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FAMILY FUNCTIONING AND TEMPERAMENT AS PREDICTORS OF PRESCHOOLERS COPING WITH DAILY STRESSORS

A Doctoral Research Project

Presented to

The School of Graduate Studies

Department of Psychology

Indiana State University

Terre Haute, Indiana

In Partial Fulfillment

of the Requirements for the Degree

Doctor of Psychology

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by

Pamela D. Jones

August 1994

APPROVAL SHEET

The doctoral research project of Pamela D. Jones, Contribution to the School of Graduate Studies, Indiana State University, Series IV, Number 64, under the title Family Functioning and Temperament as Predictors of Preschoolers' Coping with Daily Stressors is approved as partial fulfillment of the requirements for the Doctor of Psychology Degree.

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ABSTRACT

Understanding how preschool children cope is a first step toward identifying adaptive ways of coping which reduce stress and ultimately can decrease the risk of dysfunctional behavior. However, the literature on preschoolers' coping is minimal, in part due to the lack of assessment tools.

This research examined preschoolers coping with daily stress in an attempt to assess what coping styles would be used across different situations. I hypothesized that family environment and temperament would affect the coping style used and that temperament would moderate the effects of the family environment. A secondary question concerned the efficacy of the coping. In order to accomplish this, a scale was developed to assess coping across four situational domains. Using mothers as the primary reporter, the preschoolers' temperament, family functioning, and coping behaviors were assessed and the relationships were examined.

I investigated the ability of family control and cohesiveness, child temperament, and an interaction of cohesiveness and temperament, to predict coping styles. This model was very good at predicting coping in situations where a child was trying to master a task; adequate for predicting coping in emotional situations; and had limited predictive ability in parent-child or peer situations.

There was some support for the moderating effects of temperament. Temperament was a robust predictor of coping

style, whereas family cohesion was not.

Other findings suggest that children who have emotional temperaments used emotional types of coping. Children in families with more interfamily cohesion, or whose parents have higher levels of education, used more cognitive behavioral-problem solving.

Ratings of coping efficacy resulted in cognitive-behavioral problem solving being most effective in Mastery situations, moderate emotional coping being most effective in Parent-child domain, and highly emotional coping was rated as most effective in Emotional situations.

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Chapter 1

INTRODUCTION

One will find almost universal acceptance of the importance of the relationship between the child and members of the family system. There is also a substantial literature and general acceptance that a child's temperament will affect the family and the child's environment. However, the examination of children's coping styles has been much more limited. The goal of the following study is to examine the relationship between family functioning and the type and effectiveness of children's coping strategies, and to assess whether a child's temperament may mediate any effects of the family system on the coping behavior of the child.

Family relationships can influence many aspect of the child's development including quality of attachments, feelings of security, and independence (Ainsworth, 1979), as well as conduct problems and socialization (Patterson, 1982). There is an abundance of literature examining the relationship between social support, stress, and coping within the family and how a child's behavior may be affected by these environmental and/or social factors (Crnic &

Greenberg, 1990; Dunst, Trivette, Hamby, & Pollock, 1990; Hetherington, 1984; Howe & Kotch, 1984; Linblad-Goldberg, Dukes, & Lasley, 1988; Roberts, 1989). There is also research examining the effects of children's behavior and temperament on parent's behavior and attitudes (Earls & Cook, 1983; Hetherington, 1984; Marcovitch, Golberg, Lojkasek, & MacGregor, 1987; Roberts, 1989; Ventura, 1982). To date, there has been little attention focused on how children cope with stress, frustration, or anger in their daily lives, and how these coping styles may be differentially affected by temperament and family functioning.

Coping

Historically, the study of coping strategies has been focused on adults. Children's coping strategies have generally not been the focus of study, but rather have been discussed more globally in the research literature on children's adaptation to stress as defined by attachment and separation (Ainsworth, 1979), social support (Barrera, 1981), coping in achievement contexts (Dweck & Wortman, 1982), and resilience and invulnerability (Garmezy, 1983; Murphy & Moriarty, 1976). However, in 1976 Murphy and Moriarty identified a child's development (which includes their social, language, and motor functioning), temperament, prior experience, areas of vulnerability, and demands of the environment as major factors influencing the child's coping behavior. Recently, there has been a renewed interest in

and research on the coping strategies of young children. Much of the current research focuses on children with illnesses, disabilities, and those facing medical procedures (Hanson, Kleges, Eck, Cigrang, & Carle, 1990; Spirito, Stark, & Williams, 1988; Zeitlin & Williamson, 1990).

Although there is a developing literature on coping in children, there remains a large gap created by the paucity of research on preschoolers' coping. While there are measures of coping for school aged children using an interview format (Band & Weisz, 1988; Curry & Russ, 1985; Wertlieb, Weigel, & Feldstein, 1987a), observational instruments (Curry & Russ, 1985; Elwood, 1987), and self-report scales (Brodzinsky, Elias, Steiger, Simon, Gill, & Hitt, 1992; Causey & Dubow, 1992; Spirito, Stark, & Williamson, 1988), there is a lack of measures to assess coping in preschool children. To date, there appears to be only one inventory or measure to assess the coping strategies, or effectiveness of coping, by preschool children aged 3-5 years (Ritchie, Caty, & Ellerton, 1988). There is also one observational instrument for measuring coping in 3 to 36 month-old children, the Early Coping Inventory (Zeitlin, Williamson, & Szczepanski, 1988). The lack of an available assessment device for preschool coping severely limits the research with this population.

Based on the available literature on children's coping, there appears to be three important areas of child development that must be considered in studying coping.

First, one must consider the child's basic features of cognitive and social development (i.e. self-control, self-perceptions, or inhibitory mechanisms). Second, children's responses to stress are influenced by both their innate psychological and biological tendency (i.e. temperament). And third, an understanding of coping must include the child's social context -- the relationship between the child and the environment, particularly the family environment. As Compas (1987) suggested, in investigating coping one must consider the preferred way of coping and actual coping response, biological and psychological predisposition to respond, and environmental context.

A review of the literature on children's coping revealed the use of problem-solving and management of feelings as a general commonality of coping throughout the literature. The earliest model of preschool children's coping was introduced by Murphy and Moriarty (1976). They created a scale with 643 coping behaviors and factors that contribute to coping (i.e., health states) which they compiled in their Comprehensive Coping Inventory. They make reference to two global types of coping. Coping I was characterized as the capacity to cope with the environment -- active problem solving, use of opportunities, effective responses to environmental demands, challenges, and obstacles. Coping II was characterized as the capacity to manage one's relationship to the environment so as to "maintain internal integration under stress" -- that is, to

be free of unmanageable anxiety, loss of coordination, deterioration of speech, and autonomic arousal (all of which are seen in preschool children when they become stressed or overstimulated). The following is an example of the two coping types:

> Sally's great competence, positive drive, and relatedness to the external world testified to her positive resources and ego strength in the sense of practical coping capacities (Coping I).
>
> But she lacked cohesion in terms of the capacity tomaintain her high level of functioning in motor and cognitive functioning when she was fatigued or under persistent stress. She could not maintain her inner equilibrium in these areas despite her emotional control and apparent autonomic stability. Thus Coping II proved less adequate than was anticipated, and along with great strengths, she was a child with her own vulnerable areas. (Murphy and Moriarty, 1976, pp. 218-219)

Coping II appears to deal with a sense of self-worth and keeping oneself comfortable in relation to others and things in the environment, whereas Coping I deals with the environment more directly. Within each of the these global categories children could use strategies including cognitive capacities, motor capacities, affect, coping techniques and ego resources (complex integrated capacities), and self-feeling. The strategies used for both Coping I and Coping II could depend on the child's temperament, environmental demands, developmental level, and past experiences. These first studies emphasized the complexity of coping in young children, and the difficulties in studying preschool children's coping. Only recently have there been renewed attempts at studying coping in very young children.

Lazarus and Folkman (1984) introduced a coping paradigm

(using an adult population) that divides coping into emotion-focused and problem-focused. For each of these two modes of coping one may use information seeking, direct action, inhibition of action, or intrapsychic processes, or a combination of any of the four. Also, these processes can be self- or environmentally oriented. For example, a child not chosen for a sports team may cope by resolving to improve his or her skill, which is a problem-solving strategy using direct action that is self-oriented. Alternatively, another coping strategy may be to tell himself or herself that being chosen was not important, which is an emotion-regulation strategy using intrapsychic processes that are self-oriented (Wertlieb et al., 1987b). Other researchers have also used the problem-focused and emotion-focused paradigm of coping as the bases for their typologies (Band & Weisz, 1988; Curry & Russ, 1985; Menaghan, 1983; Wertlieb et al., 1987a).

If one looks more closely at the emotion- and problem-focused coping models, a second commonality can be seen: the identification of approach and avoidant styles of coping. Approach strategies involve behaviors that deal directly with the problem, whereas avoidant strategies involve behaviors that avoid or indirectly address the problem (Brodzinsky et al., 1992). Causey and Dubow (1992) also found that an approach-avoidant model of coping was useful for conceptualizing coping, but inadequate to fully explain and understand complex coping in young children.

Several other typologies also delineate between behavioral strategies (overt behavioral attempts to deal with the situation), cognitive strategies (efforts to manage the appraisal of/or thoughts about the situation), and cognitive-behavioral strategies (both a cognitive and behavioral component) (Billings & Moos, 1981; Brodzinsky et al., 1992; Curry & Russ, 1985; Lazarus & Folkman, 1984).

Although a different typology of coping has been developed by researchers investigating children's coping with medical procedures and illness (Ritchie, Caty, & Ellerton, 1988; Spirito, Stark, & Williams, 1988; Zeitlin& Williamson, 1990), these typologies do have similarities to those used in examining coping with family, peer, and school problems. Ritchie, Caty, and Ellerton (1988) developed a checklist for use with preschool children in a hospital setting. They identified six subscales that included: information seeking (approach, cognitive), direct action (approach, behavior), inhibition of action (avoidance, behavior), seeking or accepting help or comfort (approach, behavior), movement toward independence or growth, and intrapsychic (emotional responding). As noted above, their subscales evidence the elements of approach, avoidance, behavioral, and/or cognitive styles of coping.

Several studies have attempted to identify which coping strategies will be used under what environmental circumstances. In developing the Coping Scales for Children and Youth, Brodzinsky et al. (1992) found that coping (in

10-15 year old children) varied as a function of the stressor. They reported that children used primarily assistance seeking and cognitive-behavioral problem solving in response to peer and school problems. Children used cognitive avoidance strategies in response to family problems. This finding parallels that of Band and Weisz (1988) in reporting that school problems, which were perceived by the children as more controllable, evoked "primary coping" (assistance seeking and cognitive-behavioral problem solving) and that family conflict or conflict with authority figures, perceived as less controllable by the children, evoked "secondary coping" (cognitive avoidance). Band and Weisz (1988) found that the controllability of the situation determined which type of behavior was utilized. In situations felt to be less controllable (medical/dental procedures, family problems), children tended to use emotion-focused coping, that is, they tried to control the psychological impact of the stressful event. In situations that are felt to be controllable (peer problems or school failure) children tend to use problem-focused coping, that is they try to change the circumstance.

Individual child characteristics have also been linked to the child's coping style. For example, it has been found (Brodzinsky et al., 1992) that children with higher self-esteem and self-efficacy used more approach oriented coping (cognitive-behavioral problem solving and assistance seeking). Children with lower self-esteem and self-efficacy

reportedly used more cognitive and behavioral avoidance strategies. If low levels of self-esteem and self-efficacy are associated with a sense of lack of control, then it is likely that those children will use avoidant strategies most frequently. Those children with higher esteem and efficacy will be more likely to use approach styles of coping. Also, children who reported using approach strategies were more satisfied with their behavior and were happier with themselves than children who reported using more avoidant behaviors (Causey & Dubow, 1992).

Other individual characteristics that contribute to children's coping include age and gender. Several investigators have reported that there is an increase in cognitive-based coping and a decrease in behavior-based coping as a child matures (Band & Weisz, 1988; Curry & Russ, 1985; Wertlieb et al, 1987a), although there has been a recent finding not supportive of this conclusion (Brodzinsky et al., 1992). Girls, more frequently than boys, use environment-focused coping (versus self-focused) in the form of seeking assistance and social support (Brodzinsky et al., 1992). They also use emotion regulation strategies more frequently (Spirito et al., 1988).

Temperament

It is generally accepted by temperament theorists (Buss & Plomin, 1975; Bates, 1986; Thomas & Chess, 1977) that temperament can be defined as behavior traits which appear early in life and are fairly consistent across similar

situations. However, there continues to be lively debate over heritability of temperament and its covariation with development and environmental demands (Bates, 1986).

For this project, temperament is more specifically defined as constitutionally-based individual characteristics that appear early in life and show some measure of stability over the life span. It is also accepted that the child's temperament interacts with the environment in terms of how they select the environment, how the environment is affected, and in modifying the impact of environment. Buss and Plomin (1975) have identified the individual differences of emotionality, activity, and sociability as central characteristics of temperament. They have suggested that defining and assessing these characteristics allows one to begin to understand how temperament may mediate reactivity to the environment.

The temperament dimension of emotionality appears to have particular relevance to the mediation of life stressors. Emotionality is defined in terms of arousal, reactivity, and excitability. The emotional person is aroused easily and intensely. He or she is excitable and explosive in his or her reaction. The threshold for becoming distressed, for the person high in emotionality, is very low, so responsiveness to a very wide range of situations is characteristic. Alternatively, the person with lower levels of emotionality will likely demonstrate a higher threshold for distress and will respond to a more

narrow range of situations and be less reactive.

Temperament is important in defining what one experiences as frustrating and how one responds to stress. Further research is needed regarding the questions concerning temperament as a mediator of reactions to the environment and temperament as a predictor of coping behavior.

Temperament is thought to play an important role in children's coping responses, perhaps by defining the range of available responses to frustration. Children with increased responsivity will likely cope with a wider range of situations/events than children who are less responsive. Some temperament factors, on the other hand, may restrict the range of coping behaviors or may affect whether the situation is perceived as frustrating or stressful. For example, infants who are "difficult" (with low adaptability to change and negative emotional responses) may have more difficulty developing diverse coping strategies than would a more adaptable, less emotional infant (Compas, 1987).

Although the relation between temperament and coping has been somewhat neglected in the research literature, several studies have demonstrated a relationship between temperament, behavior problems, and stress. Wertlieb, Weigel, and Feldstein (1989) reported that temperament can moderate stress-related behavioral symptoms in young children. They used a sample of 166 children and their mothers to assess the amount of stress experienced by the

child, the child's temperament, the family's social support, and the child's behavior. They found that temperament and social support together accounted for 32% of the variance in child behavior symptoms. Earls and Cook (1983) and Earls and Jung (1987) found that certain aspects of temperament (approach/withdrawal) show a strong relationship with behavior problems. Temperamental characteristics of stubbornness, poor adaptability, and high intensity are closely associated with behavior problems. Temperament measured at ages as young as two to three years old can predict behavior problems, even more so than family environment. Rende and Plomin (1992) used amount of stress and temperament of first grade boys and girls to predict behavior problems. They found that higher levels of stress predicted certain behavior problems for both girls and boys. They also found that temperament moderated the effect of stress on behavior problems. If children were more emotional, more active, or less sociable, their problems dealing with the environment were increased. They concluded that a child's temperament may determine how a child will respond to a stressful event.

