1972). Communication is defined in the parent training literature as verbal behavior between parent and child or within the family (Welch, 1976). Teaching problem-solving and communication skills has been incorporated into the parent training as "enhancements" to principles of behavior management (Denicola & Sandler, 1980; Dogherty, 1980; Hughes, 1985; Moreland et al., 1982; Spaccarelli et al., 1992). Parental problem-solving skills have been reported to be positively related with adolescent problem solving (Hess, & McDevitt, 1984), and adolescent problem solving has been found to correlate with academic achievement (Clark, 1973; Rotherman, 1987). There is empirical support indicating that parents of well adjusted children use clear feedback and frequent instructions (Burgess and Conger, 1978). Deficits in parental problem-solving and communication skills has been reported to coincide with disadvantageous outcomes for children and adolescents, including conduct problems (Magen & Rose, 1994) and delinquency (Campbell, 1987). Adolescents self-reporting of alcohol and drug use has been found to correlate with poor problem-solving and poor communication skills (Jurich, Polson, Jurich, & Bates, 1985). From a family systems perspective, disturbed patterns of communication in the parent-child relationship have been correlated with psychiatric disorders among family members (Bateson, Jackson, Haley, & Weakland, 1956).

Parents who have deficits in problem-solving skills experience disadvantaged consequences for themselves. Several investigators (Robin, Kent, O'Leary, Foster, & Prinz, 1977) report a high relationship between responsiveness to parent training and efficacy in problem solving. Parents with effective problem-solving skills appear more responsive to opportunities for therapeutic intervention than parents who are deficit in this skill area. Low problem-solving parents also have been found to report higher levels of perceived stress than do parents who are effective problem solvers. (Grych & Finchman, 1990).

Communication skills of parents have a wide range of consequences for themselves and their children. Problematic parental communication skills, including the excessive use of commands and nonspecific feedback, have been associated with negative outcomes. McMahon, Forehand, and Griest (1981) reported that parents who dropped out of parent training gave more verbal commands to their peers while in the parent training than did parents completing training. Webster-Stratton (1990) noted that parents who had completed parent training, but failed to implement behavior principles, tended to have a deficit in self-management and communication skills. Printz, Rosenbaum, and O'Leary (1978), in an investigation of family communication, found qualitative and quantitative differences in communications between distressed families and non-distressed families. These factors appear to corroborate the conclusions reached by Spaccarelli et al. (1992, p. 2) that training restricted to reinforcement principles was an "ineffective technique to alter cognitive and affective patterns that were underlying parenting behavior." This view was consistent with

Griest et al. (1982), who recommended parent training be focused on changing parent problem-solving skills and parental beliefs.

Initial activities to train parents in problem-solving and communication skills, according to Kazdin, Esveldt-Dawson, French, and Lewis (1987), appeared to lead to equivocal child outcomes. However, these researchers found that the accumulating weight of empirical data supported the relationships between training parents in problem-solving and communication skills and achieving beneficial results for children. Therefore, parents implementing effective problem-solving and communication skills may be positively impacting their children's level of competency.

Parent training that provides parents with skills and knowledge of behavior management principles, problem-solving strategies, and communication skills have been found to improve child behavior (DuPaul & Eckert, 1994), promote positive parental-self evaluations, and increase perceptions of family cohesion (Sayger et al., 1988).

Several different models have been used to teach problem-solving strategies to parents. However, the models offered by D'Zurrilla and Nezu (1982) and Kendall and Braswell (1982) appear representative of the various approaches of problem-solving skills taught in parent training. Parents are trained to define the problem, use means–ends thinking, select and implement specific solutions, and evaluate outcomes (Webster-Stratton, 1990; Yeates and Selman, 1989). Parents implementing these skills report increased problem-solving efficacy, improved attitudes, and increased self-control (Griest et al., 1982).

Based on the research, parents possessing effective problem-solving and communication skills influence their children's competence and social and academic areas in ways different from parents deficit in these skills. Parent training in these skills can improve parental problem-solving and communication.

Parental Nurturing

Nurturance, often characterized as "support," "concern," "warmth," and "care," has been identified as a major construct in parent-child literature (Baumrind, 1973; Dornbusch et al., 1987; Hardy, et al., 1993; Maccoby & Martin, 1983) and connotes parental affect. Parental involvement (England & Stoufe, 1981; Fabes 1994), parental warmth (Reige, 1972; Steward & Zaenglein-Singer, 1984), and parental support (Barber 1990; Maccoby & Martin, 1983; McFarlane et al., 1995) are constructs representing a dimension of parenting as affective. The affective component in the parent-child relationship is significant. Belsky (1984, p. 85) concluded: "surprisingly consistent findings . . . point to the positive role played by attentive, warm, stimulating and non-restrictive mothering in fostering intellectual development." The association of positive parental affect directed towards their children, and the resulting advantages for children's cognitive, academic and behavioral competency, have been corroborated by other investigators (Bee et al., 1982; Bradley & Caldwell, 1976; Estrada, Arsenio, Hess, & Holloway, 1987; Karoly & Rosenthat, 1977; Luster, Rhoades, & Hass, 1989; Ramsey, Farran, & Campbell, 1979).

Frequently, parental affect and child competency have been investigated within the conceptual framework of "attachment" (Ainsworth, Blehar, Waters, & Wells, 1978;

Ainsworth, Bell, & Stayton, 1974; Belsky 1984). These researchers have provided support for the linking of parental affect with child social and cognitive competency as well as atypical developments. Furthermore, parental affect appears to influence child coping as well as development. Child resiliency in the face of stressors has been correlated with positive parent-child relations (Gribble et al., 1993).

Positive effects of parental nurturance have also been found in measures of child and adolescent academic achievement (Baumrind, 1983; Christenson, 1990; Dornbusch et al., 1987; Hess, Holloway, Dickinson, & Price, 1984). However, the nature of the relationship between parental nurturance and child academic performance is obscured by the diverse operational definitions of nurturance. Christenson's (1990) work offers an illustration. After reviewing the literature, she concluded that parental support was associated with positive measures of student academic achievement. However, Christenson (1990, p. 506) then conceptualized support as "encouraging school work, listening to children read, participating in learning activities at home, providing rewards for improvement on daily in-class assignments, and providing opportunities and supplies for learning at home." This operational definition, while overlapping that of Dickinson's (see Appendix B), does not denote the affective element customarily incorporated in parental support or nurturance in the parent-child literature and expressed by Dickinson's framework.

Other positive consequences of parental nurturance have been identified. Rehberg and Westby (1967) investigated the relationship between parental nurturance and educational goals of adolescents and beliefs of self-efficacy. Using survey data,

they observed a significant positive association between adolescent aspirations, expectations, and degree of parental support.

While the literature seems to substantiate the directional and linear effects of nurturance, there appears to be some evidence that the relationship may be curvilinear. Baumrind (1973, 1993) reported a positive relationship between parental support and adolescent competency, including academic achievement. Using survey methods and data from large representative samples, Baumrind found that too little or too much noncontingent nurturance is associated with negative measures of adolescent competency in academic achievement and social adaptation.

The absence of parental nurturance has been related to a range of child and adolescent problems. Juvenile delinquency has been found consistently to coincide with a lack of parental nurturance and or rejection (Alexander, Barton, Shirpo, & Parsons, 1976; Campbell, 1987; Reige, 1972; Steward & Zaenglein-Senger, 1984; Wattenberg & Saunders, 1954). Other harmful consequences have been identified as the result of deficits in parental nurturance, including adolescent alcohol and drug use (Braucht et al., 1978; Gorsuch & Butler, 1976; Kandel & Andrew, 1987; Reilly, 1975; Selnow, 1987; Shiffington, Brown, 1981), child abuse (England & Stroufe, 1981; Fritz, 1985; Letourneau, 1981), and psychiatric disorders (Parker, 1983; Zilbach, 1979).

Interventions targeting the parenting process of nurturing typically focus on modifying parental attitudes. Such programs as Systematic Training for Effective Parenting (Dinkmeyer & McKay, 1976) and Parenting Effectiveness Training (Gordon, 1975) have been reported as effective in altering parental attitudes. These

approaches assume that attitudes are central determinants of behavior. However, there is little evidence of children's behavioral changes subsequent to parental attitudinal change (Dembo et al., 1985). In contrast, some parent training targets behavioral skills and cognition rather than attitudes. Improvement in parent attitude is reported as a by-product of behavioral change in the child and in themselves. Parent training studies (Walters & Gilmore, 1973) report that parents trained in monitoring, the use of contingent discipline, and consistency in reinforcing behavior perceive their interactions with the child more positively than parents without these skills. Furthermore, these investigators also observed a simultaneous decrease in child behavior deficits.

The influences of nurturance on academic achievement appears to be particularly sensitive to the nature of and degree of parental care (Epstein, 1988; Steinberg, Lamborn, Darling, Mounts, & Dornbusch, 1994; Witt, Hannafin, & Martens 1983). Samuels (1986), in developing a typology of risk factors indicative of probable student academic failure, identified the degree or quality of parental support as the essential index of vulnerability for failure. Estrada et al. (1987), employing a longitudinal design with multiple measures, found significant correlations between parental nurturance during preschool years and later measures of child intellectual functioning and academic performance. Parallel findings have been reported by Amato (1989). Utilizing longitudinal survey data, these researchers examined the quality of the affective relationship between parents and their adolescents. They found adolescents' competency in school, social, and academic domains to be related to the

quality of parent relationships. Their conclusions were consistent with earlier findings that highlighted the affective quality of the parent-child relationship as important to positive child outcomes (Belsky, 1984). Others have noted that the nurturance of one parent is often sufficient to mitigate disadvantageous consequences of child conflict with the other parent (Forehand, Middleton, & Longo, 1987).

Investigations in parent training provides additional information on the relationship between parenting competency and parental perceptions. For example, several parent training studies (Peed et al., 1977; Walters & Gilmore, 1973) report that after parents had been trained in monitoring behavior, using moderate and contingent discipline, and consistently in reinforcing desired behavior, parent-child interactions were perceived as being more positive by parents and child behavioral deficits decreased. Analogously, Volenski (1995), building upon the behavioral paradigm of parent training with social learning principles, reported positive modifications of parental attitudes concerning support, acceptance, and warmth.

Self-Managing

Parental competence and emotional functioning are related to childrens' emotional, social, and academic competencies (Blount, Davis, Powers, & Roberts 1991; Melamed, 1993). Adult competency appears related to self-regulation (Bandura, 1977) and effective mastery of tasks (Kanfer & Gaelick, 1986). Self-regulated behaviors are the product of immediate experiences and the evaluation of these experiences (Bandura, 1977). Performance standards, as a basis for self-evaluations, contribute to self-beliefs concerning one's capabilities to perform a behavior (Bandura,

1986). Parents may influence children by their performance standards and self-evaluations (Bandura & Kupers, 1964). The use of behavioral principles to manage one's own behavior is self-management (Kanfer & Gaelick, 1986). Parental self-management competencies may have an impact on children; therefore, assessment of parental self-management activities may assist in identifying effective parenting styles.

Because performance standards are important in self-evaluation, specific goal setting strategies are important (Hayes et al., 1985; Rokeach, 1985). Goals may be pursued more persistently by persons holding beliefs of positive self-efficacy than by those holding contrary beliefs (Bandura, 1986; Gettinger, Doll, & Salmon, 1994; Schunk, 1989). Behavioral-management strategies that facilitate self-management include goal setting, self-monitoring, self-evaluation, and self-reinforcement (Kaplan, 1991). Parents who utilize self-management strategies have children with higher academic performance in school (Ferguson, 1981; Schaefer & Edgerton, 1985). Parents demonstrating self-efficacy may function as models for their children. Wentzel (1989) reported a significant positive correlation between parents' self-management and their children's efforts to be dependable, responsible, and their GPAs. Pulkkinen (1982) found a positive correlation between parents' dependability and self-control and these attributes in their children. Schaefer (1991) observed that the ability to set and accomplish a goal among adolescents and to work with others were positively related to academic achievement.

Parental deficients in self-management skills have been reported to coincide with negative outcomes for children and adolescents. Parents lacking in these skills

have disorganized households (Doherty, 1980; Hardy et al., 1993) and higher levels of stress (Dadds et al., 1990; Egan, 1983). Parents who are ineffective in managing stress have been reported to have children with a variety of problems (Grych & Fincham, 1990; Joureles et al., 1991; Melamed, 1993). Parental insufficiency in self-regulation skills has been associated with problematic outcomes for children, including juvenile delinquency (Doherty, 1980; Klein, Alexander, & Parsons, 1977; McGuire & Earls, 1991), psychiatric disorders (Jenkins, 1966; Miller, 1975; Schrut, 1964; Williams & Lyons, 1976), child abuse (Denicola & Sandler, 1980), and academic underachievement (Baumrind, 1989).