Family Environment

Because family stressors, such as not being supportive, being overcontrolling, or highly conflicted, appear to be related to maladjustment among adolescents and children, a substantial amount of research has encouraged the investigation of the relationship between family

relationship variables and aspects of child functioning (Dunst et al., 1990; Sameroff & Seifer, 1983; Webster-Stratton, 1990). These investigators demonstrated relationships between family systems or relationship variables and child behavior variables including temperament. They found that families who reported increased "family well-being" also reported having children with easy temperaments. The child was more likely to react appropriately to stimuli and demonstrate less frustration in interactions with the environment. Several other investigators have also emphasized the importance of the family system in the adjustment of the child. Felner (1984) reported that both the level of family organization and interaction are likely the most important mediators for adaptation for both children and adolescents.

Crnic and Greenberg (1990), using the Family Environment Scale (Moos & Moos, 1983), found that a child's behavior problems were related to poor family relations. The more challenging behaviors exhibited by the child, the less organization and control there was within the family.

Family closeness is important in that coping responses are learned through sharing family responsibilities and interacting with family members. Also, supportive relations in the family provide resources for coping (Garmezy, 1983; Murphy & Moriarty, 1976).

Temperament may also interact with the home environment. It is suggested that as a result of long term

exposure to angry environments, a child will become sensitized to the anger and stress which leaves them vulnerable to developing psychopathology. Children who are already prone to higher levels of responsivity, may experience increased levels of distress in angry families, resulting in lower "emotional disregulation" or an undercontrolling pattern of coping (Cummings & El-Sheikh, 1991). Hetherington (1989) found that children's temperament, family relations, and extrafamilial resources played important roles in a child's coping with divorce and remarriage.

Interestingly, temperament has been found to be related to children's coping and later adjustment in high conflict families. Children's difficult temperament and increased parental conflict moderately predicted adjustment problems (Thomas & Chess, 1977). In a study of children with myelomeningocele, the relationship of temperament, coping style, and family cohesion were good predictors of adjustment to illness (Lavigne et al., 1988).

Summary

It is important to study preschoolers' coping because the basis of their understanding of their relationship to others and their environment are developed while young. In understanding their coping one can then help determine which styles of coping or behaviors are adaptive and effective. Teaching children these adaptive strategies can help safeguard them from becoming overwhelmed with stress and

ultimately decrease their risk of developing maladaptive functioning.

The role of child temperament and family functioning in the development of coping strategies of preschool age children has not been well studied in the current coping literature. Given the gap in the research literature, the overall purpose of the following study was to examine the relations between child temperament and family functioning in the prediction of children's coping style. A secondary question was how mothers would rate the efficacy of their children's coping strategies.

The following specific hypotheses were explored:

1. Children with less emotionality, whose families demonstrated higher levels of intrafamily cohesiveness, would exhibit greater cognitive-behavioral coping strategies in dealing with daily stressors than would children with less emotionality whose families demonstrated lower levels of intrafamily cohesiveness.
2. Children with greater emotionality, whose families demonstrated lower levels of interfamily cohesiveness, would exhibit more emotional and avoidant styles of coping than would children with greater emotionality and higher levels of intrafamily cohesiveness.
3. The cognitive-behavioral approach style of coping would be rated as more effective by mothers than the emotional approach or the cognitive or behavioral avoidance styles.

Chapter 2

METHODS

Subjects

The subjects were 61 three- and four-year old children, two five-year old children and their families. The preschool sample was balanced for males (n=35) and females (n=28). The mean age of the preschoolers was 48.6 months (SD = 7.48), with a range of 36 to 64 months. Forty-six percent of the children were first born. The ethnic background of the families in the sample was predominately Caucasian (88.9%), while African-American and Asian families comprised the remainder of the sample. Mothers, who were the primary informants, had a mean age of 32 years (SD = 6.27), with a range of 23 to 46 years. Most mothers had some post-secondary training or college education (60.4%), although their education ranged from partial high school to post graduate degrees. Fathers' mean age was 34.5 years (SD = 6.57), with a range of 22 to 58. Slightly less than half of the fathers had some post secondary education (42.8%), with the range similar to that of the mothers. The majority of parents in the sample were married (81%), with single/divorced parents making up 11.1% of the population

and separated parents, 6.3%. The socioeconomic status of the sample, based on the Hollingshead (1975) classification system, ranged across several socioeconomic strata. Seventy percent of the sample scored in the highest classifications (I and II), 17.5% in class III, 4.8% in class IV and 1.6% in class V. No classification was made for 3.3% of the sample due to mothers omitting this information. Families with seriously ill preschoolers and those preschoolers with identifiable physical or mental handicaps were excluded from the subject pool.

Sample size was determined according to power analytic procedures described by Cohen and Cohen (1983). An alpha level (p) of 0.05, a power level of 0.75 with four predictors (K=4, intrafamily cohesiveness, control, emotionality, and cohesion x emotionality interaction term) for a median effect size of $\underline{R}$ = 0.40 was selected.

Procedure

The study was advertised at a preschool program of a large midwestern university, with faculty and staff, and at a mother's day out program in the community. For the university-affiliated preschool programs, a letter was sent home with each preschooler to their parent(s) describing the project and asking if the parent(s) would be willing to participate. They were asked to return the letter to the preschool if they were unable or unwilling to participate. Phone contact was made with the family on the day before the packet was sent home in order to answer any questions and

encourage timely return of the packets. The mothers were asked to complete the questionnaires within a 48-72 hour period, and then return the packets with their child to the preschool program. Parents who did not return their packets were contacted by phone and asked about any questions or problems with the packet of materials. They were encouraged to return the packets as soon as possible.

The author visited the mother's day out program and faculty participants, and solicited participation by personal contact. These packets were returned directly to the author.

Each packet contained a consent form, explicit directions about completing the questionnaires, and six questionnaires including a temperament questionnaire (EAS, Buss & Plomin, 1986), a measure of family environment (FES, Family Environment Scale, Moos & Moos, 1983), a measure of coping (PCCI, Preschool Children's Coping Inventory, Jones & Halpern, 1993), the Child Behavior Checklist (CBCL, Achenbach & Edelbrock, 1983), the Marlowe-Crowne Social Desirability Scale (Crowne & Marlowe, 1960), and a demographics background form. In families where a father was present, a second PCCI was included for him to complete.

Measures

Family Environment Scale (FES; Moos & Moos, 1983). The FES (see Appendix A) contains 90 true-false items designed to measure family functioning, style, and structure. This instrument has been standardized on two-parent families,

single-parent families, and multigenerational families. There are a total of ten subscales divided into three major dimensions of family functioning: 1. Interfamily Relations (Cohesion, Expressiveness, and Conflict); 2. Personal Growth (Independence, Achievement Orientation, Intellectual-cultural Orientation, Active-recreational Orientation, and Moral-religious Emphasis); and 3. System Maintenance (Organization and Control). The variables assessed by the Personal Growth dimension were not seen as relevant to this study and therefore these subscales were not used in the data analysis. The Interfamily Relations dimension measures family commitment and support (Cohesion), the extent to which family members openly express their feelings directly (expressiveness), and the amount of openly expressed anger and conflict (Conflict). For this study, intrafamily cohesiveness was measured using the Interfamily Relations dimension of the FES. The sum of the scores of the Cohesion, Expressiveness, and Conflict (reverse scored) scales scores formed this measure. The Systems Maintenance dimension assesses the planning of family activities and responsibilities (Organization) and the extent to which set rules and procedures are used to run the family (Control). Only the Control subscale was used as a measure of control within the family system. According to the measure's authors, the cohesion, expressiveness, conflict, and control subscales have internal consistency coefficients of .78, .69, .75, and .67, respectively, and test-retest

reliabilities over a 12 month period for the four scales were .63, .69, .76, and .79, respectively.

Family functioning was defined in terms of the mother's report of intrafamily cohesiveness. This variable was defined as the combination of cohesion, expressiveness, and lack of conflict.

EAS Temperament Survey for Children (Buss & Plomin, 1986). This 20-item questionnaire (see Appendix B) assesses three dimensions of temperament: Emotionality, activity, and sociability. Emotionality is conceptualized as strong emotional arousal in response to environmental events -- the tendency to become upset easily and intensely. The activity dimension assesses preferred pace and activity level. The Sociability Subscale measures the child's preference for being with others. Buss and Plomin reported that the average internal consistency of the three subscales .83, with test-retest reliabilities of .72 for emotionality, .80 for activity, and .58 for sociability. For this project, emotionality was the temperament characteristic of interest. The higher the score, the more the child exhibits that temperament characteristic.

The Preschool Children's Coping Inventory (PCCI; Jones & Halpern, 1993) is a parental report measure designed for this study. It assesses preschoolers' coping strategies, and parents perception of the effectiveness of those strategies, in response to typical daily stressors (see Appendix C). The PCCI was developed in consultation with

child development specialists, psychologists, and parents who generated situations that preschoolers would find frustrating. Consideration was also given to the existing models and theories on children's coping. After piloting the items, the measure included 20 stressful events that reflected four situational domains including skill or ability mastery, parent-child situations, peer-child situations, and emotional situations. For example, a stressful event in the Mastery domain was, "Your child is trying to tie his/her shoes but cannot."

Across each domain, a series of options was made available to the respondent which reflected different coping behaviors (i.e., crying, asking for help). These coping behaviors were grouped into four different coping styles: cognitive-behavioral approach, cognitive avoidance, behavioral avoidance, and emotional coping.

The PCCI asked the parent to read the stressful situation. Then the parent was asked to choose and record, from the options provided, the behavior(s) the child most often used during the given situation. After recording the behavior(s), the parent was asked to rate, on a Likert-type scale of 0-5, how effective he or she perceived the child's coping behavior to be in the given situation.

Coping style was determined by summing the types of coping styles used in each situational domain. The efficacy score for each style was determined by averaging the individual scores across each style. All scoring was

computed separately for each situational domain.

There are two types of information available using this questionnaire. First, because the coping behaviors were classified into four categories, which were descriptive of the behavior, a coping style could be identified. Secondly, the parent's perception of the effectiveness of each coping style within each domain can be determined.

Coping was defined, by mother's report, as the specific type of effort or strategies (behavioral, cognitive, or emotional) used to manage the demands of everyday frustrating situations. These behaviors were expected to vary across time and situations. The effectiveness of the coping behavior was determined by the mother's appraisal of how effective the child's chosen coping strategy was in the specified situations.

The Child Behavior Checklist (CBCL; Achenbach & Edelbrock, 1983). This instrument (see Appendix D) provides parental report of behavior symptom frequency and severity over the past year. Internalizing, Externalizing, and Total Behavior Scores are generated based on 113 items. One-week test-retest reliabilities were .83-.93, .93-.97, and .87-.97, respectively. The higher the score, the more behavior problems were reported. This measure was used in establishing the validity of the PCCI.

The Marlowe-Crowne Social Desirability Scale (Crowne & Marlowe, 1960). This instrument (see Appendix E) is a measure of social desirability. It was used to help

establish the reliability of the parent report measures.

Demographic Background Sheet. This informational tool (see Appendix F) was used to gather family demographic information such as gender, parity, and age of target child; educational level, occupation, gender, and age of primary caretakers; and ethnic origin of the family. The family's socioeconomic status was assessed using the Hollingshead Social Class Index (Hollingshead, 1975).

Chapter 3

RESULTS

Development of the Preschool Children's Coping Inventory

Frequencies and descriptive statistics were first completed for all PCCI items. For further analyses it was decided to use only the mothers' data in developing this questionnaire. For an item to be retained for analyses on the PCCI it had to meet the minimum criteria of being chosen by at least 10% of the subjects. That is, at least six of the subjects had to respond that their child used the same specific coping strategy in the specific stressful situation. Factor analysis with varimax rotation was used to determine which items would load on four hypothesized styles of coping: emotional, cognitive-behavioral approach, cognitive avoidance, and behavioral avoidance. A separate factor analysis was completed for each of the situation specific domains: Mastery, Parent-child, Peer, and Emotion.

For an item to be retained on a factor within each situational domain, it must have loaded positively and greater than or equal to .30 on that factor. If an item loaded on two factors, it was kept on the factor with the highest loading if there was at least .15 difference between

the loadings; otherwise, the item was deleted from both factors. In reviewing the factor loadings, factor patterns, and scree plots, it became clear that a three-factor solution (versus the four factors originally proposed) for each domain was conceptually and empirically most well-defined. Therefore, the preliminary conceptual scheme was only partially confirmed.

Across the situational domains, there were a total of five coping styles identified. Statistical analyses determined that three of the five coping styles appeared in each situational domain. The five coping styles included moderate, high, and mixed emotional coping; cognitive-behavioral problem solving coping; and cognitive-behavioral avoidance coping. Tables 1 - 4 identify individual item loadings for each situational factor analysis.

Within the Mastery domain, preschoolers used the coping styles of moderate emotion, high emotion, and cognitive-behavioral problem solving to deal with everyday problems (see Table 1). The eigenvalue and percent of variance accounted for by each factor was 3.34 and 14.5% for moderate emotion, 3.01 and 13.1% for high emotion, and 2.64 and 11.5% for cognitive-behavioral problem solving. Cumulatively, 39.1% of the variance was accounted for by the three factor solution.

In the Parent-Child domain (see Table 2), preschoolers used the coping styles of moderate emotion, cognitive-behavioral avoidance, and cognitive-behavioral problem

solving. The eigenvalues and percent of variance accounted for by each factor was 4.80 and 12.3% for moderate emotion, 3.31 and 8.5% for cognitive-behavioral avoidance, and 2.75 and 7.1% for cognitive-behavioral problem solving. Cumulatively, 27.9% of the variance was accounted for by the three factor solution.

Within the Peer domain (see Table 3), preschoolers used the coping styles of cognitive-behavioral problem solving, mixed emotional, and cognitive-behavioral avoidance coping. The eigenvalue and percent of variance accounted for by each factor was 3.45 and 10.8% for cognitive-behavioral problem solving, 3.16 and 9.9% for mixed emotion, and 2.67 and 8.3% for cognitive-behavioral avoidance. Cumulatively, 29% of the variance was accounted for by the three factor solution.

In the Emotional domain (see Table 4), preschoolers used cognitive-behavioral problem solving, high emotion, and moderate emotion for coping. The eigenvalue and percent of variance accounted for by each factor was 2.96 and 13.5% for cognitive-behavioral problem solving, 2.22 and 10.1% for high emotion, and 2.17 and 9.9% for moderate emotion. Cumulatively, 33.5% of the variance was accounted for in the factor analysis.

Cronbach's alphas analyses were used to improve the internal consistency of the scale domains. The internal consistency of each subscale (alpha coefficients) ranged from .57 to .85 across all subscales (see Tables 1-4).

Table 1

PCCI Mastery Domain: Factor Loadings and Cronbach Alphas for Three Subscales

Factor Label	Situation	Coping Behavior	(N)	Factor Loading	Alpha
Moderate Emotion	1. difficulty dressing self	- stomp feet	(59)	.77	
	2. difficulty cutting picture	- whine	(59)	.73	
	3. difficulty dressing self	- whine	(59)	.72	
	4. difficulty with a puzzle	- whine	(61)	.57	
	5. difficulty tying shoes	- whine	(58)	.45	.76
High Emotion	1. difficulty with a puzzle	- cry	(61)	.90	
	2. difficulty cutting a picture	- cry	(59)	.83	
	3. difficulty dressing self	- cry	(59)	.80	
	4. difficultly tying shoes	- cry	(58)	.78	.85
Cog-Beh Problem Solving	1. difficulty with a puzzle	- keep trying	(61)	.72	
	2. difficulty cutting a picture	- keep trying	(59)	.68	
	3. difficulty with a puzzle	- leave situation	(61)	.61	
	4. difficulty cutting a picture	- leave situation	(59)	.51	
	5. difficulty dressing self	- keep trying	(59)	.38	
	6. spills milk	- refuses to respond	(55)	.35	
	7. spills milk	- keeps trying	(55)	.34	
	8. difficulty tying shoes	- ask adult	(58)	.33	
	9. difficulty tying shoes	- keep trying	(58)	.31	.62

Table 2

PCCI Parent-Child Domain: Factor Loadings and Cronbach Alphas for Three Subscales

Factor Label	Situation	Coping Behavior	(N)	Factor Loading	Alpha
Moderate Emotion	1. doesn't want to go to bed	- whine	(61)	.74	
	2. doesn't want to go to bed	- stomp feet	(61)	.69	
	3. doesn't want to bath	- whine	(58)	.68	
	4. you won't buy toy	- whine	(62)	.59	
	5. doesn't want to eat	- whine	(62)	.57	
	6. you won't buy toy	- says hate you	(62)	.48	
	7. doesn't want to go to bed	- scream/yell	(61)	.48	
	8. can't have friends over	- whine	(54)	.41	
	9. doesn't want to go to bed	- refuse to respond	(61)	.33	.77
Cog-Beh Avoid	1. doesn't want to go to bed	- says ok/doesn't	(61)	.65	
	2. doesn't want to bath	- says ok/doesn't	(58)	.63	
	3. can't have friends over	- yell/scream	(54)	.59	
	4. can't have friends over	- stomp feet	(54)	.55	
	5. doesn't want to bath	- ask why	(58)	.51	
	6. you won't buy toy	- stomp feet	(62)	.48	
	7. doesn't want to eat	- refuse to respond	(62)	.42	
	8. doesn't want to eat	- says ok/doesn't	(62)	.40	
	9. doesn't want to bath	- scream/yell	(58)	.37	
	10. doesn't want to eat	- ask why	(62)	.33	.71
Cog-Beh Problem Solving	1. doesn't want to go to bed	- does as asked	(61)	.53	
	2. doesn't want to bath	- does as asked	(58)	.48	
	3. can't have friends over	- keeps trying	(54)	.34	.57

Table 3

PCCI Peer Domain: Factor Loadings and Cronbach Alphas for Three Subscales

Factor Label	Situation	Coping Behavior	(N)	Factor Loading	Alpha
Cog-Beh Problem Solving	1. friend has toy child wants	- ask adult	(53)	.73	
	2. disagreement with friend	- ask adult	(58)	.66	
	3. friend takes toy from child	- ask adult	(58)	.64	
	4. disagreement with friend	- keep trying	(58)	.52	
	5. friend has toy child wants	- keep trying	(53)	.44	
	6. friend knocks child down	- leave situation	(58)	.42	
	7. not chosen for team	- whine	(43)	.36	.76
Mixed Emotional	1. friend takes toy from child	- cry	(58)	.69	
	2. friend has toy child wants	- cry	(53)	.55	
	3. disagreement with friend	- cry	(58)	.55	
	4. friend has toy child wants	- scream/yell	(53)	.45	
	5. friend has toy child wants	- whine	(53)	.41	
	6. friend takes toy from child	- scream/yell	(58)	.39	.58
Cog-Beh Avoidant	1. friend knocks child down	- tattles	(58)	.71	
	2. disagreement with friend	- tattles	(58)	.69	
	3. friend takes toy from child	- tattles	(58)	.60	
	4. friend knocks child down	- scream/yell	(58)	.53	
	5. friend has toy child wants	- tattles	(53)	.42	.76

Table 4

PCCI Emotion Domain: Factor Loadings and Cronbach Alphas for Three Subscales

Factor Label	Situation	Coping Behavior	(N)	Factor Loading	Alpha
Cog-Beh Problems Solving	1. child is scared	- ask adult	(58)	.85	
	2. not feeling well	- ask adult	(55)	.81	
	3. falls/hurts self	- ask adult	(61)	.47	.76
High Emotion	1. child is scared	- cry	(58)	.78	
	2. separated from parent	- cry	(41)	.59	
	3. falls/hurts self	- cry	(61)	.51	.59
Moderate Emotion	1. child is scared	- scream/yell	(58)	.68	
	2. gets feelings hurt	- whine	(59)	.64	
	3. falls/hurts self	- blames someone else	(61)	.54	
	4. child is scared	- whine	(58)	.47	
	5. falls/hurts self	- whine	(61)	.38	.64

Table 5 presents the number of subjects, the means, standard deviations, and possible ranges for mothers' and fathers' coping scores on the PCCI. One can see that there is some variability between mothers' and fathers' scores. Further assessment of this data is found in the following sections.

Table 5

Mothers' and Fathers' Subscale Scores

		Mothers Scale Sum			Fathers Scale Sum		
Subscales	Possible Range	n	M	SD	n	M	SD
Mastery							
1. Mod.Emo.	0-5	55	.80	1.31	22	.68	1.00
2. Hi.Emo.	0-4	55	.60	1.19	22	.56	1.02
3. Cog-Beh. Prblm Solv	0-8	51	3.61	1.99	22	3.91	1.82
Parent-Child							
1. Mod.Emo.	0-8	50	2.84	2.34	23	2.04	1.89
2. Cog-Beh. Avoid	0-9	50	1.98	2.10	23	1.70	1.66
3. Cog-Beh. Prblm Solv	0-3	50	.96	1.02	23	.39	.78
Peer							
1. Cog-Beh. Prblm Solv	0-7	38	1.52	1.84	18	1.88	1.68
2. Mix.Emo.	0-6	52	1.52	1.49	22	1.27	1.24
3. Cog-Beh. Avoid	0-5	50	1.92	1.51	22	1.36	1.36
Emotion							
1. Cog-Beh. Prblm Solv	0-3	54	1.28	1.16	26	1.46	.91
2. Hi.Emo.	0-3	40	2.08	.97	17	1.70	.84
3. Mod.Emo.	0-4	57	.68	1.02	26	.61	.80

Pearson's correlations were computed to assess the degree of relationship between the coping factors within and

across situations (see Table 6). It was expected that the three factors would measure different coping styles within each domain, yet similar coping styles across domains would have some degree of positive relationship. A significant negative correlation was found between the cognitive-behavioral problem solving and the mixed emotional subscales within the Peer domain. As problem solving increased, mixed emotional coping decreased. No other significant correlations were found between subscales within the same situational domain. Several similar subscales across domains were statistically significant (i.e., cognitive-behavioral problem solving across Mastery, Parent-child, Peer, and Emotion). However, not all similar subscales showed this relationship and most of the correlations were relatively low.

Fathers' Ratings on the PCCI

Fathers were given the PCCI in an attempt to further assess the reliability of this measure. The summed scores for mothers' and fathers' reports of coping were correlated to assess any degree of relationship between them (see Table 7). There were five statistically significant correlations which provided partial support for the reliability of this measure. There were also some nonsignificant negative correlations between parents' reports. This finding suggests that the parents reported different coping behaviors for their children. Fathers may see their children differently than mothers, their interactions with

Table 6

Correlations between PCCI Subscales

		Mastery			Parent-Child			Peer			Emotion		
		1	2	3	4	5	6	7	8	9	10	11	12
Mastery	(1) Mod Emo	1.00											
		(55)											
	(2) Hi Emo	.10	1.00										
		(55)	(55)										
	(3) Cog-beh Prblm Solv	.06	-.07	1.00									
		(51)	(51)	(51)									
Parent Child	(4) Mod Emo	.20	.12	.16	1.00								
		(47)	(47)	(44)	(50)								
	(5) Cog-beh Avoid	.18	.23	.32**	.06	1.00							
		(47)	(47)	(44)	(50)	(50)							
	(6) Cog-beh Prblm Solv	-.06	.07	.14	-.07	.13	1.00						
		(47)	(47)	(44)	(50)	(50)	(50)						
Peer	(7) Cog-beh Prblm Solv	.05	-.06	.15	.33*	.15	.42**	1.00					
		(38)	(38)	(37)	(36)	(36)	(36)	(38)					
	(8) Mix Emo	.24*	.37**	.20	.24	.31*	-.30*	-.27*	1.00				
		(48)	(48)	(45)	(46)	(46)	(46)	(38)	(52)				
	(9) Cog-beh Avoid	-.24*	-.11	.26*	.31*	.34**	-.02	.04	.07	1.00			
		(46)	(46)	(44)	(45)	(45)	(45)	(38)	(50)	(50)			

Table 6 Con't

		Mastery			Parent-Child			Peer			Emotion		
		1	2	3	4	5	6	7	8	9	10	11	12
Emotion	(10) Cog-Beh Prblm Solv	-.16 (49)	-.23 (49)	.28* (45)	.10 (44)	.06 (44)	.51*** (44)	.37* (35)	-.04 (48)	.23 (47)	1.00 (54)		
	(11) Hi Emo	.09 (37)	.20 (37)	-.11 (36)	.38** (36)	-.14 (36)	.11 (36)	.21 (31)	-.01 (38)	.06 (38)	.04 (38)	1.00 (40)	
	(12) Mod Emo	.32** (52)	.19 (52)	.30* (48)	.42** (47)	.33** (47)	-.06 (47)	.10 (38)	.28* (51)	.22 (50)	-.10 (54)	.06 (40)	1. 00 (57)

* p<.05 ** p<.01 ***p<.001

Table 7

Correlations between Mother's and Father's Summed Scores on the PCCI Subscales

Mastery			Parent-Child		
Moderate Emo	High Emo	Cog-beh Prob-solv	Moderate Emo	Cog-beh Avoid	Cog-beh Prob-solv
-.07	.57**	.36*	.40*	.14	.01
Peer			**Emotion**		
Cog-beh Prob-solv	Mixed Emo	Cog-beh Avoid	Cog-beh Prob-solv	High Emo	Moderate Emo
.89***	-.20	-.20	.45**	-.30	.17

* p<.05 ** p<.01 *** p<.001

them may be different than mothers' interactions, and/or the fathers' understanding of the questionnaire may have differed. However, there was a strong correlation between the parents on cognitive-behavior problem solving in Peer situations and moderately strong in the Mastery and Emotion situations. Perhaps evaluation of cognitive-behavioral problem solving is one skill for which parents are able to be more objective in the observations of their child. Further assessment of these data are beyond the scope of this paper but deserve future study.

Construct Validity of the PCCI

While no other questionnaires of preschool coping are available, an attempt to address the validity of this measure was completed by examining its relationship to the Child Behavior Checklist (CBCL). The CBCL was completed by the child's mother. The Internalizing, Externalizing, and

Total Behavior Problem scores were computed. All three summary scores were then correlated with the coping style summary scores. Several significant results were found and most were consistent with theoretical expectations (see Table 8). Emotional coping styles were positively related

Table 8

Correlations between PCCI Subscales and Child Behavior Checklist Scores

	Behavior Problem Scores		
	Internalizing	Externalizing	Total
Mastery			
1. Mod.Emo.	.37**	.29**	.40**
2. Hi Emo.	.41***	.50***	.46***
3. Cog-Beh. Prblm Solv	-.02	.01	.04
Parent-Child			
1. Mod.Emo.	.16	.20	.22
2. Cog-Beh. Avoid	.16	.28*	.28*
3. Cog-Beh. Prblm Solv	-.25**	-.21	-.16
Peer			
1. Cog-Beh. Prblm Solv	-.14	-.02	-.03
2. Mix.Emo.	.31**	.40**	.34**
3. Cog-Beh. Avoid	.06	.04	.06
Emotion			
1. Cog-Beh. Prblm Solv	-.42***	-.27**	-.33**
2. Hi Emo.	.22	.03	.13
3. Mod.Emo.	.16	.22*	.28**

*p<.05 **p<.01 ***p<.001

to increased internalizing, externalizing, and total behavior problems in the Mastery and Peer situations;

moderate, but not high, emotional coping was related to increased externalizing and total behavior problems in the Emotional situation. Surprisingly, emotional coping was unrelated to CBCL summary scores in the Parent-child situation.

Increased cognitive-behavioral problem solving was related to reduced internalizing, externalizing, and total behavior problems in the Emotion situation, as well as to reduced internalizing behavior in the Parent-child situation. Generally, children who were described by their mothers as using more emotion coping were also described as having greater behavioral difficulties. No relation between cognitive-behavioral problem solving and CBCL summary scores was found in either the Mastery or the Peer situations. Cognitive-behavioral avoidance was found only to be related to increased externalizing and total behavior problem scores in the Parent-child situation.

Correlational and Multiple Regressions Analyses between Predictor and Criterion Variables

Correlational analyses on mothers' reports were used to assess the relationships between coping styles of the PCCI, and the variables of family environment (intrafamily cohesion) and temperament (emotionality). Hierarchical multiple regressions were then used to determine if the proposed model of coping, with the predictor variables including covariates, family control, intrafamily cohesion, emotionality, and the interaction of intrafamily cohesion

and emotionality would in fact predict the coping styles on the PCCI as hypothesized.

Correlational Analyses

The means and standard deviations for the Family Environment Scale (FES) subscales of interfamily Relations and conflict, the EAS subscales of Emotionality (emotional temperament), Activity, and Sociability, the Child Behavior Checklist (CBCL) subscales of Internalizing, Externalizing, and Total Behavior Problem scores, and the Marlowe-Crowne Social Desirability (MC) score are presented in Table 9.

Table 9

Means and Standard Deviations for the FES, EAS, CBCL, and MC

Variables	Possible Range	M	SD
FES			
1. Interfamily Relations (intrafamily cohesion)	1-09	5.98	2.24
2. Control	1-09	4.32	1.82
EAS			
1. Emotionality	0-25	13.57	4.57
2. Activity	0-25	20.48	3.36
3. Sociability	0-25	18.13	3.32
CBCL			
1. Internalizing	50-99	47.82	9.86
2. Externalizing	50-99	49.97	10.26
3. Total Beh Prblm Score	50-99	50.25	10.40
MC	0-30	18.48	6.19

Pearson's correlations were used to assess the relationship between coping styles and emotionality, intrafamily cohesion, and family control (see Table 10).