Parent training in self-management as a means of changing children has been somewhat limited. Typically, self-management skills have been offered as an adjunct to training in reinforcement principles applied to child behavior management. However, self-management training has shown positive outcomes for parents (Glynn, 1981; Wells et al., 1980). For example, Glynn et al. (1981) used self-management training of parents to improve anger control and marital distress. These investigators also compared the effects of behavioral management and self-management components in parental training. Parents receiving training in both behavior management and self-management demonstrated more gains then did parents receiving only behavior management training (Sanders & Glynn, 1981).

These findings have been indirectly supported by the work of other researchers. Webster-Stratton (1990) noted that parents who completed parent training, yet who had poor self-regulatory skills, continued to display poor problem-solving and anger

control in the home. Consequently, for some parents, self-management deficits negated the treatment effects resulting from parent training. Volenski (1995) investigated the efficacy of social learning principles on parent self-management and child behavior management. Volenski provided evidence that behavior management principles, combined with self-control training, goal setting, and expectations of success, improved parent training benefits for both parents and children. Parents utilizing positive self-management as result of parent training are generally more effective in their own lives and in the behavioral management of their children than are parents deficit in self-management skills.

Teaching and Motivating

Hess and McDevitt (1984) state that as socialization agents parents enact two primary roles. First they alter or shape social behaviors and then develop cognitive competence in their children. Both roles, according to Hess and McDevitt (1984), require competence and authority. These views are congruent with Dickinson's (1996) model of parenting styles, which recognizes the importance of parental teaching and motivating activities. Hess and McDevitt (1984), in their examination of parental teaching, conclude that parental teaching is composed of three functions: focusing attention, engaging the child in the task, and influencing the child's self-appraisals. Thus, parental teaching parallels successful instruction in the classroom (Ferritor, Buckholdt, Hamblin, & Smith, 1972).

Parental teaching may be categorized as two approaches: direct and indirect (Hess & McDevitt, 1984). Direct teaching is demonstrating and directing while

indirect is questioning (Hess & McDevitt, 1984). A number of investigators emphasize questioning in hierarchical form as the essential teaching process (Bruner, 1975; Hoffman, 1975). Others stress parental teaching by lecturing, explicit directions, and verbal commands (Laosa, 1980). Some investigators highlight the parental activities of planning and monitoring as critical teaching processes (Price, Hess, & Dickinson, 1981). All of these strategies have produced positive outcome measures for children's learning, while other parent-child teaching interactions seem to be associated with undesirable consequences.

Parents with inadequate skills in teaching may see teaching as punishing for both parent and child (Thruston & Dasta, 1990). Their adolescents may respond negatively to parental praise (Kroth, Whelan, & Stables, 1970), thus decreasing the probability of a positive parental-teaching exchange. Additionally, parent teaching without structure and organization (Schultz, 1987) may contribute to problematic interactions. However, reviews of the literature generally conclude that parent teaching is broadly beneficial for the child (Kochauska, Kuzynski, & Radke-Yarrow, 1989; Shapiro, Forbes, 1981; Vinograd-Bausell, Bausell, Proctor, & Chandler, 1986).

Student achievement has been found to be related to parental teaching and learning experiences provided in the home. However, home environments differ in regard to parental attitude and conditions in the home that facilitate child learning (Christenson, 1990, Ysseldyke, Thurlow, & Christenson, 1991). Several investigators have studied family and home environments in which learning and education are emphasized. Using longitudinal data, Durkin (1966) and Clark (1976) independently

reported a positive relation between parent and child reading together, availability of reading materials, and child observation of adult reading with the onset and level of reading skills of children. Jensen (1967) observed that parental and child conjoint learning activities were strongly correlated with the academic performance of the child. Clark (1976), Bradley and Caldwell (1978), Bradley et al. (1987), and Bradley, Tucker, Harris and Tribble, (1992) also reported a significant relationship between availability of learning resources in the home and the child's academic achievement. Systematic parent tutoring activities, in addition to provision of learning materials and varied learning opportunities, have been found to coincide with children's academic achievement (Bradley et al., 1987; Dave, 1963; Marijoribanks, 1979a; Slaughter, 1987; Tizard, Schofield, & Henison, 1982).

Parents have been taught to use reinforcement to motivate children and modify their academic behavior in conjunction with modeling and corrective feedback to improve spelling and specific reading skills (Koven & LeBow, 1973; Spadafore, 1977; Staats, Minke, Finley, Wolfe, & Brook, 1964; Staats & Butterfield, 1965). Reading problems have been reported to have improved in elementary school age readers after parents were trained to provide contingent praise, corrective feedback, and model correct responses (Broden et al., 1978; Ryback & Staats, 1970).

Cline (1974) demonstrated the efficacy of teaching reinforcement principles to parents and the beneficial consequences for their children. Parents of students (K-3) were successfully trained in principles of reinforcement in teaching math and reading. These parents showed an increase in parent-child interactions, and the children's rate

of correct responses in both math and reading increased. Parents have been trained, using behavioral strategies, to modify the rate at which their children respond. Koven and LeBow (1973) taught a parent in the application of contingent reinforcement. The parent reinforced the child for correct and quick responses during reading and spelling tasks. The investigators reported that child improved performance in both academic domains.

Parents have been trained in behavioral techniques that have been demonstrated to improve instruction, including the use of instructional prompts, physical prompts, modeling of correct responses, positive reinforcement for correct responses, and procedures for fading prompts and corrective procedures (Bergan, Newmann, & Karp, 1983; Rosenthal & Zimmerman, 1983; Sulzer-Azaroff & Mayer, 1977; Thruston & Dasta, 1990). As a result of training, parents have learned to structure tutoring sessions and homework time and to utilize contingent reinforcement to improve academic performance (Berger, 1981; Shapiro & Forbes, 1981). These interventions, in tandem with teaching activities, enhance student academic achievement. Parents implementing these strategies may improve their children's overall behavioral and academic competencies.

Measurement Instruments

Assessment instruments and methodologies measuring influences of the home environment on children and adolescents are varied. Grotevant (1989) reviewed 70 measures of parent-child relations and reported that the instruments reviewed had assessed over 450 different dependent variables. They characterized the reviewed

measures as lacking precise operational definitions and concluded that the deficit in defining variables made comparisons among instruments questionable. Sabatelli and Waldron (1995), in discussions about the nature of parent-child assessment, also expressed concern regarding the adequacy of operational constructs in parent-child assessment. They challenged the feasibility of theory building, given the confounding issues surrounding ambiguity of operational constructs. Earlier Dembo et al. (1985), in their review of the literature, suggested that instruments were selected for parent-child research more on the "biases" of the theoretical paradigms guiding the research design than on the psychometric properties of the instruments or the hypothesized relations among variables.

Even though many instruments have problems in regard to reliability and validity, some assessment methods have proven to be effective in predicting outcomes. For example, Dave (1963), Wolf (1964), and Bradley and Caldwell (1976, 1978) have implemented systems for effective assessment of home environments. Typically, these approaches share common elements. Data are usually gathered in the home setting by trained evaluators using semistructured interviews or questionnaires. In-home assessment strategies have yielded statistically powerful associations between parenting processes, home contents, and outcome measures. However, these methodologies are impractical (e.g., time, cost) for implementation by school personnel and fail to provide useful remediative intervention information. Although less empirically rigorous than the methods developed by Wolf (1964), a variety of measurement instruments are available to the practitioner and researcher. These measurements tend

to be shaped by either a sociological orientation or psychometric models. Measures influenced by the sociological orientation tend to assess environmental factors while the psychometric models evaluate both environmental and intrapsychic phenomena. Frequently, these instruments assess more than one dimension of the parent, home, and child relationship. A review of the most popular instruments used to measure parenting styles and elements of the home environment is provided in Appendix B.

Statement of the Problem

The purpose of the study was to determine the reliability and predictive validity of the HEP items and scales. In assessing the psychometric properties of the HEP, descriptive and nonparametric statistical analysis was applied to data gathered from samples taken from three groups: (a) parents of high achieving students, (b) parents of low achieving students, and (c) parents of students receiving mental health services. Because of the limited sample size of 24, the Mental Health Group was merged into the two achievement groups.

Research Questions

It is asserted that the Home Environment Profile possesses the psychometric properties of reliability and validity. The following research questions were addressed:

1) Do items form parenting styles (scales) according to judges?

2) Are the HEP items reliable?

3) Are the HEP items valid?

4) Do HEP items predict their scale scores and the total HEP scores?

5) Are the HEP scales (parenting styles) reliable?

6) Are the HEP scales (parenting styles) valid?

7) Do the HEP scales discriminate between students with high and low achievement?

CHAPTER III

METHOD

Subjects

The subjects were 196 parents of students enrolled in the 3rd, 4th, 5th, 6th, and 7th grades. Children were students or clients active in public and private schools and mental health facilities located in Illinois, Kentucky, and Tennessee. Organizations were selected to represent all socioeconomic groups. Participating schools and mental health organizations came from rural Appalachian communities, small towns, suburban communities, and urban centers. The parents represented Caucasian, African American, Latino, and Asian groups. All participation was in compliance with the standards of the Office of Research, the University of Tennessee.

Initially, the subjects (N = 196) in this study consisted of three groups of parents: (a) parents of high-achieving students making As and B+s (n = 127), (b) parents of low-achieving students making Cs, Ds, and Fs (n = 69), and (c) a group of parents whose children were being served by mental health facilities for emotional and behavioral problems (n = 24). Due to insufficient sample size, the Mental Health group was combined with the high and low groups for a total sample of 196. Parents of students with B grade averages were excluded.

Grade averages were determined by a review of the student's transcript. Review of transcripts were performed by field coordinators. Parents with children having grades of at least 75% As or 75% B+s were placed in the high-achieving student group, and parents with children having grades of at least 75% Cs, or 75% Ds

or 75% Fs were placed in the low-achieving group. Students with Bs were excluded. Criteria for eligibility of school and mental health program participation were based on the organization's allocation of resources to implement the study and commitment to adhere to the procedures and safeguards of the investigation.

From the Mental Health Group, 4 subjects were included in the High Achievement Group (n = 127) and 20 subjects were included in the Low Achievement Group (n = 69) for a total sample of 196. Mental health organizations were all accredited by the Joint Commission of Health Care Facilities and/or Family Services of America. All students in the Mental Health Group were identified by the treatment facility as emotionally disturbed and behavioraly disordered, that is, diagnosed as per DSM-IV or ICD-9. Data on the demographics of the samples were also collected (see Table 1).

The demographic data indicate a positive skew in the total sample distribution. A majority of the sample had at least a high school education, earned an income of at least $26,000, were married, and were mothers (as opposed to fathers). Table 1 indicates several demographic disparities between the parents of the high achieving and low achieving students. For example, a majority of the parents with a college degree had high achieving students; an overwhelming majority of parents with incomes $41,000 and above had high achieving students; and a substantial majority of parents who were married had high achieving students. Conversely, parents with only a junior high education had a majority of low achieving students; parents with

Table 1.

Sample Demographics - Parents and Students

Parent Variables	% and Sample Size High Achievement	% and Sample Size Low Achievement	% Sample	Sample Size
Education				
Junior High	29.4* n = 5	70.6* n = 12	8.9	17
High School	49.5 n = 45	50.5 n = 46	47.4	91
College Graduate	88.1 n = 74	11.9 n = 10	43.8	84
	Subtotal 124	Subtotal 68		Total 192
Income				
below 10,000	26.8 n = 11	73.2 n = 30	21.8	41
10,000-25,000	52.4 n = 22	47.6 n = 20	22.3	42
26,000-40,000	57.1 n = 20	42.9 n = 15	18.6	35
41,000-55,000	100.0 n = 18		9.6	18
56,000 and above	96.2 n = 50	3.8 n = 2	27.7	52
	Subtotal 121	Subtotal 67		Total 188
Marital Status				
Divorced	38.7 n = 12	61.3 n = 19	15.9	31
Separated	10.0 n = 1	90.0 n = 9	5.1	10
Unwed	28.6 n = 2	71.4 n = 5	3.6	7
Married	76.2 n = 109	23.8 n = 34	73.3	143
Widowed	50.0 n = 2	50.0 n = 2	2.1	4
	Subtotal 126	Subtotal 69		Total 195
Status of Respondent				
Mother	64.2 n = 102	35.8 n = 57	83.2	159
Father	70.8 n = 17	29.2 n = 7	12.6	24

(table continues)

Table 1. (continued)

Parent Variables	% and Sample Size High Achievement	% and Sample Size Low Achievement	% Sample	Sample Size
Grandparent	100.0 n = 2		1.0	2
Foster parent		100.0 n = 1	.5	1
Step parent		100.0 n = 3	1.6	3
Guardian	100.0 n = 2		1.0	2
	Subtotal 123	Subtotal 68		Total 191
Gender of Student				
Female	72.0 n = 67	28.0 n = 26	47.7	93
Male	58.8 n = 60	41.2 n = 42	52.3	102
	Subtotal 127	Subtotal 68		Total 195
Status of Student				
School	71.5 n = 123	28.5 n = 49	87.8	172
Mental Health	16.7 n = 4	83.3 n = 20	12.2	24
	Subtotal 127	Subtotal 69		Total 196
Grades of Student				
A	37.8 n = 74	0	37.8	74
B+	27.0 n = 53	0	27.0	53
C	0	21.9 n = 43	21.9	43
Ds & Fs	0	13.3 n = 26	13.3	26
	Subtotal 127	Subtotal 69		Total 196

* Note. Row percentages were computed across high and low achievement groups.

incomes less than $10,000 had a majority of low achieving students; and parents who were divorced or separated had a majority of low achieving students.

Instrument

The Home Environment Profile (HEP) with accompanying written directions for self-administration was presented to parents by the coordinators. The HEP (Appendix A) is a 69-item Rating Scale used by parents to rate their own behavior and contents of the home environment. The instrument has questions (stimulus variables) that are "explicitly defined" and "descriptive of specific behaviors," as suggested by Thorndike (1977, pp. 365-366). Two examples of questions are "In the past week, I talked to my child about what he/she is studying" and "In the past month, how many times have you made a schedule of things you must do during the day and put them in priority?" The stimulus variables with these characteristics contribute to higher test reliability but at the cost of increased length of items and increased reading level (reading level of 15 randomly selected items average 5.6 grade equivalent, with a range from 4.3 to 7.8).

The response choices (answers) consist of 5 options. Most of the stimulus items have a response variable that measures the frequency of occurrence (always, almost always, sometimes, seldom and never). Some items measure the frequency in actual numbers (1, 2, 3, 4, 5 or more). A few items (Q4, Q12, Q20, Q44) are descriptors of behavior arranged from the most desirable to least desirable. Thorndike (1997) equates behavioral descriptors with "the presence or absence of trait"; it resembles a behavioral checklist.

The HEP represents nine parenting styles initially formed on the basis of face validity (Dickinson, Personal communication, 1996). Two volunteers were recruited to put the items in the parenting styles (scales) as defined by Dickinson. Volunteers were Ph.D. students in the Social Sciences and were parents. Only two judges were used due to limited responses to requests for volunteers.

Each rater was given a copy of the operational definition for each parenting style (see Appendix C) and instructed to read it carefully. At the first interview with the judges, information concerning volunteer schedules and appointment times were obtained. They were to sort index cards, one HEP question printed on each card (see Appendix D) into trays, each labeled with an operational definition of a parenting style (see Appendix C). Additionally, volunteers were oriented to the study by reading the letters to the Executive Officer, Coordinators, and Parents (Appendices E1 to E9). In the second interview, the definitions were discussed, but no examples were provided. The volunteers were then placed in separate rooms, and each was directed to carry out a Q-sort procedure. Items of the demographic component (i.e., Q70 to Q75) were excluded from this classification.

After all the cards had been sorted by each rater, each tray was surveyed and the item number was recorded by the investigator. Only the items on which the judges agreed were placed in the scales. Items for which the judges disagreed (i.e., Q2, Q13, Q40, Q60, and Q68) were placed together in a miscellaneous category. Interrater agreement for the total instrument was determined by the following formula:

$$\frac{\text{Number of Agreements}}{\text{Number of Agreements + Disagreements}} \times 100 =$$

To adjust for rater guessing while classifying items, the Kappa (k) reliability coefficient was calculated. The obtained coefficient, k = .84, for the total instrument exceeds the minimal Kappa recommended by Sattler (1988) as indicative of interrater reliability.

Scales formed by the procedure described in the previous paragraph were as follows:

1. The Modeling Attitudes and Behaviors Scale assesses parental beliefs and attitudes indicative of interest in education and learning, as well as beliefs and attitudes toward self and work.

2. The Monitoring Social Behaviors Scale assesses parental attending to and acting towards the child to prevent problem behavior and to shape academic and prosocial behavior.

3. The Monitoring Academic Behaviors Scale assesses parental attention to and supervision of studying and homework activities.

4. The Rewarding School Work and Behavior Scale assesses parental use of behavior management principles to guide child behavior in the school and community.

5. The Disciplining Scale assesses the parental use of rules and behavioral management principles to manage child behavior.

6. The Problem-Solving and Communicating Scale assesses parental use of problem solving strategies and effective communication skills.

7. The Nurturing Scale assesses parent-child interaction indicative of parental interest, care, and concern for the child.

8. The Self-Management Scale assesses parental application of behavioral principles for self-management and facilitation of child's self-management.

9. The Teaching and Motivating Scale assesses parental processes of direct instruction and environmental structuring to facilitate learning.

A Student Information Form (SIF; see Appendix F) was completed by the coordinator for each student whose parent had completed the HEP. Student grades were rated by the coordinator based on student transcripts, and scores were awarded in the following manner: 1 for 75% As, 2 for 75% B+s, 3 for 75% C, and 4 for 75% Ds and Fs.

Assessment Procedure

The HEP, with written directions for self-administration (see Appendix A), were distributed by a designated coordinator in each research site. Each site was sanctioned by an Executive Director such as school superintendents, headmasters, and hospital administrators to implement the study (see Appendices E1 and E2). Each coordinator was a volunteer (see Appendices E3, E4, E5, E6). The investigator individually trained each coordinator, and the coordinator then implemented the assessment protocol (see Appendices E3, E4, E5). Each parent was fully informed concerning the purpose and nature of the study (see Appendices E7, E8, and E9). Coordinators requested nominations of subjects from the professionals, such as guidance counselors, in the organization who were familiar with students' academic history and the children's parents. Each nominated parent received a packet containing a letter of support for participation from the Chief Executive Officer, a letter

explaining the study from the investigators (Appendices E7 and E8), a consent form (Appendix E9), a HEP, and a return envelope. A subset of parents, $\underline{n} = 30$, located in one research site were provided a modified versions of the "Dear Parent or Guardian" letter (Appendix E4). These parents, making up the reliability sample, were informed that they would be receiving a second copy of the HEP, two weeks after completing the first HEP. Only parents of high achieving students without behavior or emotional problems, as defined by the school coordinator, were selected for the reliability sample. This sample was selected by the field coordinator to increase the rate of parent participation in the reliability investigation.

Packets were returned to the coordinator. The coordinator reviewed the academic transcripts for each represented student and completed the "Student Information Form" (see Appendix F) for each student. The SIF categorized student grades in 4 groups: 75% As, 75% Bs, 75% Cs, and 75% Ds and Fs. The coordinators attached and stapled the students SIF to the parent completed HEP. The coordinators expunged all personal identifying information from the SIF and HEP. Coordinators collected signed "Parental Informed Consent Forms" in a separate folder, precluding any collation of consent documents and HEPs or SIFs. The coordinators, in the site collecting the reliability data, collated two complete HEPs and one SIF per participant. The investigator collected the packets from the coordinators.

Scoring Procedures

All assessment items (Q1 to Q69) of the HEP were scored for response rank value, 1 through 5. Items marked with multiple responses or that omitted responses were scored as missing data. In reformatting the HEP, two items (Q21 and Q29) inadvertently had the fifth response labeled respectively as "Does not apply" and "Not necessary to check." Because of this oversight, ratings of 5 on these items then were treated as missing data, and only the ratings of 1-4 were used for the analysis. HEPs with greater than 50% missing data ($\underline{n} = 0$) or unaccompanied by a signed parental consent ($\underline{n} = 9$) or without attached SIFs ($\underline{n} = 5$) were not scored. For correlation analysis the grades recorded on the SIFs were scored 1 through 4. Scores ranged from 1 for As, 2 for B+s, 3 for Cs, and 4 for Ds and Fs. SIF scores were regrouped for the purpose of logistic regression analysis. As and B+s were categorized as the High Achievement Group ($\underline{n}$ =127) and Cs, Ds, and Fs, as the Low Achievement Group ($\underline{n}$ = 69) (see Table 1, "Grades of Students").

Statistical Procedures

The SPSS program was used to perform statistical analysis. Data input was consistent with the scoring 1 (lowest) to 5 (highest) for items of the HEP. Data input into the SPSS program of SIF scores were encoded with the scoring 1 (lowest – Ds and Fs) to 4 (highest – As). The encoding of the SIF scores was reversed from the SIF scoring form to facilitate the statistical analysis and to conform to the direction of relationships between the variables as presented by Dickinson (1996). All data were rounded to the third place for purposes of analysis.

Scales were established by inter-rater agreement. As previously reported, inter-rater agreement for the total instrument was calculated arithmetically by dividing the number of paired agreements by the number of paired agreements plus the number of paired disagreements. The quotient was multiplied by one hundred. The Kappa Coefficient was then calculated to account for rater guessing.

Item reliability was estimated by the test-retest method. Items were correlated using Spearman's Rho with items generated from a second administration of the HEP obtained from the reliability sample.

Scale reliability was estimated using the same method and analysis employed in the item analysis. Items clustered as scales were correlated (Spearman's Rho) between the two administrations of the HEP in the reliability sample.

The predictive validity of each item was estimated by Spearman's Rho correlation coefficient. Item responses from the HEP were correlated with the dependent variable rank of grades 1 through 4.

Scales were constructed based upon item clusters established by interrater agreement. Scales constructed were then correlated (Spearman's Rho) with the dependent variable Achievement using the total sample, $\underline{N} = 196$. To evaluate the criterion referenced test characteristics of the HEP, scales constructed by interrater agreement were then correlated (Spearman's Rho) with the dependent variable. These correlations were done in two ways: (a) with only those items that were valid and reliable reflected in the scale scores, and (b) with all items agreed upon by the judges reflected in the scale scores.

The predictive validity of scales was further evaluated by scale to achievement logistic regression analysis. To perform this procedure the dependent variable grades was dichotomized, As and B+s were assigned to one group and coded 1 and while Cs, Ds, and Fs were assigned to another group and coded 0. For the independent variable, scores on each HEP scale were first transformed to a 1 to 5 scale to conform to the 1 to 5 scale for the dependent variable. Then, a median value was determined for each HEP scale. Values from 1 up to the median were grouped as 0 and values greater than the median and up to 5 were grouped as 1. The dichotomized independent variable was regressed against the dichotomized dependent variable. The differences in the number of items in each scale does not affect the logistic regression analysis, because the procedure's use of linear transformations makes directionality the important feature of the data. (Broach, Personal communication, January 6, 1998).

Item to subscale and item to total scale relationships were determined by correlating (Spearman's Rho) responses to each item with rank scores on its respective scale and with rank scores of the total instrument.

The SPSS program permits manipulation of data sets beyond limits customarily found in traditional correlational analysis (Broach, Personal communication, December 29, 1997). Spearman's Rho correlation coefficient analysis is generally recommended for samples smaller than 30 (Ferguson, 1981; Garrett, 1962). These restrictions are the result of the problem of ties in ranks and insufficient variance in ranks (Siegel, 1956). Norisis (1996) reports that the SPSS program is able to

manipulate data sets larger than 30 effectively and accommodates for ties through a tiered hierarchy of ranks.

In determining item and subscale correlation the following statistical manipulations were carried out by the SPSS program. Each HEP item and its scale score were placed in two columns, with one column being individual items and the second column the total scale score that the item belonged to. The rows represented individual subjects. For each subject, a response was recorded in the first and second column. After the raw data are constructed with the Spearman's Rho command, the SPSS program looks at the columns one at a time and ranks from lowest to highest. Ties are given their own rank. Each subject is given a rank of where they fall in the total distribution for items in a column. The program then goes to the second column and ranks scale scores from lowest to highest and indicates where an individual subject falls on the scale score distribution. Then these raw values are replaced by their rankings, where they fall from low to high in the total distribution so that each subject has a rank. The data are then used for the Spearman's Rho correlation, checking the rank of each subject item with the direction of the scale score. A parallel procedure is followed to calculate the item to total scale correlation. (Broach, Personal communication, January 5, 1998).

CHAPTER IV

RESULTS

Inasmuch as responses to the HEP questions could be considered either ordinal and interval, the more conservative interpretation was chosen in this study. All analyses used either ordinal or categorical data.