Several significant relationships emerged, particularly for the EAS emotionality subscale. This subscale correlated significantly with five of the six emotion coping subscales,

Table 10

Correlations between PCCI Subscales and Emotionality, Intrafamily Cohesion, and Control

	Emotionality	Intrafamily Cohesion	Control
Mastery			
1. Mod.Emo.	.33**	-.23	.16
2. Hi Emo.	.41***	-.25*	.31**
3. Cog-Beh. Prblm Solv	-.05	-.10	-.15
Parent-Child			
1. Mod.Emo.	.25*	-.20	.37**
2. Cog-Beh.Avoid	.06	-.25*	.12
3. Cog-Beh. Prblm Solv	-.40**	.26*	-.17
Peer			
1. Cog-Beh. Prblm Solv	-.10	.08	.04
2. Mix.Emo.	.38**	-.33**	.18
3. Cog-Beh. Avoid	-.11	-.09	-.09
Emotion			
1. Cog-Beh. Prblm Solv	-.44***	.23*	-.24*
2. Hi Emo.	.12	-.01	.11
3. Mod.Emo.	.23*	-.38**	.30**

*p<.05 **p<.01 ***p<.001

such that greater emotionality was related to increased use of an emotional coping style. The emotionality subscale correlated significantly and negatively with two of the three cognitive-behavioral problem solving subscales. There was no correlation between cognitive-behavioral avoidance coping and emotional temperament. It appears that children

who demonstrated increased emotionality were also likely to use more emotional styles of coping, and less likely to use a cognitive-behavioral problem solving style of coping.

The relationship between coping styles and family functioning was also assessed (see Table 10). Pearson correlations revealed that in homes where there was a reported higher level of control, there was increased high emotional coping in Mastery situations and moderate emotional coping in Parent-child and Emotional situations. For high control families, there was also decreased cognitive-behavioral problem solving in the Emotional situations. In general, in homes where there were higher levels of control, more emotional types of coping were reported and children were less likely to use cognitive-behavioral problem solving strategies. The degree of family control was unrelated to any coping styles in the Peer situation.

Intrafamily cohesiveness was related to coping style in several situations (see Table 10). In homes where there was a reported higher level of intrafamily cohesiveness, there was increased cognitive-behavioral problem solving in Parent-Child and Emotional situations. There was decreased emotional coping in Mastery, Peer, and Emotional situations. Additionally, there was decreased cognitive-behavioral avoidance in the Parent-child situation. Generally, children from homes where there was more family cohesiveness were described as using increased amounts of cognitive-

behavioral problem solving coping styles, and decreased amounts of emotional, and cognitive-behavioral avoidance coping.

To ascertain whether or not certain demographic variables were related to coping thus would need to be used as covariates in later regression analyses, the relationship between demographic variables and the coping style subscales was evaluated. Point-biserial correlations were used to assess if there was any covariation of the demographic variables of sex, marital status, parity, and race with coping style summary scores. Pearson's correlations were used to assess the degree of covariation of parent's educational level and age, child's age, socioeconomic status, and social desirability with coping style.

Table 11 presents the means and standard deviations of PCCI summary scores by gender. Concerning gender differences, boys (n=35) were more likely than girls (n=28) to be reported as using cognitive-behavioral problem solving in Mastery situations ($r = -.30$, $p<.02$), cognitive-behavioral avoidance in Parent-Child situations ($r = -.34$, $p<.008$), mixed emotional responding in Peer situations ($r = -.34$, $p<.007$), and moderate emotional coping in Emotional situations ($r = -.33$, $p<.006$). Alternatively, girls (n=28) were more likely to demonstrate highly emotional responding in the Emotional situation ($r = .30$, $p<.03$).

Of interest is that the preschooler's age showed no relationship to coping style, contrary to the findings of

others studying grade school children (Band & Weisz, 1988, Wertlieb et al., 1987a). However, because the age range in this sample was limited, it was not surprising that differences were not found. There were also no differences found with regard to race. This result is likely due to the low number of ethnically diverse children in this sample.

Table 11

PCCI Subscale Means and Standard Deviations by Gender

	Males		Females	
	M	SD	M	SD
Mastery				
1. Mod.Emo.	.82	1.33	.77	1.33
2. Hi Emo.	.61	1.13	.59	1.27
3. Cog-Beh. Prblm Solv	4.14	1.96	2.96	1.87
Parent-Child				
1. Mod.Emo.	3.04	2.39	2.61	2.31
2. Cog-Beh.Avoid	2.62	2.48	1.22	1.20
3. Cog-Beh. Prblm Solv	.89	1.05	1.04	1.02
Peer				
1. Cog-Beh. Prblm Solv	1.45	1.96	1.61	1.75
2. Mix.Emo.	1.97	1.59	.96	1.14
3. Cog-Beh. Avoid	2.21	1.57	1.55	1.37
Emotion				
1. Cog-Beh. Prblm Solv	1.37	1.15	1.19	1.18
2. Hi Emo.	1.82	1.05	2.39	.78
3. Mod.Emo.	1.00	1.23	.33	.55

With regard to parity, children were grouped into first born or other born. In Mastery ($r = .43$, $p<.001$) and Emotional ($r = .27$, $p<.05$) situations, if the child was

first born he/she was less likely to use highly emotional coping behaviors.

Several family demographic characteristics were related to child coping style summary scores. Socioeconomic status, as measured by the Hollingshead, related to only two coping style summary scores. Children from families of higher SES demonstrated more cognitive-behavior problem solving in Peer situations ($r = .32$, $p<.03$) and in Emotional situations ($r = .28$, $p<.02$).

Mother's education correlated significantly with cognitive-behavioral problem solving in three situations, Mastery, ($r = .25$, $p<.04$), Peer, ($r = .42$, $p<.006$), and Emotion, ($r = .27$, $p<.03$), whereas father's education correlated significantly with cognitive-behavioral problem solving subscales in the Mastery, ($r = .24$, $p<.05$) and Emotion, ($r = .33$, $p<.009$) situations. It appears, in general, that the higher the level of educational achievement of the parents, the more often it was reported that the child used cognitive-behavioral problem solving. Mother's age correlated with mixed emotional coping in the Peer domain ($r = .26$, $p<.05$), suggesting that the older mothers were reporting more mixed emotional coping for their children.

Point-biserial correlations revealed that marital status was related to coping styles such that mothers who were in two-parent families tended to describe their children as using less moderate emotion coping in Mastery

situations ($r = .32$, $p<.009$) and more cognitive-behavioral problem solving in Peer situations ($r = -.35$, $p<.02$). Mothers' Social Desirability scores were negatively correlated only with high emotional coping in Mastery situations ($r = -.33$, $p<.007$). It appears that higher desire to appear socially acceptable resulted in her being less likely to report highly emotional coping in Mastery situations.

Regression Analyses

A series of hierarchical multiple regressions were conducted with family control, intrafamily cohesiveness, emotional temperament, and the interaction between emotional temperament and intrafamily cohesiveness as predictor variables, and coping strategy within each situational domain as the criterion variable. Demographic variables that correlated with each dependent variable were entered as covariates on the first step of each respective hierarchical regression. Each coping strategy within each situational domain was considered independently of the others to examine the importance of the differences in coping across different situations. For each regression, the multiple correlation, R^2 change, F change, significance level, and standardized beta are reported.

Mastery Situation

Three hierarchical multiple regressions were conducted in the Mastery situation to predict moderate emotional

coping, high emotional coping, and cognitive-behavioral problem solving coping.

Moderate Emotional Coping. In this analysis the demographic variable of marital status was entered as a covariate on the first step of the regression. The separate entry of family control, intrafamily cohesiveness, emotional temperament, and the temperament x intrafamily cohesiveness interaction term followed as subsequent steps of the analysis.

The multiple correlation coefficient for the regression was statistically significant for the prediction of moderate emotional coping (R = .46, $F(5,48)$ = 2.60, p = .037). The R^2 was .21 and the adjusted R^2 was .13. Table 12 displays the specific results of this analysis.

After controlling for marital status, which accounted for a significant amount of variance (R^2 = .10), examination of the changes in R^2 revealed that emotional temperament accounted for an additional 8% of the variance. This result suggests that a child who has a temperament described as emotional living in a home with one-parent, will demonstrate more moderate emotional coping. Family control, intrafamily cohesiveness, and the interaction of temperament and intrafamily cohesiveness failed to contribute uniquely to the prediction of moderate emotional coping.

High Emotional Coping. In this hierarchical multiple regression, the independent variables were entered in the same order as in the previous regression. However, in this

analysis parity and social desirability scores were entered on the first step as covariates.

The multiple correlation coefficient for the regression was statistically significant for the prediction of high emotional coping (R = .57, $F(6,45)$ = 3.56, $p<.006$). The R^2 was .32 and the adjusted R^2 was .23. Examination of the specific results of this analysis (see Table 12) reveals that aside from the covariates, which accounted for 26% of the variance, no other independent variable contributed uniquely to the prediction of high emotional coping. If the child was not first born and the mother wanted to appear socially desirable, then high emotional coping could be predicted.

Cognitive-Behavioral Problem Solving Coping. In this analysis, the covariates of mothers' and fathers' education, as well as sex, were entered on the first step of the equation.

The multiple correlation coefficient for the regression was statistically significant for the prediction of cognitive behavioral problem solving (R = .57, $F(7,40)$ = 2.78, $p< .019$). The R^2 was .33 and the adjusted R^2 was .21. Table 12 displays the specific results of this analysis.

The demographic variables accounted for 18% of the variance in this regression suggesting that gender (boys) and parental education (higher levels) of education contribute to the prediction of this coping style. R^2 changes also revealed that the interaction of emotionality

and intrafamily cohesion accounted for an additional 7% of unique variance in the prediction of cognitive-behavioral coping.

Post hoc comparisons of the interaction term indicated that in Mastery situations, highly emotional children use moderate amounts of cognitive-behavioral problem solving regardless of family cohesion. Children low in emotionality use less cognitive-behavioral problem solving in families with low cohesion and use greater amounts of cognitive-behavioral problem solving in families with high cohesion (see Figure 1).

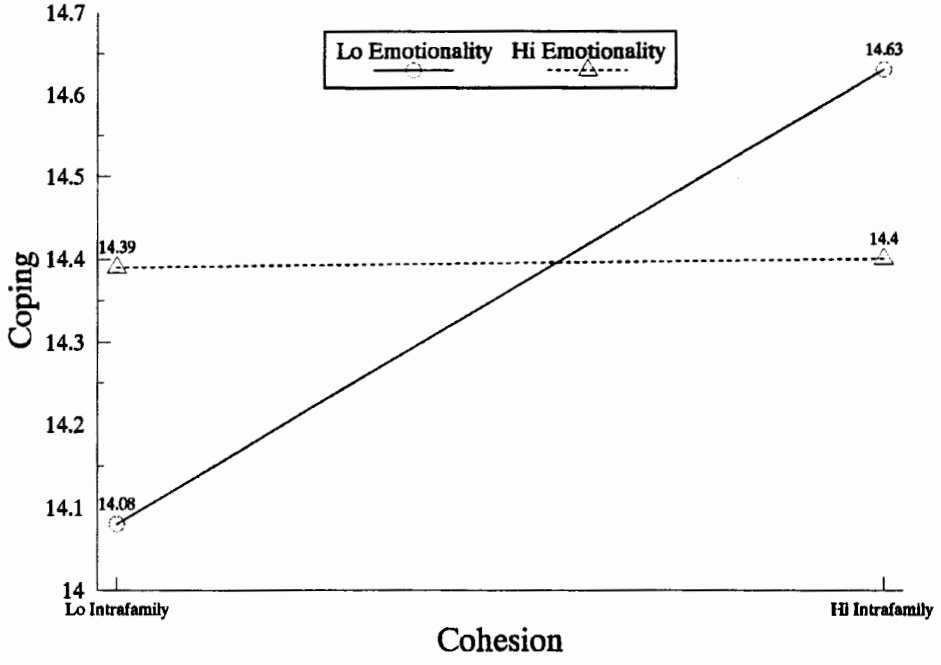

Figure 1. Interaction between Temperament and Intrafamily Cohesion in Mastery Situations Predicting Cognitive-Behavioral Problem Solving Coping.

Table 12

Hierarchical Multiple Regressions Predicting Coping Styles in Mastery Situations

Step and Order of Predictor entry	Mult. R	R^2 Change	F change	p	Beta
Moderate Emotion Coping					
1: Marital Status	.32	.10	5.93	.02	.32
2: Control	.33	.01	.53	.47	.10
3: Intrfmly Cohesvnss	.36	.02	1.23	.27	-.18
4: Emotionality	.46	.08	4.99	.03	.36
5: Emotion x Intrfmly Cohesvnss	.46	.00	.00	.95	.04
Hi Emotion Coping					
1-2: Social Desirability					-.36
Parity	.51	.26	8.64	.00	.36
3: Control	.52	.01	.84	.36	.12
4: Intrfmly Cohesvnss	.53	.01	.66	.42	.13
5: Emotionality	.56	.03	2.17	.15	.23
6: Emotion x Intrfmly Cohesvnss	.57	.00	.41	.52	-.36
Cog-Beh Problem Solving Coping					
1-3: Father Education					.24
Sex					-.33
Mother Education	.43	.18	3.28	.03	.13
4: Control	.45	.02	1.16	.29	-.14
5: Intrfmly Cohesvnss	.50	.04	2.63	.11	-.26
6: Emotionality	.50	.00	.02	.90	.02
7: Emotion x Intrfmly Cohesvnss	.57	.07	4.52	.04	1.31

The temperament and intrafamily cohesion variables alone failed to contribute unique variance to the regression equation. Given that the interaction term did contribute significantly, this would suggest that temperament can moderate the effects of intrafamily cohesion in predicting cognitive-behavioral problem solving in Mastery situations.

Parent-Child Situation

In the Parent-child situation three hierarchical multiple regressions were conducted to predict moderate emotional coping, cognitive-behavioral avoidance, and cognitive-behavioral problem solving. In this series of regressions, only the covariate of sex was entered on the first step of each of the regression analyses predicting cognitive-behavioral avoidance.

Moderate Emotional Coping. Although this regression was not significant, there is a strong indication from the regression results that the variable of control plays an important role in moderate emotional coping in Parent-Child situations (see Table 13). This variable accounted for 13% of the variance in this regression and the other variables did not contribute more to the variance in this regression.

Cognitive-Behavioral Avoidance Coping. Although this regression was not significant, there appears to be is a strong relationship between sex and avoidance coping as demonstrated by the significant amount variance accounted for by this variable (11%). Being male may be important in determining the use of avoidance coping (see Table 13).

Cognitive-Behavioral Problem Solving. The regression predicting cognitive-behavioral problem solving was significant (R = .44, $F(4,45)$ = 2.68, p< .044). The R^2 was .19 and the adjusted R^2 was .12 (see Table 13). Emotionality accounted for 11% of the variance in the prediction of cognitive-behavioral problem solving coping. This suggests that a child who has a temperament described as emotional will demonstrate less cognitive-behavioral problem solving coping. No other variables contributed to the model.

Peer Situation

In the Peer situation, three hierarchical multiple regressions were conducted to predict cognitive-behavioral problem solving coping, mixed emotional coping, and cognitive-behavioral avoidance coping. Covariates were entered for the cognitive-behavioral problem solving and mixed emotional coping.