The first analysis consisted of placing the HEP items in the 9 parenting scales, and the second was a test-retest analysis of reliability of items and scales. The items and scales were then correlated with student grades. The latter was done to assess the predictive validity of items and scales. Each of the items was also correlated with its' respective scale and with the total instrument. An additional analysis consisted of a logistic regression analysis using scales that correlated significantly with achievement. This was done to determine which combination of scales best predicts academic performance. The rationale for each of these analyses will be presented with the respective analyses. Because the HEP is based upon treatment validity, items were evaluated regarding psychometric properties for inclusion into scale structure.

Research Question One

Do items form parenting styles (scales) according to judges?

Two independent raters categorized each item of the HEP by using a forced choice Q-sort method. This method may be used as an alternative to factor analysis in scale construction, according to Kerlinger and Kaya, (1970). Judges were Ph.D. students in social science who were also parents. One was a male and the other a female. Judges had no significant background in child development.

The judges were given the 9 operational definitions of the parenting styles (see Appendix C). They were also given instructions for placing items in the 9 styles (see instructions in Appendix D).

Table 2 shows the composition of the 9 parenting styles (subscales), based on judges' agreement. Items that were not agreed upon by the judges are listed in Table 2 under the category of "No Interrater Agreement." The overall agreement was 93% for all of the items. When an adjustment for guessing was calculated, a Kappa coefficient of k=.84 was found. The judges did not agree on the placement of 5 items (Q2, Q13, Q40, Q60 and Q68), and these items were dropped from scale analysis.

Research Question Two

Are the HEP items reliable?

To conduct this analysis, a Spearman's Rho correlation coefficient was done on the rankings of the HEP responses on a test-retest basis. The Spearman's Rho has been used in several studies to determine the reliability of ordinal data (Bradley & Caldwell, 1982; Bradley et al., 1987; Dave, 1963).

Thirty parents completed the HEP at two-week intervals. Two items had insufficient variance, thus preventing the use of Spearman's Rho (Siegle, 1956). In order to use these items, the percent agreement was calculated and used as equivalent to the Spearman's Rho coefficient as recommended by (Hayes, 1992).

Table 2.

Summary Table: Item Statistics

Subscales	Item Test-Retest Reliability	Item Predictive Validity	Item- Subscale Correlation	Item-Total Scale Correlation
Modeling Attitudes & Behaviors				
Q3	.75**	.29*	.60**	.21*
Q4	.85**	.50**	.81**	.51**
Q9	.87**	.37**	.72**	.34**
Q12	.87**	.06	.26*	.00
Q17	.73**	.06	.28*	.01
Q19	.85**	.14*	.63**	.15*
Q20	.79**	.09	.51**	.14
Q41	.48*	.23**	.74**	.27**
Q42	.64**	.15*	.26*	.14*
Q44	.93**	.22*	.49**	.24**
Q50	.82**	.23**	.41**	.20*
Q53	.90**	.26**	.68**	.30**
Q61	.70**	.15*	.60**	.18*
Q66	.72**	.24**	.63**	.23**
Monitoring Social Behaviors				
Q18	.75**	.24**	.40**	.24**
Q21	.96†	.32**	.76**	.29**
Q27	.97†	.25*	.74**	.20*
Q29	.69**	.41**	.78**	.41**
Q34	.68**	.35**	.64**	.29**
Q58	.54*	.32**	.51**	.32**
Q69	.56**	.17*	.58**	.12

(table continues)

Table 2. (continued)

Subscales	Item Test-Retest Reliability	Item Predictive Validity	Item-Subscale Correlation	Item-Total Scale Correlation
Monitoring Academic Behaviors				
Q7	.55**	.34**	.78**	.32**
Q8	.83**	.37**	.76**	.37**
Q22	.63**	.08	.44**	.06
Q31	.80**	.38**	.73**	.37**
Q38	.28	.37**	.55**	.28**
Q55	.98**	.26**	.78**	.29**
Rewarding School Work & Behavior				
Q11	.59**	.37**	.87**	.36**
Q37	.05	.19*	.56**	.46**
Q39	.92**	.30**	.84**	.32**
Q64	.63**	.48**	.81**	.49**
Q67	.03	.05	.85**	.30**
Disciplining				
Q14	.76**	.03	.70**	.02
Q15	.87**	.13	.63**	.08
Q25	.79**	.25**	.73**	.25**
Q33	.52*	.22*	.66**	.17*
Q35	.72**	.28**	.51**	.26**
Q43	.72**	.19*	.78**	.20*
Q48	.69**	.22*	.83**	.21*
Q56	.68**	.19*	.22*	.16*
Q57	.47*	.03	.28*	.08
Q59	.65**	.16*	.22*	.11
Q62	.45*	.19*	.23*	.16*

(table continues)

Table 2. (continued)

Subscales	Item Test-Retest Reliability	Item Predictive Validity	Item-Subscale Correlation	Item-Total Scale Correlation
Problem Solving & Communicating				
Q30	.80**	.15*	.47**	.22*
Q46	.91**	.19*	.43**	.14*
Q52	.74**	.07	.31**	.08
Q65	.78**	.11	.71**	.09
Nurturing				
Q1	.65**	.35**	.63**	.34**
Q23	.52*	.27**	.85**	.28**
Q26	.84**	.25**	.87**	.25**
Q49	.59**	.32**	.81**	.27**
Q54	.75**	.21*	.36**	.19*
Self-Managing				
Q5	.80**	.15*	.78**	.17*
Q6	.79**	.16*	.71**	.17*
Q10	.84**	.30**	.48**	.32**
Q28	.78**	.05	.67**	.03
Q32	.81**	.00	.19	.00
Q51	.82**	.06	.47**	.00
Teaching & Motivating				
Q16	.75**	.05	.38**	.04
Q24	.03	.05	.73**	.32**
Q36	.79**	.16*	.71**	.18*
Q45	.83**	.19*	.67**	.22*
Q47	.79**	.02	.34*	.04
Q63	.60**	.39**	.88**	.38**

(table continues)

Table 2. (continued)

Subscales	Item Test-Retest Reliability	Item Predictive Validity	Item-Subscale Correlation	Item-Total Scale Correlation
No Interrater Agreement				
Q2	.67**	.03	.00††	.06
Q13	.84**	.02	.00	.03
Q40	.75**	.48**	.00	.05
Q60	.70**	.35**	.00	.04
Q68	.69**	.19*	.00	.03

* $p < .05$
** $p < .001$
† approximate to correlation
†† correlations not available

Table 2 shows that 65 of the 69 items correlated significantly at the $p<.05$ level of significance. In order to determine the reliability of the instrument, Spearman's correlation coefficients were transformed using Fisher's z. Fisher's z allows correlation coefficients to be manipulated as interval data (Guilford, 1965). The Fisher's z coefficient for all items, excluding the items dropped because of reliability, was 1.03. The mean of z coefficients was determined and converted, by using conversion tables, into an instrument correlation of $r = .77$.

Research Question Three

Are the HEP items valid?

This question was answered by conducting a Spearman's Rho between the HEP items and the achievement of students. When a Pearson Product Moment Correlation cannot be conducted because of the lack of continuous data, Sattler (1988) recommends the Spearman's Rho. According to Bohrnstedt (1970), the Spearman's Rho can be ". . . taken to be the validity coefficient."

For this analysis, all items listed in Table 2 were used, including those with nonsignificant reliabilities. In order to conduct the Spearman's Rho, student grades were converted to a 4 point scale for data analysis. Students with 75% As were assigned 1; those with 75% B+s were assigned a 2; students with 75% Cs were assigned a 3; and students with 75% Ds and Fs were assigned a 4. Numerical assignments were considered as indicating rank rather than interval. As indicated in the statistical procedures section of the SPSS manual (Norisis, 1966) these scores were

coded in the computer analysis so As were assigned 4, and Ds and Fs were assigned 1.

Table 2 shows the correlations between HEP items and achievement. Approximately 73% of the items, or 51 out of 69, were found to be significantly correlated, with correlations ranging from .14 to .50. The average correlation for all significant items was r = .28.

Research Question Four

Do HEP items predict their scale scores and the total HEP score?

This question was answered by correlating (Spearman's Rho) for each of the items with the pooled items in each of the subscales and with the pooled items of the instrument (see Table 2). The analysis of the first element of this question found that the correlation between items and scales ranged from r =.19 to r = .88, with the mean coefficient of .42. Of the 64 items with interrater agreement, 63 were found to correlated at a statistically significant level, $p<.05$ with their subscale. The question concerning the correlation between the items and the total HEP scores was addressed as noted above with Spearman's Rho. The correlations ranged from .00 to .51 with a mean of r = .16. For the 69 items, 48 of the correlation coefficients were found to be statistically significant at $p<.05$.

Research Question Five

Are the HEP scales (parenting styles) reliable?

This question was addressed by using the same method employed in the analysis of item reliability. Using a test-retest method, items grouped as scales by the

judges were correlated (Spearman's Rho) between the two administrations of the HEP. Scale statistics reflected responses to all items placed in scales by the raters. As indicated in Table 3, all nine scales correlated at a statistically significant level, ranging from .44 to .93.

Research Question Six

Are the HEP scales (parenting styles) valid?

This question was answered by conducting a Spearman's Rho between the 9 HEP scales and the achievement of students. The rationale for using the Spearman's Rho is the same as with items. Student grades were converted to a 4 point scale for data analysis in the same manner as with items. Table 3 shows the correlation coefficients for the 9 scales. This table also shows the scales when they are constructed with all items agreed upon by judges and scales composed only of items that were reliable and valid, as well as agreed upon by judges. When using items that were reliable and valid, all scales except the Problem-Solving and Communication Scale were significantly correlated with achievement. Significant correlations ranged from .30 to .65, with a mean of $r = .43$. Eight of the nine scales constructed with items agreed upon by the judges, without regard to item reliability or validity, correlated with student grades at a statistically significant level, $p<.05$. Correlation coefficients of the significant scales ranged from .18 to .61, with a mean of .36.

Table 3.

Summary Table: Subscale Statistics

Subscale	Subscale Test-Retest Reliability	Subscale Predictive Validity (only reliable and valid Items)	Subscale Predictive Validity (all items)
Modeling Attitudes and Behavior	.82**	.48**	.38**
Monitoring Social Behavior	.57**	.30**	.33**
Monitoring Academic Behavior	.80**	.65**	.61**
Rewarding Schoolwork and Behavior	.91**	.46**	.43**
Disciplining	.44**	.35**	.22**
Problem Solving and Communicating	.93**	.07	.02
Nurturing	.79**	.40**	.40**
Self-Management	.87**	.35**	.18*
Teaching and Motivating	.74**	.40**	.19*

* $p < .05$
** $p < .001$

Research Question Seven

Do the HEP scales discriminate between students with high and low achievement?

In order to answer this question, logistic regression analysis was used. This method of analysis discriminates membership of one group from the other. According to Vogt (1993), it is usually used for predicting whether something will happen or not, such as ". . . anything that can be expressed as an event/nonevent. The independent variables can be categorical or continuous in logistic regression analysis" (p. 131). This analysis can be used when the dependent variable is dichotomous and scored 0,1 (Vogt, 1993). In the logistic regression analysis in the current study, the independent variable was the HEP scales and the dependent variable was grades. The dependent variable of grades was coded as dichotomous. Prior to performing the logistic regression, the responses to the HEP items, grouped as scales, were split using the median of the range. These two categories of the independent variable were regressed against the two levels of grades.

Items that could not be agreed upon by the judges as belonging to scales (styles), items that were not reliable, and items that were not valid were eliminated from this analysis. Scales that had 2 items or less were also eliminated from this analysis. (The Problem-solving and Communication Scale was eliminated.) A total of 46 items representing 8 scales were used for this computation. Tables 4 shows the results of the logistic regression analysis.

The base rate of prediction is shown in Table 4, indicating the rate of observed events without regard for particular scales. The percent contribution indicates how much a scale would improve the prediction of membership in the high or low groups over the base rate. Using the three scales of Monitoring Academic Behavior (Q7, Q8, Q31, and Q55), Rewarding School Work and Behavior (Q11, Q39, and Q64), and Nurturing (Q1, Q23, Q26, Q49, Q54), the rate of prediction of group membership improves to 83.05% from the base rate of 63.84%. Monitoring Academic Behavior contributed most to the prediction by improving the base rate 17.52%. Rewarding School Work makes no improvement in the predictive rate of the high and low groups combined but improves identification of the high group. The Nurturing Scale improves the prediction rate to 83.05% over the combined rate from the previous two scales. This is an increase of 2.26% in the predictive rate. The other scales contributed negligibly to prediction.

Table 4 shows the accuracy of predicting group membership in the high and low achievement groups for the three scales of Monitoring, Rewarding, and Nurturing. For the Monitoring Academic scale, as shown in Table 4, the accuracy of predicting group membership was 81.36%. The accuracy rate was 82.81% for predicting low achievers, and the accuracy rate was 80.53% for predicting the high achievers.