No regressions in this domain were significant, however, several variables demonstrated importance in relation to coping style. Table 14 reports the specific results of the analyses of coping in the Peer domain.

Cognitive-Behavioral Problem Solving Coping. Though this regression did not predict this coping style, the combined effects of the covariates of SES, marital status, and mothers' education did account for 25% of variance in this regression. Higher educational level of mother, higher SES, and a two-parent home environment is likely to play an

important role in cognitive-behavioral problem solving in Peer situations.

Mixed Emotional Coping. In this analysis, although the regression was not significant, the covariates did account for 16% of the variance in the regression, suggesting that mother's age and child's gender have some relationship to mixed emotional coping.

Emotion Situation

A series of three hierarchical multiple regression were conducted in the Emotion situation predicting cognitive-behavioral problem solving coping, high emotion coping, and moderate emotion coping. The regression predicting high emotional coping was not significant.

Cognitive-Behavioral Problem Solving Coping. The multiple correlation coefficient for the regression was statistically significant for the prediction of cognitive-behavioral problem solving coping (R = .61, $F(7,42)$ = 3.51, $p < .005$). The R^2 was .37 and the adjusted R^2 was .26. Table 15 displays the specific results of this analysis.

Fathers' and mothers' educational level and socioeconomic status accounted for 16% of the variance. Examination of the other changes in R^2 revealed that control within the family accounted for 8% of the variance, and emotional temperament accounted for 9% of the variance in this type of coping. These results suggested that a child whose parents are highly educated and family SES is high, who has decreased emotional temperament, and whose family

uses lesser amounts of control, will demonstrate less cognitive-behavioral problem solving in Emotional situations.

High Emotion. Although this regression was not significant, the covariates of parity and sex accounted for 19% of variance in this style of coping (see Table 15). Female children who are not first born may be likely to use this type of coping.

Moderate Emotion. In this third regression in the Emotion domain, the multiple correlation coefficient for the regression was statistically significant for the prediction of moderate emotional coping (R = .55, $F(5,50)$ = 4.27, $p<$ .003). The R^2 was .30 and the adjusted R^2 was .23. Examination of the specific results of this analysis in Table 15 reveals that after controlling for sex, which accounted for 11% of the variance in this regression, the changes in R^2 revealed that family control accounted for 9% of unique variance, and the interaction term accounted for 6% of unique variance.

These results suggest that children in general and boys in particular, whose families use more control, use moderate emotional coping in Emotional situations. Also, post-hoc comparisons indicated that in emotional situations, children low in temperamental emotionality used moderate amounts of moderate emotional coping regardless of intrafamily cohesion. However, children high in emotional temperament used lower amounts of moderate emotional coping in families

Table 13

Hierarchical Multiple Regressions Predicting Coping Styles in Parent-Child Situations

Step and Order of Predictor entry	Mult. R	R^2 change	F change	p	Beta
Moderate Emotion Coping					
1: Control	.37	.13	7.44	.01	.37
2: Intrfmly Cohesvnss	.37	.00	.01	.92	.02
3: Emotionality	.37	.00	.15	.70	.07
4: Emotion x Intrfmly Cohesvnss	.38	.00	.22	.64	-.27
Cog-Beh Avoidance Coping					
1: Sex	.34	.11	6.19	.02	-.34
2: Control	.36	.01	.77	.38	.11
3: Intrfmly Cohesvnss	.40	.04	2.10	.18	-.24
4: Emotionality	.41	.00	.04	.83	-.03
5: Emotion x Intrfmly Cohesvnss	.41	.00	.00	.93	.05
Cog-Beh Problem Solving Coping					
1: Control	.16	.03	1.36	.25	-.16
2: Intrfmly Cohesvnss	.26	.04	1.97	.17	.24
3: Emotionality	.42	.11	5.98	.02	-.41
4: Emotion x Intrfmly Cohesvnss	.44	.02	1.01	.32	-.55

Table 14

Hierarchical Multiple Regressions Predicting Coping Styles in Peer Situations

Step and Order of Predictor entry	Mult. R	R^2 change	F change	p	Beta
Cog-Beh Problem Solving Coping					
1-3: SES					.32
Marital Status					-.30
Mother Education	.50	.25	3.64	.02	.36
4: Control	.51	.00	.34	.56	.09
5: Intrfmly Cohesvnss	.51	.00	.09	.76	.06
6: Emotionality	.52	.00	.33	.57	-.11
5: Emotion x Intrfmly Cohesvnss	.52	.00	.07	.79	.19
Mixed Emotion Coping					
1-2: Mother Age					.26
Sex	.40	.16	3.75	.03	-.31
3: Control	.40	.00	.01	.94	.01
4: Intrfmly Cohesvnss	.44	.03	1.55	.22	-.21
5: Emotionality	.52	.07	3.61	.07	.34
6: Emotion x Intrfmly Cohesvnss	.52	.00	.17	.69	.28
Cog-Beh Avoidance Coping					
1: Control	.09	.00	.35	.55	-.09
3: Intrfmly Cohesvnss	.17	.02	1.19	.28	-.18
4: Emotionality	.21	.01	.59	.44	-.14
5: Emotion x Intrfmly Cohesvnss	.21	.00	.02	.89	-.08

Table 15

Hierarchical Multiple Regressions Predicting Coping Styles in Emotion Situations

Step and Order of Predictor entry	Mult. R	R^2 change	F change	p	Beta
Cog-Beh Problem Solving Coping					
1-3: Father Education					.32
Mother Education					.03
SES	.40	.16	2.86	.05	.32
4: Control	.48	.07	4.37	.04	-.28
5: Intrfmly Cohesvnss	.49	.01	.59	.44	.12
6: Emotionality	.58	.09	5.81	.02	-.40
7: Emotion x Intrfmly Cohesvnss	.61	.04	2.45	.13	-.90
High Emotion Coping					
1-2: Parity					.26
Sex	.44	.19	4.14	.02	.35
3: Control	.44	.00	.09	.76	-.04
4: Intrfmly Cohesvnss	.45	.00	.26	.62	.10
5: Emotionality	.45	.00	.25	.62	-.10
6: Emotion x Intrfmly Cohesvnss	.47	.02	.81	.38	-.69
Moderate Emotion Coping					
1: Sex	.33	.11	6.45	.01	-.32
2: Control	.44	.09	5.80	.02	.30
3: Intrfmly Cohesvnss	.49	.04	2.89	.10	-.25
4: Emotionality	.49	.00	.09	.77	.05
5: Emotion x Intrfmly Cohesvnss	.55	.06	4.33	.04	-1.05

with lower cohesion and more moderate emotional coping in families with high intrafamily cohesion (see Figure 2). This finding appears to support the hypothesis that temperament can moderate the effects of intrafamily cohesion in predicting moderate emotional coping behavior in Emotional situations.

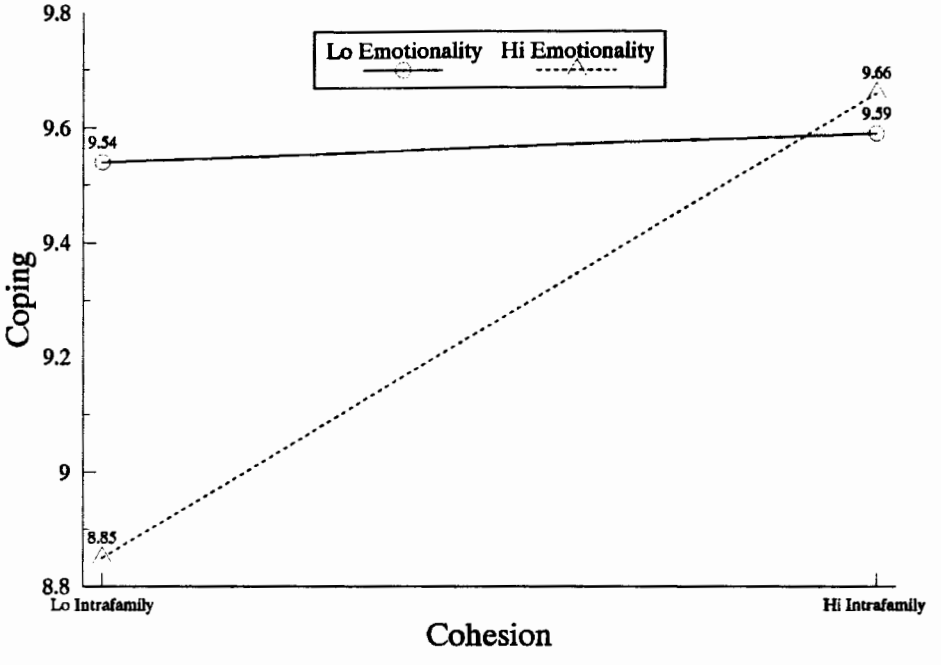

Figure 2. Interaction between Temperament and Intrafamily Cohesion in Emotion Situations Predicting Moderate Emotional Coping.

Coping Efficacy

Included on the PCCI is a section intended to measure the efficacy of the child's coping strategy. Of interest to the researchers was how effective the chosen coping strategies were in the given situations. This was done by asking mothers' to report their perception of the effectiveness of each strategy in each domain.

A repeated measures MANOVA was used to examine the

efficacy of each of the coping factors within the four coping situations. Averaged tests of significance revealed significant main effects for Mastery ($F(2,124) = 80.69$, $p<.001$), Parent-Child ($F(2,124) = 4.48$, $p<.01$), and Emotion ($F(2,124) = 21.07$, $p<.001$) situations (see Table 16). Post hoc tests were used to examine mean efficacy differences between coping factors within situations. There were no main effects for the Peer domain.

Table 16

Mothers' Efficacy Ratings

Subscales	Scale Efficacy Possible Range	M	SD
Mastery			
1. Mod.Emo	0-30	2.57	4.65
2. Hi Emo.	0-24	1.56	3.48
3. Cog-Beh. Prblm Solv	1-54	14.35	9.37
Parent-Child			
1. Mod.Emo.	0-54	7.50	7.67
2. Cog-Beh. Avoid	0-60	6.00	7.03
3. Cog-Beh. Prblm Solv	0-18	4.02	4.68
Peer			
1. Cog-Beh. Prblm Solv	0-42	6.13	7.21
2. Mix.Emo.	0-36	4.06	4.82
3. Cog-Beh. Avoid	0-30	5.69	3.75
Emotion			
1. Cog-Beh. Prblm Solv	0-18	5.62	5.98
2. Hi Emo.	0-18	7.95	4.96
3. Mod.Emo.	0-30	2.56	4.27

For the Mastery situation, cognitive-behavioral problem

solving was reported as more effective than both moderate emotion ($F(1,62) = 80.12$, $p<.001$), and high emotion coping styles ($F(1,62) = 106.12$, $p<.001$). Moderate emotion and high emotion appeared to be judged equally effective.

In Parent-Child situations, moderate emotional coping was found to be more effective than cognitive-behavioral problem solving ($F(1,62) = 8.61$, $p<.01$), and similar to cognitive-behavioral avoidant coping ($p>.05$).

Finally, in the Emotion situations, high emotional coping was more effective than cognitive-behavioral problem solving ($F(1,62) = 7.32$, $p<.01$) and moderate emotional coping ($F(1,62) = 58.91$, $p<.001$); and cognitive-behavioral problem solving was more effective than moderate emotion coping ($F(1,62) = 11.08$, $p<.01$).

Although assessing the efficacy of children's coping is an important task, it was only of secondary interest in this study so there was limited analysis of this data. Certainly, further study in the future is warranted.

Chapter 4

DISCUSSION

Among professionals concerned with the development, physical health, and mental health of children, it has been overwhelmingly accepted that understanding children's coping is an important task (Band & Weisz, 1988; Brodzinsky et al., 1992; Compas & Phares, 1991). There are several theories concerning coping in school-aged children, but few that appear to generalize well to young, preschool children. This research project was an attempt to begin the process of understanding, evaluating, and measuring preschoolers' coping styles and factors that affect coping.

The focus of this project was to examine the relationship between family functioning, temperament and coping strategies. It was hypothesized that a child's temperament could mediate effects of the family system on the coping behavior of that child. Of secondary interest was the perceived effectiveness of children's coping styles.

Measurement Development

The coping measure developed for this project, the PCCI, was intended to assess children's coping resources to deal with stressors in Master, Parent-child, Peer and

Emotional situations. Although the pattern of the data and factor analysis of the Preschool Children's Coping Inventory did not completely support the hypothesized coping factors, the general schema of proposed coping strategies endured. Originally, it was expected that coping strategies would be best grouped into emotional, cognitive-behavioral approach, and cognitive and behavioral avoidance styles of coping. These general categories were found, but with slight variations depending on the specific situation in which coping was assessed. There was some expectation that the coping strategies would vary across all four domains as this variability is usually viewed as appropriate (Brodzinsky et al. 1992). Some specificity in terms of emotional coping being used in Emotional situations was expected. And, in fact, the data did support this supposition with two types of emotional coping being used in the Emotion domain. We hypothesized that our measure would yield different coping factors across different domains, and in fact we found this to be the case.

As opposed to one emotional coping style, we found that emotional coping actually reflected three distinct types of coping: high emotional coping (i.e. crying), moderate emotional coping (i.e. whining, stomping feet, screaming), and mixed emotional coping (combinations of behaviors above). In each of the situational domains assessed (Mastery, Parent-Child, Peer, and Emotional) children were reported to use at least one emotional coping style; within

the Mastery and Emotional domains, emotional coping accounted for two of the three coping styles for that domain. It seems that initially the importance and use of emotional types of responding across different situations was underestimated. However, it is not surprising that emotional coping accounts for three of the five final coping strategies as preschool children are in the process of developing their capacities for cognitive control and emotional mediation.

A cognitive-behavioral problem solving approach was used in each situational domain, and it was very similar to the cognitive-behavioral approach strategy first proposed. In this strategy, the child deals directly with the problem by responding either cognitively (e.g. asks an adult for help) or behaviorally (e.g. does as asked). The cognitive-behavioral avoidance (e.g. says okay but does not do it, ask why) coping style was similar to the originally proposed cognitive avoidance and behavioral avoidance styles of coping. The results of the factor analysis suggested that the two could be collapsed into one strategy. This makes sense intuitively as well. Of interest is that this particular coping strategy took on a more passive-aggressive or indirect nature (i.e., child says o.k. but does not do the task; tattles) as compared to the direct problem solving nature of the other cognitive-behavioral strategy. It was used in the Parent-child and Peer domains only. Perhaps this is due to the relationship components of these two

domains. For instance, most responses in these domains require participation from another party, e.g. says okay but then does not do it, asks why, or refuses to respond.

The findings of this study also provided some initial support for the validity and reliability of the PCCI. The internal structure of the scale as defined by factor loadings was typically high, and internal consistency of the PCCI subscales was acceptable. The intersubscale correlations demonstrated that each coping strategy was generally independent of all the others within a given situational domain, but that similar subscales were mostly related across the situational domains.

Although the correlations were small, there was similarity between mothers' and fathers' reports of coping behavior on five of the nine subscales. In particular, parents reported similar use of cognitive-behavior problem solving. However, the data also suggested that parents perceive their children's coping behaviors differently in different situations, and are sometimes quite at odds with each other. Thus, there was only modest support for the reliability of this measure when comparing parents' reports.

When the PCCI was compared with a measure that assesses behavior problems, generally those children described as using more emotional coping styles were also those described as having more behavior problems. Generally, children who used cognitive-behavioral problem solving were reported as having fewer behavior problems, while those children who

used cognitive-behavioral avoidance were reported as having increased behavior problems. This may indicate that it is not necessarily the cognitive-behavioral aspect of the coping style that relates to behavior problems but perhaps the approach or avoidance style that makes a difference in related behavior problems. However, it appeared that there is not a good overall correlation between these two measures. It is possible that the lack of clear correlations between the CBCL and the PCCI is because the CBCL rates behavior across many domains while the PCCI is more domain specific. Also, although the two instruments measure children's behavior, the two measure somewhat different things as the CBCL measures behavior problems and the PCCI measures coping behaviors.

Overall, this scale has acceptable psychometric properties but its limitations must be recognized. The instrument is not comprised of all of the possible coping strategies of young children. The general strategies identified are an attempt to incorporate typical coping strategies used across a wide range of commonly experienced everyday stressors. Presently, the intent of this instrument is to assess normal, average coping responses of typical preschool children. Additional work needs to be done on assessing the validity of this measure. Correlating the PCCI with school-aged children's coping measures could be used as a way to assess criterion validity, but the few existing measures themselves have questionable psychometric

properties. An important step in demonstrating the validity of this measure would be to compare parental report to a more direct observational assessment of preschooler's coping. This might be accomplished by observing a child's behavioral responses to frustrating situations or through a series of story-like vignettes. The scale has not yet been validated for use with children with handicaps (physical or emotional), with ethnically diverse children, or with lower income children.

Demographic Predictors of Coping Style

Several demographic variables were related to coping style in this study. Regarding gender, girls tended to use highly emotional coping in emotional situations. This was similar to other research findings (Spirito et al., 1988). Boys tended to use more cognitive-behavioral problem solving in Mastery situations, cognitive-behavioral avoidance in Parent-child situations, mixed emotional coping in Peer situations, and moderate emotional coping in Emotional situations. It appeared that boys used specific strategies in specific situations. Perhaps girls use only the specific strategy of high emotional coping in Emotional situations, but use a variety of strategies across the other domains. This conclusion would be similar to the findings of Brodzinsky et al. (1992) where he reported that girls used more diverse types of coping than boys. It is also possible that mothers reported their children's coping behavior in a gender stereotypical way. Girls were reported as using more

high emotional coping and boys using a more cognitive-behavioral coping style. When boys did use emotional coping, it was of a more moderate nature.

Several other child variables were found to have little relationship to the coping styles in this study. Neither age nor race was found to covary with coping style. This may be a reflection of the nature of coping in preschool children; however, it is more likely that the narrow range of age and ethnic backgrounds did not allow for detection of any differences. Birth order (parity) of the child did covary with one specific coping style in that first born children were less likely to use high emotional coping. It may be that first born children have more of the parents' attention than subsequently born children. Parents may be more likely to teach and model for them alternative ways to cope. As the parents' attention gets divided among children, later born children may then resort to some emotionally-based behaviors to gain attention.

There were also parental variables that were related to the child's coping behavior. Greater years of parental education was related generally to the use of more cognitive-behavioral problem solving across domains (except in the Peer situations). Parents with higher levels of education are likely to be more cognitive in nature, learning to problem solve as part of achieving higher educational levels. It would seem that these parents would then teach their children more problem solving skills, as

well as model those cognitive skills for them. Higher SES was associated with more cognitive-behavioral problems solving in Peer and Emotional situations. It seems reasonable that higher SES and higher educational levels would manifest similar results as those who are more highly educated are also likely to be rated higher socioeconomically on the Hollingshead scale.

Social desirability was negatively related to high emotional coping in the Mastery domain. This suggests that mothers who would like to appear socially desirable or appropriate will be less likely to report that their children use highly emotional coping when mastering age-appropriate tasks. The mother may feel it is stigmatizing to be highly emotional, or perhaps she views this behavior as less desirable or acceptable, particularly in situations where the child is practicing and learning new skills.

Temperament and Intrafamily Cohesion as Predictors of Coping Style

One of the central interests of this study was to examine the roles of temperament and family cohesion in child coping. It was not surprising that children who have more emotional temperaments also dealt with everyday frustrations across domains by using more emotional coping strategies. These same children were less likely to use a cognitive-behavioral strategy of any type (problem solving or avoidant). Children who used cognitive-behavioral problem solving or avoidance were much less often described

as temperamentally emotional. These results provide important support for the hypothesis that a child's temperament may influence the way the child copes with daily stressors.

The control and family cohesiveness variables were associated with coping in several interesting ways. Correlations revealed that in homes where there was higher levels of control, more emotional types of coping were used in Mastery, Parent-Child, and Emotional situations. In these homes, children were using more emotional styles of coping and less cognitive-behavioral problem solving.

There was a very strong relationship between intrafamily cohesiveness and the use of emotional coping. The higher the level of cohesion, the less the emotional coping styles were used in Mastery, Peer, and Emotional situations. The more family cohesiveness, the more a child used cognitive-behavioral problem solving in Parent-child and Emotional situations. Families that are supportive and low in conflict likely provide an opportunity, by teaching or modeling, for the child to develop more problem solving skills as the parents are more likely to be patient and encourage these skills. The ability to reason and work out problems would help a child develop this type of coping. If the family is less cohesive, parents are less likely to take the time to teach or support more cognitive-behavioral problem solving strategies.

The regression analyses were intended to examine the

relative contributions of both temperament and family cohesion to the prediction of the different coping styles across the different situational domains. In particular, the regression analyses were designed to test a very specific model of coping which included both main effects of temperament (emotionality) and intrafamily cohesion, and, to assess for the moderating effect of temperament on the family.

Mastery Domain. The model used in this study was successful in predicting coping styles in this domain. All three regressions predicting moderate emotion, high emotion, and cognitive-behavioral problem solving coping, were significant. Concerning moderate emotion coping, both the covariate of marital status, and emotional temperament have predictive value. This means that children, in homes where there is one parent available and who demonstrate increased emotional temperament, will be more likely to display moderate emotional coping in Mastery situations. It may be that when there is less parental attention and a child's temperament is one that allows for arousability and excitability, emotional responding is likely to be chosen as a coping strategy. In situations where a child is trying to master an age-appropriate skill, frustration is a likely result. Children who are easily aroused and excitable will likely respond more quickly with that emotional response rather than tolerate the frustration and problem solve.

In Mastery situations where the child is not the first

born and mothers want to appear socially acceptable, high emotion coping can be predicted. Of interest is that these two covariates accounted for most of the variance in this regression, with little added by the psychological factors. It appears that this coping style, where crying was the coping behavior, a child's birth order and parental affects may be more important than family cohesion, family control and temperament.

In the prediction of cognitive-behavioral problem solving coping, the covariates of mothers' and fathers' education and sex of the child were important. Male children of more highly educated parents were more likely to use this style of coping. Perhaps boys with highly educated parents are encouraged to keeping trying to resolve a difficult task, despite his frustration. Or, the boy may be reinforced for his thoughtful coping style and thus learns to problem solve in difficult mastery situations.

It was hypothesized that children with low emotionality in families with high levels of intrafamily cohesion would exhibit increased amounts of cognitive-behavioral coping. In the Mastery domain, emotionality appeared to moderate the effects of intrafamily cohesion in predicting cognitive-behavioral problem solving. Children who were low in emotionality and whose families were high in cohesion used the most cognitive-behavioral problem solving. Children low in emotionality and whose families were low in cohesion used the least cognitive-behavioral problem solving. In a

situation where a child is trying to master a task, the child may not have enough internal arousal so that active cognitive-behavioral problem solving can be chosen as a coping strategy. This seems to be even more likely when the family environment is not conducive to behaviors such as continuing to try or asking for help, where these behaviors may be interpreted as bothersome and time consuming. In families where support and encouragement are available, and the child is not easily aroused, more frustration could be tolerated as the child practices the skill and learns to problem solve.

Children high in emotionality used moderate amounts of the cognitive-behavioral problem solving approach regardless of the amount of intrafamily cohesion. Children high in emotionality appear to have enough self-arousal to respond in families where cohesion is low, and are seemingly guided or contained in families with high cohesion so that their levels of cognitive-behavioral problem solving in these two conditions are similar.

Although Wertlieb et al. (1989) found statistical support for the buffering effect of temperament, he believed the main effects explanation was most parsimonious because the main effects accounted for more variance than the interaction effects. He therefore concluded that their data was nonsupportive of the buffering hypothesis. In the present study, where an interaction effect was significant, no main effects were found. This finding suggests a primary

moderating role for temperament on family cohesion. These findings also support the conclusions of Learner and East (1984) that temperament interacts with the environment to serve as a moderator.

Although moderating effects are supported by the significance of the interaction, the differences in subscale scores is small and calls into question the clinical significance of these findings. Certainly there are enough data to support the importance of this line of research; however, the model may need refinement and further study before its clinical usefulness becomes apparent.

Parent-Child Domain. Although only the regression analysis predicting cognitive-behavioral problem solving was significant, the regression predicting moderate emotional coping demonstrated that family control may, in fact, be a very important factor in this model. A child whose family is somewhat controlling may use whining and stomping his or her feet as a way of coping with frustrating interactions with the parent. Family control should be carefully considered in the future research as an important variable in this particular coping style.

There is also an indication that boys are using more avoidant coping in the Parent-child situations. Brodzinsky et al. (1992) also found that children were likely to use avoidant coping in family situations involving the parent, perhaps as a way of minimizing the distress associated with problems that seem less controllable. Band and Weisz (1988)

found similar results.

In the regression predicting cognitive-behavioral problem solving, temperament was predictive of coping. Children with lower amounts of emotional temperament were likely to use cognitive-behavioral problem solving. The less arousable and prone to reacting intensely, the more likely a child is to be thoughtful and take time to problem solve. In parental situations, children low in emotionality are likely to do as the parent asks.

Peer Domain. While none of the regressions predicting coping in the Peer domain were significant, there were several variables that are of particular importance. In families where mothers are more highly educated, there are two parents in the home, and there is a higher socioeconomic standing, a child is likely to use cognitive-behavioral problem solving. This finding is similar to other regressions predicting problem solving.

In predicting the coping behaviors of whining and screaming in Peer situations, the variable of sex and mother's age were important. Boys whose mothers are older will more likely use these coping behaviors in this situational domain. Perhaps older mothers are not as uncomfortable reporting that their son reacts with whining and screaming when he is with peers. They may accept that behavior more readily. The covariates of educational level, socioeconomic status, marital status, mother's age, and child's gender will be important include when studying

coping with peer situations in the future.

Emotion Domain. The covariates of mothers and fathers education and family SES accounted for some of the predictive value of the regression predicting cognitive-behavioral problem solving. Two psychological factors, family control and child's temperament, played a significant role in the prediction of cognitive-behavioral problem solving as well. These results may indicate that in situations that are emotional in nature, a child's coping strategy is related to both the child's temperament and the nature of the control within the family and the parents' educational level and socioeconomic status. For example, a child whose parents are highly educated, who is low in emotional temperament in a family with low levels of control, will be more likely use cognitive-behavioral problem solving. This could be interpreted in two ways. First, as a result of the child being temperamentally emotional and his or her resulting responsiveness to their environment, the family may feel a need to exert more control in order to structure and limit the child's reactivity and excitability. However, the child may be more reactive and excitable due to the limitations put on the child by the controlling family which limits the child's ability to develop internalized controls. Causey and Dubow (1992) found that children use emotional kinds of coping when they feel less in control of the environment. This has been supported by other researchers as well (Band & Weisz,

1988; Moos & Moos, 1983; Lazarus & Folkman, 1984).

Female children who are not first born are important in predicting crying as a coping behavior in Emotional situations. This pattern may in fact demonstrate the propensity of young children to demonstrate stereotypic behavior at a very young age.

In the regression predicting moderate emotional coping, several factors were of significant predictive value. Boys in families with higher levels of control were likely to be reported as using moderate emotional coping. It seems likely that parents who have boys reacting emotionally to situations may be uncomfortable with this response because of their stereotypic ways of viewing boys' behavior, thus they may try to increase their control over the boys' behavior. Or, the boys could be responding more emotionally because of the higher levels of control in the family. The boy may be seeking or struggling for some independence from the parents.

It was also hypothesized that children with high levels of emotionality in families with low intrafamily cohesion would use more emotional and avoidant coping than cognitive-behavioral problem solving. However, contrary to this prediction, children high in emotionality from families with low cohesion used lower amounts of moderate emotional coping. It may be that they use lower amounts of moderate coping and more of some other type of emotional coping behavior that was not a part of this particular interaction.

It could be that families cannot tolerate the highly aroused child and do not allow emotional types of coping; thus the child must chose some other response. In contrast, children high in emotionality in homes where there was high intrafamily cohesion used the most moderate emotional coping in emotional situations. This may be explained by the ability or willingness of a highly cohesive family to tolerate and accept moderate emotional coping in emotional situations, or even for them to see this coping as appropriate and acceptable.

The interaction in this regression seems to suggest also that the child's temperament may moderate effects of intrafamily cohesion in predicting moderate emotional coping. It appears that the children who have lower arousal will respond with moderate emotional coping regardless of their family's cohesion. Their temperament may be moderating effects of the environmental factors in these situation.

Although this interaction was statistically significant, the real differences in the scores are quite small. Thus, there is some question about the clinical utility of these findings. Certainly further study is warranted.

Summary and Conclusions

In this study, in all models predicting cognitive-behavioral problem solving coping and moderate emotional coping (except in the Peer domain where no regressions were

significant), emotionality was significant either independently or in an interaction with intrafamily cohesion. When investigating temperament and social support as moderators or buffers against stress, Wertlieb et al. (1989) found that temperament contributed both independently and as a moderator (in interaction with social support) of stress. Temperament was a very important predictor in these two styles of coping across domains. This would suggest that when assessing or studying preschoolers' coping, the individual variable of temperament is likely to play an important role.

None of the regression analyses used to predict avoidant coping styles were significant. However, through correlational analysis of avoidance in the Parent-Child domain, one can see that behavioral problems and lower family cohesion are related to this coping style. This makes sense in that in families where there is less intrafamily cohesiveness, that is more conflict, less cohesion, and less expressiveness, children would be more likely to avoid the stressful situation to perhaps avoid a conflict. Brodzinsky et al. (1992) and Band and Weisz (1983) also found that cognitive-behavioral avoidance was used in dealing with family problems. However, these relationships were not strong enough to predict the use of cognitive-behavioral avoidance coping.

It is also of interest that although intrafamily cohesion was a part of the model in which different coping

styles could be predicted, family cohesiveness did not alone (independently) account for a significant amount of variance in any model. Only in interaction with temperament did family cohesion become significant. This is an important finding in that it suggests that family cohesion alone does not provide a main effect but that in conjunction with other variables it becomes significant. This lends support to the opinions of Compas (1987) who asserted that when thinking about coping, one must take into account the environment and the internal predisposition of the child. Crnic and Greenberg (1990) also assert that temperament is more powerfully associated with outcome than the home environment.