When the Rewarding School Work and Behaviors scale was combined with the Monitoring scale, the accuracy of predicting group membership was 80.79%, with 62.50% correct for the low group and 91.15% correct for the high achievement group.

Rewarding School Work and Behavior scale contributes more to the prediction of high achievers, while the Monitoring scale is more effective in predicting membership in the low achievement group. When the Nurturing scale was combined with the other two scales, the prediction rate was 83.05%, with the prediction of 78.13% for the low group and 85.84% for the high group (see Table 4).

Table 4.

Summary Table: Logistic Regression Analysis of Scales

Scale	Base Percentage	Percentage Contribution
Monitoring Academic Behavior	63.84	81.36
Rewarding School Work and Behavior	81.36	80.79
Nurturing	80.79	83.05

CHAPTER V

DISCUSSION

Development of the HEP

According to Dickinson (1997), the HEP items are based on "treatment validity." In the development of the instrument, the research literature was reviewed for studies on the effects of parent training. Especially important in this review were studies with outcomes for parents and children. From those studies that produced significant changes in the participants, the major concepts that were taught to parents were used in the development of many of the HEP items. If the goal of the parent training was to get the parents to agree on discipline, then an item to measure how much parents agreed on discipline was selected for use in the HEP. Items from the HEP were conceived as being able to furnish diagnostic information about the parenting style. Consequently, the items could become the curriculum for a training program to improve the parent's behavior.

The HEP was conceived as being both a normative and a criterion test. The scales could be used for determining how parents differed in parenting styles according to normative data. The items within a scale could then be used as criterion information to direct remediation. This criterion approach to the remediation of parenting skills parallels that of Brigance (1980) and other criterion tests.

Modification of the HEP

In this study, two judges placed all items of the HEP in the 9 scales. Dickinson, in an early research activity, had judges place items in the 9 scales and

then had the items from the Modeling Behaviors and Attitudes Scale again placed in the other scales. (His rationale for doing this was that parents almost always model when they display a specific parenting behavior. As a result, the behavior modeled was counted as a particular parent style and counted again under the style of modeling.) In this study, judges were ask to place items in only one scale in order to increase the simplicity of the task and clarify operational definitions supporting the construction of the scales. Because of this, results may have differed from that of the author of the scale. Approximately 30% of the total items were classified in this study in different scales from that of the author.

Having two judges is a limitation for developing scales. Typically, several judges would sort the items into scales, and then the items that were agreed on most frequently would be used in the construction of the scale. In further development of the scale, it is recommended that several judges be used in reclassifying all of the items originally included in the instrument.

Contributions of the Scales

The results presented on reliability and validity offer information concerning the contribution of items and of the scales. The magnitude of item correlations can be categorized as "slight" or "moderate." The meaningfulness of these correlations is clarified by Young's (1966) interpretation of correlation coefficients based on samples of greater than one hundred. According to Young's evaluation of the magnitude of correlation coefficients, those in the range of .70 to .90, should be considered as indicating a "strong" degree of association between variables. Correlations between

.40 and .69 indicate a "substantial" relationship, and correlations between .20 and .39 indicate a "moderate" relationship. Very few item correlations in the present study were above .40. However, when items were clustered as a scale, using only reliable items, the scale correlations were often "substantial." On the other hand, the size of the correlation coefficients were reduced by the inclusion of items that were not reliable or not valid.

While item and scale correlations are indicative of the extent of association between the independent variable and dependent variable, the more powerful and persuasive findings for the HEP were generated from the logistic regression analysis. From logistic regression analysis, results indicate that the scales (composed of items with judge agreement, reliability, and validity), Monitoring Academic Behaviors (4 items), Rewarding School Work and Behavior (3 items), and Nurturing (5 items) successfully identified parents of high and low achieving children 83.05 out of 100 times. This suggests that three scales, or twelve items, make the major contribution to the predictive potential of the instrument.

One possible reason for the Monitoring Academic Behavior Scale's strong influence on the logistic regression analysis is that this scale measures how parents deal with studying and communications with teachers. Such questions are directly related to the dependent variable of grades.

Descriptions of Parenting Behaviors

Items Q4 (r = .50) and Q64 (r = .48) correlated most powerfully with Achievement. These items ("My highest educational expectation for my child is . . ." and "In the past year, of the times you have given your child rewards to do something, how often he/she still not produce?") were more predictive of the dependent variable than were the other items. The strong correlation of the first item, "My highest educational expectation for my child is . . ." with grades may be a function of the educational level of the parents and the strong achievement of their children. Because they have high levels of education, they would expect the same of their children. Because the children are already achieving well, parents would expect them to be successful in post high school education. The second item, "In the past year, of the times you have given your child rewards to do something, how often did he/she still not produce?", dealing with rewards for "not producing" points out that parents of high achieving children know how to give rewards appropriately (a low score on this item means that parents often reward ineffectively).

Although an analysis of the content on the scales (styles) was not part of this study, some of the findings are worth mentioning. It was found that parents of high achieving children tend to use fewer tangible reinforcers, fewer verbal reinforcers for good work at school, fewer spankings, and less punishment for low grades than do parents of low achieving children. On the other hand, parents of high achieving indicate that they are more likely to use reinforcers for short-term performance at school, such as the next test. A possible reason why parents of high achieving

students do not emphasize consequences for academic performance is that their children tend to perform well without such consequences. A major reason for their children's performing well may be that parents monitor their children closely and prevent them from developing bad habits. Parents of high achieving children make arrangements to prevent "bad" behavior when they go places that encourage such behavior. When inappropriate behavior starts, they know how to stop it and how to use another activity to prevent it from occurring again.

They are compared to parents of low achieving children, much more affectionate to their children and supportive of their children's interest. They talk to their children frequently about their activities, movies, and friends and they purchase things that support their children's interest. They also buy more books, have more study aids (such as computers), and have a common place and time to study.

Interestingly, the present research suggests that compared to parents of low achieving children, parents of high achieving children do not have more conversations at the dinner table, do not monitor more frequently what their children watch on television, do not use their children's ideas in resolving a conflict, or give their children more household responsibilities. The literature often refers to these parenting behaviors as an important parenting functions.

Limitations and Conclusions of the Study

A major limitation of the study relates to the representativeness of the study sample. Approximately 5,000 HEP packets were distributed to field coordinators. Between 2,750 and, 2,850 were received by parents whose children were in public and private schools. Another 400 parents whose children were receiving treatment in mental health organizations were asked to participate in the study and given the HEP packet by field coordinators. Two hundred and eleven parents actually completed the HEP. Response rates varied across research sites ranging from 100% compliance to 0% participation. Because the representativeness of the sample is in question; generalization based upon this sample should be offered with caution.

Several other problems became apparent as the study progressed. One problem was the failure to record the grade level of the children whose parents completed the HEP. This is an important variable, because parents may behave differently with younger children than with older children. For example, they may monitor younger children more closely, use more spankings, and furnish more books and study supervision.

A second limitation is the sample size of the children making Ds and Fs. Although the total sample was large, this group of 26 children was too small to use as a contrast group. Children making Ds and Fs are difficult to find in the schools today, because such children usually receive special services.

A related limitation is homogeneity of the sample used in the test-retest reliability procedure. This sample was much more homogeneous than other

subgroups. The coordinator conducting the investigation at the research site selected only parents of high achieving students. Therefore, the sample would not appear to be representative of the general population of parents.

Using achievement test scores instead of grades as a criterion of academic performance might have provided more sensitive data for the study. The use of grades, with only a four point range, is more restrictive than achievement test scores would be. Because grades are often affected by considerations other than performance, achievement test scores might have provided a more accurate indicator of academic performance.

Coordinators in the schools and mental health facilities had several complaints about the HEP. They indicated that parents had trouble reading the directions (even though the reading levels of the items average a 5th grade reading level). The questions containing double negatives caused problems for the parents, and parents complained that some questions did not make sense (had no face validity). They were referring to questions about "having an orderly household" and "a time to do household activities."

As one can see from the demographic data, parents of students in the High Achievement Group had higher educations and incomes. This raises the issues of whether academic performance was fundamentally attributable to the socioeconomic level of parents. It certainly could be argued that with a high level of income, parents could provide more student aids (computers, reference books) and have time for more

self-improvement programs (which were questions on the HEP). Future studies need to differentiate the parenting variables from the socioeconomic factor.

The HEP could be a helpful instrument to school psychologists and other mental health professionals. It has the potential to function as an effective screening instrument and holds promise as a diagnostic and treatment tool. Parents who score low on a scale, such as discipline, could be taught discipline techniques using the scale as a guide. For example, the items on the discipline scale include the following notions: (a) parents should agree on discipline, (b) should have rules, (c) be consistent with discipline, (d) should not become emotional when administering discipline, and (e) should use short lectures instead of long. This information could be used diagnostically and prescriptively by teaching parents to improve their behavior in the five items above.

The study may make a contribution to the study of parent-child relations in several ways. Since the HEP is the first parenting styles assessment instrument based on "treatment validity," the study may stimulate further interest in applying the concept of "treatment validity" to assessment of parenting. Additionally, the study suggests that all elements of parenting are not equal. The data may contribute to a hierarchical understanding of parenting functions. And lastly, the study may contribute to the understanding of the role parents play in children's academic success.

It has long been suspected by teachers and researchers that parents deserve some of the credit when children do well in school and share some of the blame when they perform poorly. This study shows some of the reasons why. Parents of high-

achieving children display different parenting styles than do parents of low-achieving students, which would account for some of the difference in their children's achievement. Even though poor performance in school is sometimes attributed to biological causes, this study would suggest that parenting may also be a factor in accounting for school performance of such students. In some cases, the difference in parenting behavior may be a reaction to the child's difficulty; however, in most areas measured by this test, the parenting behavior would possibly be the cause rather than a result. For example, the questions in the areas of modeling and nurturing measure parenting that occurs before children behave, not a reaction to behavior.

Further Development

Future investigators may wish to use the item selection procedure employed in this study with other samples. Using the same reliability and validity criteria used in this study, other researchers may find that the item correlations in the HEP scales differ from those in the current study. Also, investigators may want to consider using groups of parents who differ from the subjects in the present study. An interesting extension of the present investigation would be future research that focuses on the differences between parenting styles experienced by children of normal emotional adjustment and those of children identified as behaviorally and emotionally disordered.

Researchers concentrating on scale construction may beneficially examine the nature of the item construction in the HEP. Changing the response format of the HEP to a Likert type scale would allow for more consistency in response set. However, such a modification might also lose the clinical sensitivity of the instrument.

Identifying the number of times a week a particular behavior occurs may provide a more concrete reference point for changing that behavior than a rating such as rarely or usually. On the other hand, the use of a standard Likert scale might provide a stronger case for treating the responses as interval data.

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APPENDICES

APPENDIX A

Form B

Home Environment Profile (HEP)

Donald J. Dickinson 1995

The HEP measures the parenting styles which includes parenting approaches to behavior management, ways of showing care and concern, methods of monitoring children's school performance and relations with peers, approaches to problem-solving activities, and lifestyle activities associated with student learning.

Instructions:

1. Using pen or pencil, circle the answer to each question hat comes closest to being accurate for you. Try to answer all the questions even though some of the situations may not have occurred in your family. **If you cannot answer a question, leave the item blank.**

2. If you have more than one child, answer the questions for the child whose teacher or counselor sent or talked with you about the questionnaire. Only one member of the family need complete the questionnaire; however, it is possible for more than one person to assist in answering.

3. When you have completed the questionnaire, please place it in the enclosed, self-addressed envelope and return it to your child's school or organization. Remember, as we do not know your identity, we have no way of reminding you to complete the questionnaire. Therefore, **please answer the questions and send it back as soon as possible.** The results may serve as a basis to help parents and children meet the challenges of school demands.

Results:

The 6 participating schools and organizations will be notified of the results of the study in the Spring of 1997. We will make available a summary report of these results for each school or organization. In addition, we will encourage the school or organization to use the results to assist parents in those areas that appear to make a difference in how children meet the challenges of learning in school. Please feel free to write to us for the results of this research.

Questions?

If you have any questions, call the coordinator at your school or organization: _____. Further questions may be addressed by the Principal Investigator, James E. Crowe, Jr. at (423) 579-2654 or Co-Principal Investigator, Dr. Donald Dickinson at (423) 974-8145.

This instrument is not to be reproduced without written permission.

THE HOME ENVIRONMENT PROFILE (HEP) Form B

1. Last week, I talked with my child about everyday things such as friends, television programs, hobbies and activities.
   Almost never 2 times 3 times 4 times 5 or more times

2. This week, how many times did you NOT wait for a problem to happen before discussing proper conduct, being fair and considerate.
   None 1 time 2 times 3 times 4 or more times

3. When I am around my child, my moods are the same.
   Almost never 1/4 of time 1/2 time 3/4 time Almost always

4. My highest educational expectation for my child is.
   Graduate School College Tech/Voc Sch High School Less than HS

5. In the past month how many times have you made out a schedule of things you must do during the day and put them in priority?
   None 1 time 2 times 3 times 4 or more times

6. I follow an established routine (time for bed, time for eating, etc.)
   Almost always 3/4 of time 1/2 of time 1/4 of time Almost never

7. In the past week, I talked to my child about what he/she is studying.
   4 or more 3 times 2 times 1 time None

8. In the past three years, how often did you contact your school when you thought your child's progress was not satisfactory.
   6 or more times 5 times 3-4 times 1-2 times None

9. When I am around my child I am in a happy, pleasant, or friendly mood.
   Almost never 1/4 of time 1/2 of time 3/4 of time Almost always

10. My immediate family helps each other to solve problems by talking, making plans, and supporting each other to follow the plans.
    Almost never 1/4 of time 1/2 of time 3/4 of time Almost always

11. In the past year, how many times have you made an agreement to give your child a tangible reward, such as money, for good performance in school?
    None 1-2 times 3-4 times 5 times 6 or more times

12. I believe that my child's performance in school is based mostly on:
    Work habits Persistence Teachers factors Intelligence Luck

13. In the past week, when helping your child make a decision, how often did you discuss the advantages and disadvantages of each decision?
Not at all 1 time 2 times 3 times 4 or more times

14. When I punish for something very serious, I use long lasting and strong punishment (not spanking)
Almost never 1/4 of time 1/2 of time 3/4 of time Almost always

15. When I correct my child, how often do I give the child an activity that keeps him/her from getting into difficulty again?
Almost always 3/4 of time 1/2 of time 1/4 of time Almost never

16. How often are you willing to negotiate a time and place for your child to study?
Almost never 1/4 of time 1/2 of time 3/4 of time Almost always

17. I am as polite to my child as I am to my friends, coworkers and others.
Almost never 1/4 of time 1/2 of times 3/4 of time Almost always

18. This past week, how often did an adult in your family behave unexpectedly to your child?
4 or more times 3 times 2 times 1 time None

19. The number of hours I read (to myself) at home this past week was.
7 or more 5-6 3-4 1-2 Less than 1

20. I believe that I can accomplish almost anything by proper planning and hard work.
Strong disagree Disagree Neutral Agree Strongly agree

21. My child's closest friend has been in trouble at school or with the law during the last year.
None 1 time 2 times 3 times Don't know

22. I look at my child's homework to make certain it is completed and correct.
Almost always 3/4 of time 1/2 of time 1/4 of time Almost never

23. Yesterday how many times did you compliment, support, encourage, praise, or show affection to your child?
None 1 time 2 times 3 times 4 or more

24. My child has someone available to help with homework and studying for tests.
Never 1/4 of time 1/2 of time 3/4 of time Almost always

25. This past week, how often have you used such things as time-out, TV restrictions, or the taking away of privileges in order to punish your child if he/she misbehaved?
None 1-2 times 3-4 times 5 times 6 or more

26. In the past week, I have talked to my child about his/her interest.
None 1-2 times 4-5 times 6-7 times 8 or more

27. Yesterday, I knew where my child was.
Almost always 3/4 of the time 1/2 of time 1/4 of time Almost never

28. I have an organization to my household (place for things, what is first priority, etc.)
Almost always 3/4 of the time 1/2 of time 1/4 of time Almost never

29. This last year, my child's closest friend made about what kinds of grades in school?
As Bs Cs Ds Don't know

30. How many times this past month have you used your child's ideas to resolve a dispute?
None 1 time 2 times 3 times 4 or more

31. During the past week, my child studied at the same time every day.
Almost never 2 times 3 times 4 times 5 or more

32. How many household responsibilities (like making up the bed) have you given to your child this week?
None 1 2 3 4 or more

33. This past week, when I said I was going to punish my child, I followed through and did it.
Almost never 1/4 of time 1/2 of time 3/4 of time Almost always

34. How often are you able to immediately stop inappropriate behavior once it has started (e.g. children pinching each other or children starting to rough house)?
Almost always 3/4 of time 1/2 of time 1/4 of time Almost never

35. Yesterday, about how many times did you correct your child or complain about his/her behavior?
4 or more 3 times 2 times 1 time None

36. I make sure my child studies in a quite place away from such distractions as people, television, radio, etc.
Almost never 1/4 of time 1/2 of time 3/4 of time Almost always

37. In the past month how often have you used punishment to get your child to do better in school?
None 1 time 2 times 3 times 4 or more

38. I know what my child's homework assignment is.
Never 1/4 of time 1/2 of time 3/4 of time Almost always

39. In the last year, how often have you offered your child incentives for good work at school on a short-term basis (next tests, homework for the week).
6 or more 4 or 5 3 or 4 1 or 2 None

40. In the past week, I have explained to my child how I do such things as planning meals, balancing a checkbook or budget, and fixing the car.
Never 1 time 2 times 3 times 4 or more

41. The number of hours I watch television at home each day is.
6 or more 1 to 2 hours 4-5 hours 2-3 hours 1 or less

42. Last week, how many times did you make a favorable comment to your family about your job, home, or life?
None 1 time 2 times 3 times 4 or more

43. The adult members of our family agree on discipline.
Almost never 1/4 of time 1/2 of time 3/4 of time Almost always

44. I think I am a major influence in my child's progress at school.
Strongly disagree Disagree Neutral Agree Strongly agree

45. What is the percentage of errors your child should make in schoolwork in order for him/her to learn effectively?
20% or more 15% 10% 5% Less than 5%

46. How often have you discussed the days events with your child at the dinner table this past week?
7 or more 5 or 6 times 3 or 4 times 1 or 2 times None

47. When correcting a mistake (like in math), how many chances do you give your child to correct the mistake before showing or telling how to get the answer?
4 or more 3 times 2 times 1 time None

48. I use spanking to discipline my child when his/her misbehavior is serious.
Almost always 3/4 of time 1/2 of time 1/4 of time Almost never

49. Last week how many hours did you spend talking, going to a movie, watching television, or doing some other activity with your child?
Less than 1 hour 1-2 hour 3-4 hour 5-6 hours 7 hrs. or more

50. In the past week, how often did you communicate with other family members about problems in such a way that the discussion increased tension in the family?
None 1 time 2 times 3 times 4 or more times

51. I have taken part in a self-improvement program during this past 6 months (such as a church retreat, education course, craft workshop, exercise program).
None 1 program 2 programs 3 programs 4 or more

52. My child has a voice in making or changing the rules for his/her behavior in our home.
Never 1/4 of time 1/2 of time 3/4 of time Almost always

53. I have been involved in activities such as hobbies, social/church organizations, community groups and or recreating during the past month.
None 1 time 2 times 3 times 4 or more

54. I provide my child materials, tools, equipment, and/or books to support his/her interest.
Almost never Christmas or birthdays 3-6 times a year 7-8 times a year Almost every month

55. The last time my child studied, I made certain that he/she was actually studying by checking on him/her during the study time.
Almost never 1-2 checks 3-4 checks 5 checks or more Not necessary to check

56. I give short, rather than long lectures to my child when he/she does something wrong.
Almost never 1/4 of time 1/2 of time 3/4 of time Almost always

57. When my child does something I don't like (like not hanging up a coat), I calmly explain to my child what he/she did that was wrong.
Almost never 1/4 of time 1/2 of time 3/4 of time Almost always

58. How often are you able to keep your child busy or occupied when the two of you go places where there are attractive but disapproved activities or peers who can lead your child to mischief?
Almost never 1/4 of time 1/2 of time 3/4 of time Almost always

59. My child knows what his/her punishment will be when he/she does something wrong.
Almost never 1/4 of time 1/2 of time 3/4 of time Almost always

60. Yesterday how many times did you give in to your child's demands?
4 or more 3 times 2 times 1 time None

61. The number of books I have given or read to my child this last month is.
4 or more 3 2 1 None

62. I have used yelling, name calling, or threats to punish my child in the past two days.
4 or more 3 2 1 None

63. My child has such learning aides as a computer, typewriter, dictionary, encyclopedia, calculator and reference material.
None 1 2 3 4 or more

64. In the past year, of the times you have given your child rewards to do something, how often did he/she still did not produce?
Almost always 3/4 of time 1/2 of time 1/4 of time None

65. When I have a problem to solve, I first identify the problem, then develop a plan, and follow the plan to see if the problem is solved.
Almost never 1/4 of time 1/2 of time 3/4 of time Almost always

66. In the last week, how many times did you let your child hear you "gripe" about your job or household work.
None 1 time 2 times 3 times 4 or more

67. When my child does good work at school, I praise him/her.
Almost always 3/4 of time 1/2 of time 1/4 of time Almost never

68. In the past week, how often have you compromised with your child when the two of you had a disagreement.
None 1 time 2 times 3 times 4 or more

69. Yesterday, how many times did you check to see what your child was watching on television.
None 1 time 2 times 3 times 4 or more

70. From birth through age 5, my child was in day care how many years?
4 or more 3 2 years 1 year None

71. The highest educational level that I have completed is:
Elementary level or less Junior high school High school College /Graduate School

72. Our yearly income is closest to:
Below 10,000 10-25,000 26,000-40,000 41,000-55,000 56,000 and above

73. My marital status is:
Divorced Separated Unwed Married Widowed

74. My age when my child was born was:
15 or younger 16-18 19-22 23-25 26 or older

75. Which best describes you?
Mother Father Sister/Brother Grandparent Foster parent Stepparent Guardian

APPENDIX B

Parent Inventories

An often utilized instrument is the Parent Attitude Test (PAT) (Cowen, Huser, Beach, & Rapport, 1970). The PAT measures parental perceptions and attitudes of a child's behavior and adjustment in the home. It is structured as four scales: (a) Home Attitudes, (b) School Attitudes, (c) Behavior Rating Scale, and (d) Adjective Checklist Scale. The first two scales are made up of four and seven items respectively. Twenty-five items make up the Behavior Rating Scale, and thirty-four adjectives are in the Checklist. The reliability and validity are reported as "acceptable" by Cowen et al., (1970). The PAT Scale scores reportedly discriminate between well adjusted children and problematic children. Scores are reported to correlate directly with teacher and clinician ratings of children.

The Home Index (HI) (Gough, 1971) measures material possessions in the home and activities of parent and child associated with learning and academic achievement. It has twenty-two items and is self-administered using a "yes" or "no" response choice. Items deal with material possessions in the home and activities of parents and children. It is scored by summing the "yes" responses. Correlations between the HI have the largest correlations with measures of social class status, e.g., father's occupation, $r = .65$.

The Parenting Dimensions Inventory (PDI) (Slater & Power, 1987) is an instrument often used in parent training research to measure parenting behavior and attitudes. It is a self-report instrument and assesses parent support, control and

structure. The PDI is formed on Baumrind's model of parenting styles. Control processes are demands for "maturity" and consequences to assure child compliance. Support processes are made up of parental nurturance and responsiveness. Structuring is a parenting processes which facilitate consistency and organization in the home. All parenting dimensions were derived from factorial analysis.

The Parental Assessment of Child Monitoring (PACM) (Hetherington, et al., 1992), measures the extent of control and monitoring provided by parental figures. It is in questionnaire format, and taps specific domains of parenting activities directed toward children in various situations. These situations include school behavior, interaction with friends, extra curricular activities, and child behaviors in the home and community.

The Maternal Protectiveness and Directiveness Scale (MP; MD) (Hardy, Power, Jaedike, 1993) (a) assesses the degree of parental protectiveness and (b) extent of directiveness in problem solving. The two scales were derived from factor analytic procedures. Extreme ratings on both variables are associated with less than optimal levels of child autonomy and problem solving.

The Home Life Questionnaire (HLQ) (Hirschi, 1969) measures the parenting processes of discipline, attachment, and supervision. Other processes assessed include parent-child interactions during decision making, joint parent-child activities, and parental involvement in school achievement. It is a seventy-two item parent questionnaire. The author reports significant correlation between HLQ scores and status of adolescents as juvenile offenders and non-offenders.

The Parenting Stress Index (PSI) (Abidin, 1983) assesses parental perceptions, beliefs, and affect concerning parent functioning and child functioning. There are fifty-four items in the parenting scale and forty-seven items in the child scale. It is a self-report instrument. Factor analysis indicated seven factors contributed to the loadings. The author identified major factors in the instrument as parental feelings of adequacy, parental sense of competency, parental attachment to the child and parental social isolation.