The model being tested in this research was not successful in the Peer domain. There may be several reasons for this finding. First, the sample was drawn from a daycare program where teachers are much more likely than parents to see the child in interaction with others. The mother may have only limited observations of the child with peers. Second, children may cope with peer problems with a different set of coping strategies than the ones provided for in this study. Third, children may practice newly learned or developing coping strategies in situations with their peers due to the amount of time spent with peers and the relative control they have in peer situations.

It is important to clarify the issues concerning why there were different coping styles both across domains and

within domains, and why different variables predicted different types of coping. These results were not unexpected considering the complex and dynamic nature of coping.

In child development, the child has an impact on the family and the family has an impact on the child. Temperament variables work with the environment rather than at odds with it. A child is born with a behavioral tendency, not a particular way of behaving. Temperament can direct or influence a child's behavior within a given situation. Temperament evokes responses from others as well, so there is some interplay between temperament and others' characteristics. Generally, temperament will provide for basic characteristics, and the environment will provide the stage for how the characteristics are displayed. For example, consider a three year old child who is temperamentally inhibited, or low in sociability, and put him or her on the playground. There are many play options for the child, but he or she is likely to play with toys that do not require much interaction with others. He or she will not pick social things to do. Put the same child in a different situation, for example at home with parents in the play area, and the child will be more likely to pick more interactive toys. The same child at five years old, who is still inhibited, may join a ball game because the environment (a kindergarten teacher at school) will expect this kind of participation. The child is still inhibited,

but demonstrates different behaviors at different ages in different situations.

The hypotheses concerning the efficacy of the coping were only partially supported. Cognitive-behavioral problem solving was rated as the most effective coping style in only one domain -- Mastery. In Parent-child situations, moderate emotional coping was rated as most effective, while in Emotional situations, highly emotional coping was rated as most effective. It appears that a different mode of coping in different situations may in fact be the most effective way to coping. Having a range of coping strategies from which to choose appears to be the most effective way of dealing with the numerous everyday frustrations that preschoolers face.

The method used in this research had it's advantages and disadvantages. There are limitations inherent in the use of the mother's report. In responding, mothers may be biased by their memories of a particular situation, their expectations of their child, and the interpretation of the questions. For example, Hetherington (1989) found that nurses' ratings of temperament were better predictors of later behavior than mothers' ratings.

The sample size and characteristics will limit the generalizability of the results. A larger and more heterogeneous sample would address this issues. Also, this study examined coping at one point in time and with a fairly narrow age range of children. Given the narrow age range it

was not surprising to find no age effects. The complexity of coping, considering the evidence of strategies varying across situations, ages, and internal functioning, would warrant future longitudinal study.

Before one can assess the long term outcome of coping -- positive or negative, adaptive or maladaptive, or effective or ineffective -- an accurate measure of coping must be found. The PCCI could well be the instrument to use. However, there is a great need to continue the work on the conceptualization of preschoolers' coping. It will be very important to account for the complex and dynamic nature of coping. Then the variables that affect coping strategies will need to be identified and studied in order to understand the process and eventually the outcome of coping. This study used a questionnaire based on theory and a conceptualization of coping as dynamic and complex, rather than as an outcome. Further refinements in conceptualization are important in order to further our understanding of coping and applying it in clinical situations. The work of Ryan-Wenger (1992) in developing a nonhierarchical taxonomy of coping strategies specific to children. She reviewed and then synthesized results of sixteen empirical studies on coping which resulted in the identification of fifteen categories of coping strategies. The strategies are independent of each other and seem fairly comprehensive. This conceptualization and her encouragement to use this taxonomy as the basis for examining coping is an

important step for research on children's coping.

The clinical implications of this study are related to the assessment of children's coping as related to the family environment and the child's temperament. This study demonstrated the importance of accounting for temperamental and environmental factors independently and in interaction with each other in the assessment of coping. Finally, in that this study was successful in systematically identifying coping strategies and factors that influence coping, these results can serve as the foundation for future work in the area of preschoolers' coping. It will be important to examine the coping strategies of clinical populations as well as the normal population. By comparing these two groups, we may be better able to discriminate between normal variability in coping and truly dysfunctional styles of coping. Once effective and adaptive ways of coping are understood, then children can be taught and encourage to develop these coping strategies, thus reducing their risk of dysfunctional behavior.

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APPENDIX A

Family Environment Scale

Please read each statement on this form and then mark T (true) if you think the statement is true of your family, and F (false) if the statement is not true of your family.

T F 1. Family members really help and support one another.

T F 2. Family members often keep their feelings to themselves.

T F 3. We fight a lot in our family.

T F 4. Activities in our family are pretty carefully planned.

T F 5. Family members are rarely ordered around.

T F 6. We often seem to be killing time at home.

T F 7. We say anything we want to around our home.

T F 8. Family members rarely become openly angry.

T F 9. We are generally very neat and orderly.

T F 10. There are very few rules to follow in our family.

T F 11. We put a lot of energy into what we do at home.

T F 12. It's hard to "blow off steam" at home without upsetting somebody.

T F 13. Family members sometimes get so angry they throw things.

T F 14. It's often hard to find things when you need them in our house.

T F 15. There is one family member who makes most of the decisions.

T F 16. There is a feeling of togetherness in our family.

T F 17. We tell each other about our personal problems.

T F 18. Family members hardly ever lose their tempers.

T F 19. Being on time is very important in our family.

T F 20. There are set ways of doing things at home.

T F 21. We rarely volunteer when something has to be done at home.

T F 22. If we feel like doing something on the spur of the moment we often just pick up and go.

T F 23. Family members often criticize each other.

T F 24. People change their minds often in our family.

T F 25. There is a strong emphasis on following rules in our family.

T F 26. Family members really back each other up.

T F 27. Someone usually gets upset if you complain in our family.

T F 28. Family members sometimes hit each other.

T F 29. Family members make sure their rooms are neat.

T F 30. Everyone has an equal say in family decisions.

T F 31. There is very little group spirit in our family.

T F 32. Money and paying bills is openly talked about in our family.

T F 33. If there's a disagreement in our family, we try hard to smooth things over and keep the peace.

T F 34. Each person's duties are clearly defined in our family.

T F 35. We can do whatever we want to in our family.

T F 36. We really get along well with each other.

T F 37. We are usually careful about what we say to each other.

T F 38. Family members often try to one up or out do each other.

T F 39. Money is not handled very carefully in our family.

T F 40. Rules are pretty inflexible in our home.

T F 41. There is plenty of time and attention for everyone in our family.

T F 42. There is a lot of spontaneous discussions in our family.

T F 43. In our family, we believe you don't ever get anywhere by raising your voice.

T F 44. Dishes are usually done immediately after eating.

T F 45. You can't get away with much in our family.

APPENDIX B

EAS Temperament Survey for Children: Parental Ratings

Rate each item for your child on a scale of 1 (not characteristic or typical of your child) to 5 (very characteristic of your child).

1 2 3 4 5 Child tends to be shy.

1 2 3 4 5 Child cries easily.

1 2 3 4 5 Child likes to be with people.

1 2 3 4 5 Child is always on the go.

1 2 3 4 5 Child prefers playing with others rather than alone.

1 2 3 4 5 Child tends to be somewhat emotional.

1 2 3 4 5 When child moves about, he or she usually moves slowly.

1 2 3 4 5 Child makes friends easily.

1 2 3 4 5 Child is off and running as soon as he or she wakes in the morning.

1 2 3 4 5 Child finds people more stimulating than anything else.

1 2 3 4 5 Child often fusses and cries.

1 2 3 4 5 Child is very sociable.

1 2 3 4 5 Child is very energetic.

1 2 3 4 5 Child takes a long time to warm up to strangers.

1 2 3 4 5 Child gets upset easily.

1 2 3 4 5 Child is something of a loner.

1 2 3 4 5 Child prefers quiet, inactive games to more active ones.

1 2 3 4 5 When alone, child feels isolated.

1 2 3 4 5 Child reacts intensely when upset.

1 2 3 4 5 Child is very friendly with strangers.

APPENDIX C

Preschool Children's Coping Inventory

The following statements are a list of situations or events that children may find frustrating or upsetting.

Space B: Please respond to the statement by deciding which of the Behaviors listed below your child uses when dealing with the event, then record the corresponding numbers in space B. You do not have to fill in all the spaces, just select the one or more behaviors your child usually displays in response to each event.

1. says ok but then doesn't do it
2. blames someone else
3. cry
4. change subject
5. stomp feet
6. asks an adult for help
7. does as asked
8. says no
9. keeps trying
10. leaves the situation
11. whines
12. ask why
13. tattles
14. scream/yell
15. tells you they hate you or you're not their friend
16. refuse to respond

Space R: Please rate, using the following scale, how often your child's behavior in the given situation seems to be effective in dealing with the problem and record that rating in space R below each corresponding behavior.

never.....rarely.....sometimes.....often.....very often.....always
0 1 2 3 4 5

1. Your child is trying to tie his/her shoes but cannot.

Behavior	_____	B _____	B _____	B _____	B _____	B _____	B _____	B _____
Rating	_____	R _____	R _____	R _____	R _____	R _____	R _____	R _____

2. Your child gets separated from you in the store.

Behavior _____	B _____	B _____	B _____	B _____	B _____	B _____	B _____
Rating _____	R _____	R _____	R _____	R _____	R _____	R _____	R _____

3. Your child wants to have friends over to play and you say no.

Behavior _____	B _____	B _____	B _____	B _____	B _____	B _____	B _____
Rating _____	R _____	R _____	R _____	R _____	R _____	R _____	R _____

4. Your child falls and hurts himself/herself.

Behavior _____	B _____	B _____	B _____	B _____	B _____	B _____	B _____
Rating _____	R _____	R _____	R _____	R _____	R _____	R _____	R _____

5. Your child is asked to eat food that he/she doesn't want to eat.

Behavior _____	B _____	B _____	B _____	B _____	B _____	B _____	B _____
Rating _____	R _____	R _____	R _____	R _____	R _____	R _____	R _____

6. A friend intentionally knocks your child down while playing.

Behavior _____	B _____	B _____	B _____	B _____	B _____	B _____	B _____
Rating _____	R _____	R _____	R _____	R _____	R _____	R _____	R _____

7. You will not buy a toy your child wants.

Behavior _____	B _____	B _____	B _____	B _____	B _____	B _____	B _____
Rating _____	R _____	R _____	R _____	R _____	R _____	R _____	R _____

8. Your child is trying to poor a glass of milk and it spills.

Behavior _____	B _____	B _____	B _____	B _____	B _____	B _____	B _____
Rating _____	R _____	R _____	R _____	R _____	R _____	R _____	R _____

9. Your child has a disagreement with a friend.

Behavior _____	B _____	B _____	B _____	B _____	B _____	B _____	B _____
Rating _____	R _____	R _____	R _____	R _____	R _____	R _____	R _____

10. A friend is playing with a toy, crayon, etc... that your child wants.

Behavior _____	B _____	B _____	B _____	B _____	B _____	B _____	B _____
Rating _____	R _____	R _____	R _____	R _____	R _____	R _____	R _____

11. Your child does not want to take a bath when told to do so.

Behavior	_____	B	_____	B	_____	B	_____	B	_____	B	_____	B	_____
Rating	_____	R	_____	R	_____	R	_____	R	_____	R	_____	R	_____

12. A friend takes a toy, crayon, etc... with which your child is playing.

Behavior	_____	B	_____	B	_____	B	_____	B	_____	B	_____	B	_____
Rating	_____	R	_____	R	_____	R	_____	R	_____	R	_____	R	_____

13. Your child is having difficulty dressing himself/herself.

Behavior	_____	B	_____	B	_____	B	_____	B	_____	B	_____	B	_____
Rating	_____	R	_____	R	_____	R	_____	R	_____	R	_____	R	_____

14. Your child does not want to go to bed when told to do so.

Behavior	_____	B	_____	B	_____	B	_____	B	_____	B	_____	B	_____
Rating	_____	R	_____	R	_____	R	_____	R	_____	R	_____	R	_____

15. Your child is not feeling well.

Behavior	_____	B	_____	B	_____	B	_____	B	_____	B	_____	B	_____
Rating	_____	R	_____	R	_____	R	_____	R	_____	R	_____	R	_____

16. Your child is scared by something.

Behavior	_____	B	_____	B	_____	B	_____	B	_____	B	_____	B	_____
Rating	_____	R	_____	R	_____	R	_____	R	_____	R	_____	R	_____

17. Your child gets his/her feelings hurt.

Behavior	_____	B	_____	B	_____	B	_____	B	_____	B	_____	B	_____
Rating	_____	R	_____	R	_____	R	_____	R	_____	R	_____	R	_____

18. Your child is trying to cut out a picture that is too difficult.

Behavior	_____	B	_____	B	_____	B	_____	B	_____	B	_____	B	_____
Rating	_____	R	_____	R	_____	R	_____	R	_____	R	_____	R	_____

19. Your child is trying to put together a puzzle that is too difficult.

Behavior	_____	B	_____	B	_____	B	_____	B	_____	B	_____	B	_____
Rating	_____	R	_____	R	_____	R	_____	R	_____	R	_____	R	_____

20. Your child is not chosen to be on the team he/she prefers.

Behavior	_____	B	_____	B	_____	B	_____	B	_____	B	_____	B	_____
Rating	_____	R	_____	R	_____	R	_____	R	_____	R	_____	R	_____

APPENDIX D

Child Behavior Checklist For Ages 2-3

Child's Name _____ Today's Date _____
Child's Birthdate _____ Sex _____
Age _____
Ethnic Group or Race _____

Please fill out this form to reflect your view of the child's behavior even if other people might not agree. Feel free to write additional comments beside each item and in the space provided on page 2.

Below is a list of items that describe children. For each item that describes the child now or in the past 2 months, please circle the 2 if the item is very true or often true of the child. Circle 1 if the item is somewhat or sometimes true of the child. If the item is not true of the child, circle 0. Please answer all items as well as you can, even if some do not seem to apply to the child.