The Parent Bonding Instrument (PBI) (Parker, Tapling, & Brown, 1979) assesses parent-child attachment. It is a self-report measure consisting of two scales; nurturance and protection. The PBI reportedly discriminates between clinical (depression) and non-clinical groups of children.

The Parent Behavior Inventory (PBI) (Kaswan, Love, Ronick, 1971) measures parent and child behavior in the home setting. It is presented as questionnaire format, sampling overt behavior within the context of antecedents and consequences. Parent behavior is reported separately, for example mothers and fathers independently rate behavior of the child and their own in relation to the child.

The Maryland Parent Attitude Survey (MPAS) (Pumroy, 1966) measures such parenting styles, as disciplinarian, indulgent, protective, and rejective. It is formulated as ninety-five pairs of items. The first five items are buffer items, with each style represented by a configuration of forty-five items (overlapping). The instrument provides for consideration of "Social Desirability" bias in parental reporting.

The Family Adaptability and Cohesion Evaluation (FACES III) (Olson, Partner, Lavee, 1985) measures family functioning, including cohesion and problem solving. It is based on family systems theory and uses twenty items to form two scales. The instrument is administered twice. The first is to assess perceived functioning of the family and a second to measure ideal family function. The degree of congruency indicates the adjustment of the family.

An often cited environmental measure is the Marjoribank Family Environment Schedule (MFES) (Marjoribanks, 1972). The MFES measures eight environmental parental processes or "presses" associated with child cognitive development and achievement. The eight scales assess parental pressure for achievement, activeness, intellectuality, independence, language competency-primary and secondary and dominance (paternal and maternal). There are 188 items structured as a six point rating scale. The MFES is administered as an interview in the home.

The Family Environment Scale (FES) (Moos & Moos, 1981) measures the social environment of the family. It has ten sub scales, representing three constructs including interpersonal relationships, basic organizational structure, and personal growth.

The HOME Inventory (HOME) (Caldwell and Bradley, 1984) exists in many editions tailored for differing settings and populations. It measures the quantity and quality of social, emotional, and cognitive support for child development in the home. It is made up of fifty-nine items in eight sub scales. The sub scales are identified by the author as a) family participation in developmentally stimulating experiences, b)

parental involvement with the child, c) availability of learning materials and experiences, d) parental responsiveness – emotional and verbal, e) emotional climate, and f) conditions of the physical environment. The HOME Inventory is completed by an interviewer, by way of observation and semi-structured interview in the home with both child and parent present.

The Parental Attitude Research Instrument (PARI) (Schaefer & Bell, 1957) is a 23 item scale to assess parental attitudes to parenting. Items each have 4 responses. Reliability of the scales ranged from .34 to.77. Parents were asked questions about discipline, communication, and family roles.

The Parental Attitudes Scale (PAS) (Drew & Teahan, 1957) is an instrument designed to measure parental attitudes towards parenting activities. It has 30 items which are clustered as three scales. Parental scores correlated strongly with parents level of education.

APPENDIX C

What Each Parental Style Measures

Modeling Attitudes and Behaviors (moods, beliefs about educ. & self control, and general habits)
Modeling attitudes and behaviors is exhibiting attitudes and behaviors which reflect an interest in education and learning (by reading, for example), positive and consistent moods, and the demonstration of favorable attitude toward one's job and self.

Monitoring Social Behavior (preventing bad behavior, knowing who, what, & where of activities)
Monitoring is being alert to what children are doing. Parents know where their children are, who they are with, and what they are doing when they are monitoring at home and at school. By monitoring they will be able to stop inappropriate behavior, give incompatible tasks, and reward appropriate behavior.

Monitoring Academic Behaviors (knowing what, where, and when of studying & homework)
Monitoring is being alert to how children are doing in school and how they study at home. This is done through talking to the child about school work, examining papers, and talking to teachers as well as checking on the child's studying, including the accuracy of the studying. Knowing the child's homework and having someone available to help the child is also considered to be monitoring.

Rewarding School Work and Behavior (using rewards and punishers for school work & contracting)
Home based rewards is the use of rewards and punishers at home for achievement or behavior at school, sometime in the form of a contract with the child and teacher. praise as well as tangibles for success at school are considered to be rewards.

Disciplining (using rules, consistency, & consequences)
Discipline is the use of rules and consequences in managing the behavior of children. This includes the use of consistent rewards and punishers, including time out and spankings. Fussing and lecturing to children would also be forms of discipline. Giving in to the child's demands would be a lack of discipline.

Problem Solving and Communicating (using steps of problem solving, compromise, & communication)
Problem solving is solving problems in a systematic way where the problem is identified, a plan is developed and conducted, and an evaluation is made. Problem solving can be used in activities such as planning meals to fixing the car. problem solving includes communicating in such a way the others have a voice in the decisions, where compromises are reached, and that family members problem solve with becoming upset.

Nurturing (interaction of parent & child – except educ.)
Nurturing is being friendly and pleasant with your child and being concerned about the child's health and welfare. This could range from being pleasant when around the child to showing an interest in your youngster's interests, encouraging and supporting the child, and doing activities with the child.

Self-Managing (scheduling, organizing, self-improvement & assigning child responsibilities)
Self management is the use of planning and scheduling to increase ones effectiveness. This could include organizing ones house hold routines to having responsibilities for ones self and the child (in the forms of chores) and the sue of self-improvement programs.

Teaching and Motivating (correcting mistakes, negotiating a time and place to study & having materials)
Teaching and motivating includes how to teach and how to correct when mistakes are made. It also includes how to negotiate a time and place to study, under proper conditions and with proper resources, and with a pleasing activity following the teaching.

APPENDIX D

Instruction for Q-Sort

Thank you for volunteering for this task. Your job is as follows:

1) Listen as I read through the HEP. I will read the directions for completing the HEP, then I will read each item in the HEP. Please do not ask questions.

2) Listen as I read Dr. Dickinson's definitions of different concepts. Again, Please don't ask questions.

3) Now let's take a 5 minute break while I set up the rest of the work.

4) In front of you are nine boxes, each box has one definition taped on it. These definitions are the same as those I read before.

5) Please pick one and read it aloud to me.

6) Here is another box (hand box) which has all the items in the HEP, printed one item per index card.

7) Your job is to take each card and put the card in the box with the definition that best fits the meaning of the item.

8) Please take all the time you need, your correct decision is very important.

9) Please come out of the room when you are finished so I may collect the information.

CONTENTS - APPENDIX E

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APPENDIX E1

Dear Chief Executive Officer,

Thank you for considering our request to pursue research activities regarding parenting behavior and student achievement in your setting. Currently, there is a lack of scientifically based studies in this area and we believe that our research, with your organization's cooperation, may provide increased understanding concerning parental influences and student academic achievement.

The focus of this study is to investigate the adequacy of the Home Environment Profile (HEP) as an instrument for assessing the parent behavior and student achievement relationship. We want to examine properties of this instrument, and through this instrument gain insight into the parent behavior-student academic relationship.

As you can see by examining the HEP (see enclosure), we may be able to learn what components of parenting are most important in determining how children achieve academically. If we can learn more about the relationship, we might be in a position to in-service and counsel with parents on more effective parenting.

The essential elements of the study are these: a) students are identified based upon academic achievement (high or low), b) parents of identified students are invited to participate in the study, c) parents complete the HEP or HEPs, d) your staff provides information regarding student grades as indicated on the "Student Information Form (SIF)" (see enclosure), and e) results are collected (by the school/organization) and analyzed (by the investigators). The study design calls for all identifying information to be restricted to your authorized staff - no identifying information will be made known to the investigators, all participation to be voluntary with the option to withdraw at any time, and all contact and communication to be coordinated by your designated representative - the "coordinator." All information is confidential.

The coordinator, after consultation with colleagues, would recommend parents based upon their child's academic and discipline records during the previous school year. The coordinator would send to the parents a packet - prepared by us - containing information about the study, copies of the HEP with directions for completion, documents to demonstrate their informed consent for our records and giving permission for your organization to release to us the parents' responses on the HEP and information

concerning their child's grades as indicated on the SIF. The parent may choose to complete the HEP either in the home or at the organization. The coordinator would collect the completed HEPs. consent forms, and complete the SIF. The coordinator would then staple together the completed HEPs to the SIF after expunging any identifying information, e.g. names, social security numbers, etc., and mail the data along with the parental consent forms to the investigators. Each organization will remain anonymous with identifying codes given for each site. All data will be collected and analyzed by location code. These procedures, we believe, will protect the confidentiality of the parents and organization.

In summary, we are requesting permission to conduct a study, utilizing survey methods, that addresses relationships of potential import to all parties educating, caring for, or serving parents and students. Your approval, in writing, would be appreciated. No action on this matter will be initiated without your approval and that of the Human Subjects Review Committee at The University of Tennessee, Knoxville.

If you have interest, but additional questions, please feel free to contact James E. Crowe, Jr. or Dr. Donald Dickinson at (423) 974-8145.

Sincerely,

James E. Crowe, Jr.

APPENDIX E2

CHIEF EXECUTIVE OFFICER INFORMED CONSENT FORM

I,_____, as the authorized representative of

_____, have become fully informed about the proposed study entitled The Home Environment Profile: A Reliability and Validity Study. I understand the content of the study and the parameters of participation and confidentiality.

Yes, I give consent to participate.

_____ _____

Signature of Chief Executive Officer Date

APPENDIX E3

Dear Coordinator,

Thank you for volunteering to participate in this study. Your agreement to represent your mental health organization is vital to the success of the project. You may withdraw from this project at any time without penalty to you or the organization. Your discussions with the Chief Executive Officer of your organization has introduced you to the nature of the study and the general expectations. A fuller explication of the scope and sequence of activities dependent upon you to assure the success of the project are as follows:

1. Following discussion with the Chief Executive Officer, any questions should be addressed immediately with the Principle Investigator, James E. Crowe, Jr. at (423) 974 8145.

2. In discussion with colleagues, identify students in the third to seventh grade who during the previous school year had an overall average grade of"B+" and higher or "C" and lower as determined by actual transcripts of grades or as attested to by the teacher. Students having a "B" Average are to be excluded.

3. From the list of students meeting these criteria, parents considered by you and your colleagues as "probably" cooperative with the aims of the study should be recommended.

4. The recommended parents should be given a packet of materials. Giving the packet to all parents on the same day would be most helpful. The parent may choose to complete the HEP either in the home or at the organization.

5. As packets are returned, please pick up the materials and complete the "Student Information Form (SIF)." In completing the "SIF,' the coordinator will review student's transcripts for the previous academic year and will rate each student as follows: student's grades with at least 75% A's will receive a score of 1; 75% B+'s, a score of 2; 75% C's, a score of 3 and 75% D's and F's, a score of 4.

a. For each completed HEP, record (on the HEP in pencil) the parent's name, address, telephone number, and date of completion/return.

b. After at least two weeks from the return date but not exceeding one month, send each parent who previously completed the HEP a second letter and second copy of the HEP for completion, along with an enclosed, self-addressed envelope.

6. Hold all parental informed consent forms.

7. Remove any personal identification information, such as name, address, etc., from the SIF and HEP.

8. Staple the SIF to the completed HEP provided by the parent.

9. Treat all information as confidential, securing it in a safe location.

10. Continue the procedure until twenty-five sets of data are completed (HEP with corresponding SIF).

11. Mail all data and the parental consent forms in the enclosed self-addressed envelope provided to the principle investigator.

Your assistance is appreciated!

Sincerely,

James E. Crowe, Jr.

APPENDIX E4

Dear Coordinator,

Thank you for volunteering to participate in this study. Your agreement to represent your mental health organization is vital to the success of the project. You may withdraw from this project at any time without penalty to you or the organization. Your discussions with the Chief Executive Officer of your organization has introduced you to the nature of the study and the general expectations. A fuller explication of the scope and sequence of activities dependent upon you to assure the success of the project are as follows:

1. Following discussion with the Chief Executive Officer, any questions should be addressed immediately with the Principal Investigator, James E. Crowe, Jr. at (423) 974-8145.

2. In discussion with colleagues, identify students in the third to seventh grade who during the previous school year had an overall average grade of "B+" and higher or "C" and lower as determined by actual transcripts of grades or as attested to by the teacher. Students having a "B" Average are to be excluded.

3. From the list of students meeting these criteria, parents considered by you and your colleagues as "probably" cooperative with the aims of the study should be recommended.

4. The recommended parents should be given a packet of materials. Giving the packet to all parents on the same day would be most helpful. The parent may choose to complete the HEP either in the home or at the organization.

5. As packets are returned, please pick up the materials and complete the "Student Information Form (SIF)." In completing the "SIF,' the coordinator will review student's transcripts for the previous academic year and will rate each student as follows: student's grades with at least 75% A's will receive a score of 1; 75% B+'s, a score of 2; 75% C's, a score of 3 and 75% D's and F's, a score of 4.

a. For each completed HEP, record (on the HEP in pencil) the parent's name, address, telephone number, and date of completion/return.

b. After at least two weeks from the return date but not exceeding one month, send each parent who previously completed the HEP a second letter and second copy of the HEP for completion, along with an enclosed, self-addressed envelope.

6. Hold all parental informed consent forms.

7. Remove any personal identification information, such as name, address, etc., from the SIF and HEP.

8. Staple the SIF to the completed HEP provided by the parent.

9. Treat all information as confidential, securing it in a safe location.

10. Continue the procedure until twenty-five sets of data are completed (HEP with corresponding SIF).

11. Mail all data and the parental consent forms in the enclosed self-addressed envelope provided to the principal investigator.

Your assistance is appreciated!

Sincerely,

James E. Crowe, Jr.

MHO-V/S

APPENDIX E5

Dear Coordinator,

Thank you for volunteering to participate in this study. Your agreement to represent your school is vital to the success of the project. You may withdraw from this project at any time without penalty to you or the school. Your discussions with the Chief Executive Officer of your school has introduced you to the nature of the study and the general expectations. A fuller explication of the scope and sequence of activities dependent upon you to assure the success of the project are as follows:

1. Following discussion with the Chief Executive Officer, any questions should be addressed immediately with the Principle Investigator, James E. Crowe, Jr. at (423) 974-8145.

2. In discussion with colleagues, identify students in the third to seventh grade who during the previous school year had an overall average grade of "B+" and higher or a "C" and lower as determined by actual transcript grades or as attested to by the teacher. Students having a "B" average are to be excluded.

3. From the list of students meeting these criteria, parents considered by you and your colleagues as "probably" cooperative with the aims of the study should be recommended.

4. The recommended parents should be sent - by way of the student - a packet of materials. Sending the packet out to all parents on the same day would be most helpful. The parent may choose to complete the HEP either in the home or at the organization.

5. As packets are returned to the teacher, please pick up the materials and complete the "Student Information Form (SIF)." In completing the "SIF,' the coordinator will review student's transcripts for the previous academic year and will rate each student as follows: student's grades with at least 75% A's will receive a score of 1; 75% B+'s, a score of 2; 75% C's? a score of 3 and 75% D's and F's a score of 4.

6. Hold all parental informed consent forms.

7. Remove any personal identification information, such as name, address, etc.? from the SIF and HEP.

8. Staple the SIF to the completed HEP provided by the parent.

9. Treat all information as confidential, securing it in a safe location.

10. Continue the procedure until twenty-five sets of data are completed (HEP with corresponding SIF).

11. Mail all data and parental consent forms in the enclosed self-addressed envelope provided to the principle investigator.

Your assistance is appreciated!

Sincerely,

James E. Crowe, Jr.

School-V/S

APPENDIX E6

COORDINATOR INFORMED CONSENT FORM

I understand that my participation in the study is voluntary and that I may withdraw my participation at any time without penalty to me or my school/organization. I understand that by agreeing to participate I am agreeing to send out and collect the HEP questionnaires and parental consent forms. Furthermore I understand that I am agreeing to complete the SIF for each student when appropriate. By participating in the study I agree to assist in guarding the confidentiality of parent participants by expunging identifying information from HEP questionnaires and SIF forms submitted to the investigators. I am also aware that I may contact James E. Crowe, Jr. or Dr. Donald Dickinson at (423) 974-8145 with any additional questions.

I understand that I will keep a copy of this form to read at my leisure.

o Yes, I give my consent to participate.

_____ _____

Signature of Coordinator Date

APPENDIX E7

The University of Tennessee

Committee on Research Participation

PARENTAL INFORMED CONSENT FORM

Principal Investigator: James E. Crowe, Jr.

Co-Principal Investigator: Donald Dickinson, Ed.D.

Title of Research Project: The Home Environment Profile: A Reliability and Validity Study

Dear Parent or Guardian,

For the sake of our children...

There has never been a time in our lives when children need understanding and support more than now. When faced with all the demands of school, peer groups and the influences of society through television, etc., children need their parent(s). You may be a parent whose child has successfully coped with all these demands or perhaps one who has had difficulties in one or more of these areas. Most parents would readily agree that a child's success in school is important.

You have been recommended to participate in a project designed to learn how the habits of parents influence how children will achieve in school. By learning more about this relationship, schools would be able to assist parents in helping their children to deal with the academic challenges of school. Thus, this information could directly benefit parents. This relationship is being studied via the Home Environment Profile (HEP). The HEP is a paper and pencil questionnaire on which parents report their method or style of parenting their children.

What will you be asked to do?

You will be asked to read this document thoroughly, and if in agreement, to affirm your participation in the study and to grant permission for your completed HEP and information about your child's academic grades (with all identifying information such as names, addresses, etc. removed) to be provided to the investigators. It will take approximately 20 to 30 minutes to read and mark the HEP. The HEP will ask questions regarding parenting habits which may relate to your child's academic achievement. **It's all confidential!** The results of your completed HEP, with all identifying information

removed, will be grouped together and mailed to the investigators. Additionally, your child's handicapping conditions, if any, will be reported in an accompanying form attached to the completed questionnaire. When the questionnaires are received, all the answers will be entered into a computer database and after the information is checked for correctness, the questionnaires will be destroyed. Your answers will be combined with the answers of other parents from schools or organizations in 2 different states. The name of your child's school or organization will be kept confidential. Participation in the study is strictly voluntary. Furthermore, even with permission or consent given in writing, any parent may withdraw from participating without notice, explanation, or penalty.

What are the possible benefits or risks to you?

There will be no risk or discomfort to you in participating. There is the inconvenience necessitated by your reading the HEP and responding in writing to the items. Some possible benefits might be that the experience will help you to focus on behaviors which seem related to your child's academic achievement. As you complete the HEP you may have other questions which might be fruitful topics for further discussion with professionals at your child's school or organization.

Do you have to participate?

No, your participation is entirely voluntary. You may choose to quit at any time during the project or refuse to answer any question without any penalty to you or your child.

What will happen to the information that is collected?

All results from the HEP questionnaire will be confidential. All personal identifying information will be removed from the questionnaires. Your consent form will be filed with the investigators. Signed consent statements will be kept for the duration of the project and for at least three years following completion of the project. Consent statements will be held by the Co-Principal Investigator, Dr. Donald J. Dickinson, and will be stored in the Claxton Addition Building of the University of Tennessee. The investigators will receive no identifying information concerning your completed HEP questionnaire or your child's handicapping condition, if any. The results from the questionnaires will be transposed to computer format and the HEP questionnaire destroyed.

If you have questions...

This study is being conducted by James E. Crowe, Jr., Doctoral Candidate and Dr. Donald J. Dickinson with the cooperation of your school or organization. Any questions that you might have can be answered by talking with your school or organization representative, or by contacting Mr. Crowe or Dr. Donald Dickinson at (423) 974-8145.

Thank you for your time and consideration.

Sincerely,

James E. Crowe, Jr.

APPENDIX E8

The University of Tennessee

Committee on Research Participation

PARENTAL INFORMED CONSENT FORM

Principal Investigator: James E. Crowe, Jr.

Co-Principal Investigator: Donald Dickinson, Ed.D.

Title of Research Project: The Home Environment Profile: A Reliability and Validity Study

Dear Parent or Guardian,

For the sake of our children...

There has never been a time in our lives when children need understanding and support more than now. When faced with all the demands of school, peer groups and the influences of society through television, etc., children need their parent(s). You may be a parent whose child has successfully coped with all these demands or perhaps one who has had difficulties in one or more of these areas. Most parents would readily agree that a child's success in school is important.

You have been recommended to participate in a project designed to learn how the habits of parents influence how children will achieve in school. By learning more about this relationship, schools would be able to assist parents in helping their children to deal with the academic challenges of school. Thus, this information could directly benefit parents. This relationship is being studied via the Home Environment Profile (HEP). The HEP is a paper and pencil questionnaire on which parents report their method or style of parenting their children.

What will you be asked to do?

You will be asked to read this document thoroughly, and if in agreement, to affirm your participation in the study and to grant permission for your completed HEP and information about your child's academic grades (with all identifying information such as names, addresses, etc. removed) to be provided to the investigators. It will take approximately 20 to 30 minutes to read and mark the HEP. The HEP will ask questions regarding parenting habits which may relate to your child's academic achievement. **It's all confidential!** The results of your completed HEP, with all identifying information

removed, will be grouped together and mailed to the investigators. Additionally, your child's handicapping conditions, if any, will be reported in an accompanying form attached to the completed questionnaire.

Approximately two weeks after your completed questionnaire has been received, you will be asked to complete a second HEP, just like the first one. Your cooperation in filling out the second copy is vital to the project. Doing so will assist in learning more about the usefulness of the HEP. Upon completion, please return the second questionnaire to your school or organization representative.

When the questionnaires are received, all the answers will be entered into a computer database and after the information is checked for correctness, the questionnaires will be destroyed. Your answers will be combined with the answers of other parents from schools or organizations in 2 different states. The name of your child's school or organization will be kept confidential. Participation in the study is strictly voluntary. Furthermore, even with permission or consent given in writing, any parent may withdraw from participating without notice, explanation, or penalty.

What are the possible benefits or risks to you?

There will be no risk or discomfort to you in participating. There is the inconvenience necessitated by your reading the HEP and responding in writing to the items. Some possible benefits might be that the experience will help you to focus on behaviors which seem related to your child's academic achievement. As you complete the HEP you may have other questions which might be fruitful topics for further discussion with professionals at your child's school or organization.

Do you have to participate?

No, your participation is entirely voluntary. You may choose to quit at any time during the project or refuse to answer any question without any penalty to you or your child.

What will happen to the information that is collected?

All results from the HEP questionnaire will be confidential. All personal identifying information will be removed from the questionnaires. Your consent form will be filed with the investigators. Signed consent statements will be kept for the duration of the project and for at least three years following completion of the project. Consent statements will be held by the Co-Principal Investigator, Dr. Donald J. Dickinson, and will be stored in the Claxton Addition Building of the University of Tennessee. The investigators will receive no identifying information concerning your completed HEP questionnaire or your child's grades. The results from the questionnaires will be transposed to computer format and the HEP questionnaire destroyed.

If you have questions...

This study is being conducted by James E. Crowe, Jr., Doctoral Candidate and Dr. Donald J. Dickinson with the cooperation of your school or organization. Any questions that you might have can be answered by talking with your school or organization representative, or by contacting Mr. Crowe or Dr. Donald Dickinson at (423) 974-8145.

Thank you for your time and consideration.

Sincerely,

James E. Crowe, Jr.

APPENDIX E9

PARENTAL INFORMED CONSENT FORM

I understand that my participation in the study is voluntary and that I may withdraw my participation at any time without penalty to me or my child. I understand that by agreeing to participate I am agreeing to participate I am giving permission to my child's school or organization to provide the Principle and Co-Principle Investigators of the study with my questionnaire(s) and with information concerning my child's grades. If I have further questions about the study, I understand that I may call the school or organization representative, . I am also aware that I may contact James E. Crowe, Jr. or Dr. Donald Dickinson at (423) 974-8145 with any additional questions.

I understand that I will keep a copy of this form to read at my leisure.

Yes, I give my consent to participate.

_____ _____

Signature of Coordinator Date

APPENDIX F

Student Information Form (SIF)

Dear Coordinator,

For each completed HEP please indicate the grade average descriptive of the student. Review the student's transcript for the previous academic year and rate each student's grades:

0 At least 75% A's, score 1

0 At least 75% B+'s, score 2.

0 At least 75% C's, score 3.

0 At least 75% D's and F's, score 4.

O Student Score

Vita

James E. Crowe, Jr. was born March 13, 1948, the first of five children. He attended Chattanooga City and Hamilton County Public Schools. Mr. Crowe received his undergraduate degree in 1971 from The University of Tennessee, Chattanooga (UTC). He majored in combined sciences. He pursued his teaching preparation as a post baccalaureate student at UTC. In 1974, Mr. Crowe completed the Master of Science in Educational and Counseling Psychology at The University of Tennessee, Knoxville.

In his 28 year career, he has held many teaching, clinical and administrative roles. His career has been concentrated toward working with emotionally and behaviorally disordered children, adolescents and their families.

Mr. Crowe is the father of three daughters all of whom are in or preparing for roles in the helping profession.

He enjoys people, walking, and learning.