0=Not True 1=Somewhat/Sometimes True 2=Very/ Often True

0 1 2 1. Aches and pains (without medical cause)
0 1 2 2. Acts too young for age
0 1 2 3. Afraid to try new things
0 1 2 4. Avoids looking others in the eye
0 1 2 5. Can't concentrate, can't pay attention for long
0 1 2 6. Can't sit still or restless
0 1 2 7. Can't stand having things out of place
0 1 2 8. Can't stand waiting; wants everything now
0 1 2 9. Chews on things that aren't edible
0 1 2 10. Clings to adults or too dependent
0 1 2 11. Constantly seeks help
0 1 2 12. Constipated, doesn't move bowels
0 1 2 13. Cries a lot
0 1 2 14. Cruel to animals
0 1 2 15. Defiant gets upset easily.
0 1 2 16. Demands must be met immediately
0 1 2 17. Destroys his/her own things
0 1 2 18. Destroys things belonging to his/her family or other children
0 1 2 19. Diarrhea or loose bowels when not sick
0 1 2 20. Disobedient
0 1 2 21. Disturbed by any change in routine
0 1 2 22. Doesn't want to sleep alone
0 1 2 23. Doesn't answer when people talk to him her

0 1 2 24. Doesn't eat well (describe) _____
_____
0 1 2 25. Doesn't get along with other children
0 1 2 26. Doesn't know how to have fun, acts like a little adult
0 1 2 27. Doesn't seem to feel guilty after misbehaving
0 1 2 28. Doesn't want to go out of home
0 1 2 29. Easily frustrated
0 1 2 30. Easily jealous
0 1 2 31. Eats or drinks things that are not food - don't include sweets (describe) _____
0 1 2 32. Fears certain animals, situations, or places (describe) _____
0 1 2 33. Feelings are easily hurt
0 1 2 34. gets hurt a lot, accident prone
0 1 2 35. Gets on many fights
0 1 2 36. Gets into everything
0 1 2 37. Gets too upset when separated from parents
0 1 2 38. Has trouble getting to sleep
0 1 2 39. Headaches (without medical cause)
0 1 2 40. Hits others
0 1 2 41. Holds his/her breath
0 1 2 42. Hurts animals or people without meaning to
0 1 2 43. Looks unhappy without good reason
0 1 2 44. Angry moods
0 1 2 45. Nausea, feels sick (without medical cause)
0 1 2 46. Nervous movements or twitching (describe) _____
_____
0 1 2 47. Nervous, highstrung, tense
0 1 2 48. Nightmares
0 1 2 49. Overeating
0 1 2 50. Overtired
0 1 2 51. Overweight
0 1 2 52. Painful bowel movements
0 1 2 53. Physically attacks people
0 1 2 54. Picks nose, skin, or other body parts (describe) _____
0 1 2 55. Plays with own sex parts too much
0 1 2 56. Poorly coordinated or clumsy
0 1 2 57. Problems with eyes without medical cause (describe)_____
0 1 2 58. Punishment doesn't change his/her behavior
0 1 2 59. Quickly shifts from one activity to another
0 1 2 60. Rashes or other skin problems (without medical cause)
0 1 2 61. Refuses to eat
0 1 2 62. Refuses to play active games
0 1 2 63. Repeatedly rocks head or body
0 1 2 64. Resists going to bed at night
0 1 2 65. Resists toilet training (describe)_____
_____
0 1 2 66. Screams a lot
0 1 2 67. Seems unresponsive to affection
0 1 2 68. Self-conscious or easily embarrassed

0 1 2 69. Selfish or won't share
0 1 2 70. Shows little affection toward people
0 1 2 71. Shows little interest in things around him/her
0 1 2 72. Shows little fear of getting hurt
0 1 2 73. Shy or timid
0 1 2 74. Sleeps less than most children during the day and/or night (describe)_____

_____

0 1 2 75. Smears or plays with bowel movements
0 1 2 76. Speech problems (describe) _____

_____

0 1 2 77. Stares into space or seems preoccupied
0 1 2 78. Stomachaches or cramps (without medical cause)
0 1 2 79. Stores up things he/she doesn't need (describe)

_____

0 1 2 80. Strange behavior (describe) _____

_____

0 1 2 81. Stubborn, sullen, or irritable
0 1 2 82. Sudden changes in mood or feelings
0 1 2 83. Sulks a lot
0 1 2 84. Talks or cries out in sleep
0 1 2 85. Temper tantrums or hot temper
0 1 2 86. Too concerned with neatness or cleanliness
0 1 2 87. Too fearful or anxious
0 1 2 88. Uncooperative
0 1 2 89. Underactive, slow moving, or lacks energy
0 1 2 90. Unhappy, sad, depressed
0 1 2 91. Unusually loud
0 1 2 92. Upset by new people or situations (describe) __

_____

0 1 2 93. Vomiting, throwing up (without medical cause)
0 1 2 94. Wakes up often at night
0 1 2 95. Wanders away from home
0 1 2 96. Wants a lot of attention
0 1 2 97. Whining
0 1 2 98. Withdrawn, doesn't get involved with others
0 1 2 99. Worrying
0 1 2 100. Please write in any other problems your child has that were not listed above. _____

0 1 2 _____

0 1 2 _____

0 1 2 _____

Please be sure you have answered all questions
Underline any you are concerned about

APPENDIX E

Child Behavior Checklist For Ages 4-18

Child's Name _____ Today's Date _____
Child's Birthdate _____ Sex _____
Age _____
Ethnic Group or Race _____

Please fill out this form to reflect your view of the child's behavior even if other people might not agree. Feel free to write additional comments beside each item and in the space provided on page 2.

Below is a list of items that describe children. For each item that describes the child now or in the past 6 months, please circle the 2 if the item is very true or often true of the child. Circle 1 if the item is somewhat or sometimes true of the child. If the item is not true of the child, circle 0. Please answer all items as well as you can, even if some do not seem to apply to the child.

0=Not True 1=Somewhat/Sometimes True 2=Very/ Often True

0 1 2 1. Acts too young for his/her age
0 1 2 2. Allergy (describe)_____
_____
0 1 2 3. Argues a lot
0 1 2 4. Asthma
0 1 2 5. Behaves like opposite sex
0 1 2 6. Bowel movements outside toilet
0 1 2 7. Bragging, boasting
0 1 2 8. Can't concentrate, can't pay attention
0 1 2 9. Can't get his/her mind off certain thoughts; obsessions (describe)_____
_____
0 1 2 10. Can't sit still, restless, or hyperactive
0 1 2 11. Clings to adults or too dependent
0 1 2 12. Complains ofloneliness
0 1 2 13. Confused or seems to be in a fog
0 1 2 14. Cries a lot
0 1 2 15. Cruel to animals
0 1 2 16. Cruelty, bullying, or meanness to others
0 1 2 17. Day-dreams or gets lost in his/her thoughts
0 1 2 18. Deliberately harms self or attempts suicide
0 1 2 19. Demands a lot of attention
0 1 2 20. Destroys hi/her own things
0 1 2 21. Destroys things belonging to his/her family or others

0 1 2 22. Disobedient at home
0 1 2 23. Disobedient at school
0 1 2 24. Doesn't eat well
0 1 2 25. Doesn't get along with other kids
0 1 2 26. Doesn't seem to feel guilty after misbehaving
0 1 2 27. Easily jealous
0 1 2 28. Eats or drinks things that are not food - don't include sweets (describe)_____
_____
0 1 2 29. Fears certain animals, situations, or places, other that school (describe)_____
_____
0 1 2 30. Fears going to school
0 1 2 31. Fears he/she might think or do something bad
0 1 2 32. Feels he/she has to be perfect
0 1 2 33. Feels or complains that no one loves him/her
0 1 2 34. Feels others are out to get him/her
0 1 2 35. Feels worthless or inferior
0 1 2 36. Gets hurt a lot, accident-prone
0 1 2 37. Gets in many fights
0 1 2 38. Gets teased a lot
0 1 2 39. Hangs around with others who get in trouble
0 1 2 40. Hears sound or voices that aren't there (describe) _____
_____
0 1 2 41. Impulsive or acts without thinking
0 1 2 42. Would rather be alone than with others
0 1 2 43. Lying or cheating
0 1 2 44. Bites fingernails
0 1 2 45. Nervous, highstrung, or tense
0 1 2 46. Nervous movements or twitching (describe) _____
_____
0 1 2 47. Nightmares
0 1 2 48. Not liked by other kids
0 1 2 49. Constipated, doesn't move bowels
0 1 2 50. Too fearful or anxious
0 1 2 51. Feels dizzy
0 1 2 52. Feels too guilty
0 1 2 53. Overeating
0 1 2 54. Overtired
0 1 2 55. Overweight
56. Physical problems without known medical cause:
0 1 2 a. Aches or pains (not headaches)
0 1 2 b. Headaches
0 1 2 c. Nausea, feels sick
0 1 2 d. Problems with eyes (describe) _____
0 1 2 e. Rashes or other skin problems
0 1 2 f. Stomachaches or cramps
0 1 2 g. Vomiting, throwing up
0 1 2 h. Other (describe) _____
0 1 2 57. Physically attackes people
0 1 2 58. Picks nose, skin, or other parts of body (describe) _____
0 1 2 59. Plays with own sex parts in public

0 1 2 60. Plays with own sex parts too much
0 1 2 61. Poor school work
0 1 2 62. Poorly coordinated or clumsy
0 1 2 63. Prefers being with older kids
0 1 2 64. Prefers being with younger kids
0 1 2 65. Refuses to talk
0 1 2 66. Repeats certain acts over and over, compulsions (describe) _____
0 1 2 67. Runs away from home
0 1 2 68. Screams a lot
0 1 2 69. Secretive, keeps things to self
0 1 2 70. Sees things that aren't there (describe) _____
_____
0 1 2 71. Self-conscious or easily embarrassed
0 1 2 72. Sets fires
0 1 2 73. Sexual problems (describe) _____
_____
0 1 2 74. Showing off or clowning
0 1 2 75. Shy or timid
0 1 2 76. Sleeps less than most kids
0 1 2 77. Sleeps more than most kids during the day and/or night (describe) _____
_____
0 1 2 78. Smears or plays with bowel movements
0 1 2 79. Speech problems (describe) _____
_____
0 1 2 80. Stares blankly
0 1 2 81. Steals at home
0 1 2 82. Steals outside the home
0 1 2 83. Stores up things he/she doesn't need (describe)
_____
0 1 2 84. Strange behavior (describe) _____
_____
0 1 2 85. Strange ideas (describe) _____
_____
0 1 2 86. Stubborn, sullen, or irritable
0 1 2 87. Sudden changes in mood or feelings
0 1 2 88. Sulks a lot
0 1 2 89. Suspicious
0 1 2 90. Swearing or obscene language
0 1 2 91. Talks about killing self
0 1 2 92. Talks or walks in sleep (describe) _____
_____
0 1 2 93. Talks too much
0 1 2 94. Teases a lot
0 1 2 95. Temper tantrums or hot temper
0 1 2 96. Thinks about sex too much
0 1 2 97. Threatens people
0 1 2 98. Thumb-sucking
0 1 2 99. Too concerned with neatness or cleanliness
0 1 2 100. Trouble sleeping (describe) _____
_____
0 1 2 101. Truancy, skips school
0 1 2 102. Underactive, slow moving, or lacks energy

0 1 2 103. Unhappy, sad, or depressed
0 1 2 104. Unusually loud
0 1 2 105. Uses alcohol or drugs for nonmedical purposes (describe) _____
0 1 2 106. Vandalism
0 1 2 107. Wets self during the day
0 1 2 108. Wets the bed
0 1 2 109. Whining
0 1 2 110. Wishes to be of opposite sex
0 1 2 111. Withdrawn, doesn't get involved with others
0 1 2 112. Worries
0 1 2 113. Please write in any problems your child has that were not listed above:
0 1 2 _____
0 1 2 _____
0 1 2 _____

Please be sure you have answered all questions
Underline any you are concerned about

APPENDIX F

Marlowe Crowne Social Desirability Scale

Directions: Listed below are a number of statements concerning personal attitudes and traits. Read each item and decide whether the statement is true or false as it pertains to you, and circle the correct response to the left of the statement.

T F 1. Before voting I thoroughly investigate the qualifications of all the candidates.

T F 2. I never hesitate to go out of my way to help someone in trouble.

T F 3. It is sometimes hard for me to go with my work if I am not encouraged.

T F 4. I have never intensely disliked anyone.

T F 5. On occasion I have had doubts about my ability to succeed in life.

T F 6. I sometimes feel resentful when I don't get my way.

T F 7. I am always careful about my manner of dress.

T F 8. My table manners at home are as good as when I eat out in a restaurant.

T F 9. If I could get into a movie without paying and be sure I would not be seen, I would probably do it.

T F 10. On a few occasions, I have given up doing something because I thought to little of my ability.

T F 11. I like to gossip at times.

T F 12. There have been times when I felt like rebelling against people in authority even though I knew they were right.

T F 13. No matter who I'm talking to, I'm always a good listener.

T F 14. I can remember "playing sick" to get out of something.

T F 15. There have been occasions when I took advantage of someone.

T F 16. I'm always willing to admit when I make a mistake.

T F 17. I always try to practice what I preach.

T F 18. I don't find it particularly difficult to get along with loud mouthed, obnoxious people.

T F 19. I sometimes try to get even, rather than forgive and forget.

T F 20. When I don't know something I don't at all mind admitting it.

T F 21. I am always courteous, even to people who are disagreeable.

T F 22. At times I have really insisted on having things my own way.

T F 23. There have been occasions when I felt like smashing things.

T F 24. I would never think of letting someone else be punished for my wrong doings.

T F 25. I would never resent being asked to return a favor.

T F 26. I have never been irked when people expressed ideas very different from my own.

T F 27. I never made a long trip without checking the safety of my car.

T F 28. There have been times when I was quite jealous of the good fortune of others.

T F 29. I have almost never felt the urge to tell someone off.

T F 30. I am sometimes irritated by people who ask favors of me.

T F 31. I have never felt that I was punished without cause.

T F 32. I sometimes think when people have a misfortune they only get what they deserve.

T F 33. I have never deliberately said something that hurt someone's feelings.

APPENDIX G

General Information

Family Name: _____

Mother's Name: _____ Father's Name: _____

Address: _____

_____ Telephone: _____

Child's Age: _____ Child's Sex: _____

Number of children in household: _____

1. Marital Status of Parents:
   - _____ Married
   - _____ Single
   - _____ Divorced
   - _____ Widowed
   - _____ Separated

2. Mother's Education:
   - _____ Less than 7th grade
   - _____ Junior High School (7th and 8th grade)
   - _____ Partial High School
   - _____ High School Graduate
   - _____ Partial College or Specialized training
   - _____ Standard College or University Program
   - _____ Graduate Professional Training

3. Mother's Work:

   _____
   (please specify)

4. Father's Education:
   - _____ Less than 7th grade
   - _____ Junior High School (7th and 8th grade)
   - _____ Partial High School
   - _____ High School Graduate
   - _____ Partial College or Specialized training
   - _____ Standard College or University Program
   - _____ Graduate Professional Training

5. Father's Work:

_____
(please specify)

6. Do you speak another language at home in addition to English? Yes____No____

If yes, what language is it? _____

7. Ethnicity of Mother:

_____ Caucasian
_____ African-American
_____ Hispanic
_____ American-Indian
_____ Asian
_____ Other_____

Ethnicity of Father:

_____ Caucasian
_____ African-American
_____ Hispanic
_____ American-Indian
_____ Asian
_____ Other _____

8. Household composition (who lives in the house):

Relationship to child	Age	Education	Occupation
_____	___	_____	_____
_____	___	_____	_____
_____	___	_____	_____
_____	___	_____	_____
_____	___	_____	_____
_____	___	_____	_____

9. Primary caretaker(s) (who is most responsible for the daily care and well being of your child):

_____ Natural Parents
_____ Adoptive Parents
_____ Foster Parents
_____ Grandparents
_____ Other _____