Development of the Parent - Child Situation Scale: A Measure of Parental Attributions Toward Handicapped Children's Behavior

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1986
DEVELOPMENT OF THE PARENT - CHILD SITUATION SCALE:
A MEASURE OF PARENTAL ATTRIBUTIONS TOWARD
HANDICAPPED CHILDREN'S BEHAVIOR

A Thesis
Presented to
the Faculty of the Department of Psychology
Western Kentucky University
Bowling Green, Kentucky

In Partial Fulfillment
of the Requirements for the Degree
Master of Arts

by
Lonnie Sears
August 1986
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TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>LIST OF TABLES</th>
<th>vi</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABSTRACT</td>
<td>vii</td>
</tr>
<tr>
<td>Chapter</td>
<td></td>
</tr>
<tr>
<td>I. INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>II. REVIEW OF LITERATURE</td>
<td>4</td>
</tr>
<tr>
<td>The Handicapped Child</td>
<td>4</td>
</tr>
<tr>
<td>Psychological Stress</td>
<td>5</td>
</tr>
<tr>
<td>Parental Stress with a</td>
<td>7</td>
</tr>
<tr>
<td>Handicapped Child</td>
<td></td>
</tr>
<tr>
<td>Contributing Factors</td>
<td>7</td>
</tr>
<tr>
<td>Between Group Research</td>
<td>10</td>
</tr>
<tr>
<td>Maternal Stress</td>
<td>11</td>
</tr>
<tr>
<td>Paternal Stress</td>
<td>12</td>
</tr>
<tr>
<td>Marital Stress</td>
<td>13</td>
</tr>
<tr>
<td>Mediating Factors in Parental</td>
<td>15</td>
</tr>
<tr>
<td>Stress</td>
<td></td>
</tr>
<tr>
<td>A Multidimensional Framework</td>
<td>16</td>
</tr>
<tr>
<td>Utilitarian Variables</td>
<td>17</td>
</tr>
<tr>
<td>Health/Energy/Morale</td>
<td>17</td>
</tr>
<tr>
<td>Social Networks</td>
<td>18</td>
</tr>
<tr>
<td>Problem-Solving Skills</td>
<td>20</td>
</tr>
<tr>
<td>Child Variables</td>
<td>20</td>
</tr>
<tr>
<td>Belief Systems</td>
<td>21</td>
</tr>
<tr>
<td>Causal Attributions</td>
<td>23</td>
</tr>
<tr>
<td>Attribution Theory</td>
<td>23</td>
</tr>
<tr>
<td>Parental Attributions</td>
<td>25</td>
</tr>
<tr>
<td>Measurement of Attributions</td>
<td>28</td>
</tr>
<tr>
<td>Item</td>
<td>Total Correlations, Means, and Standard Deviations for College Students on the Initial</td>
</tr>
<tr>
<td>------</td>
<td>------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>1</td>
<td>Internal - External Attribution Subscale of the PCSS</td>
</tr>
<tr>
<td>2</td>
<td>Stable - Unstable Attribution Subscale of the PCSS</td>
</tr>
<tr>
<td>3</td>
<td>Global - Specific Attribution Subscale of the PCSS</td>
</tr>
<tr>
<td>4</td>
<td>Mothers of Handicapped Children on the Initial Internal - External Attribution Subscale of the PCSS</td>
</tr>
<tr>
<td>5</td>
<td>Mothers of Handicapped Children on the Initial Stable - Unstable Attribution Subscale of the PCSS</td>
</tr>
<tr>
<td>6</td>
<td>Mothers of Handicapped Children on the Initial Global - Specific Attribution Subscale of the PCSS</td>
</tr>
</tbody>
</table>
8. Spearman-Brown Corrected Correlations Between First and Second Halves of Attribution Subscales on the Parent - Child Situation Scale ............. 52
The Parent - Child Situation Scale (PCSS) was developed to measure parental attributions toward handicapped children's behavior. The PCSS was administered to mothers of handicapped children. The final version of the scale possessed good reliability. Coefficient alphas for the PCSS were .74 for the internal - external attribution subscale, .70 for the stable - unstable subscale, and .72 for the global - specific subscale. Factor analysis of the PCSS revealed three factors corresponding to the three attribution types. The internal - external subscale's validity was supported. The other two subscales, however, appeared to have only moderate validity. Responses of college students to the PCSS suggested that the scale was not as suitable for this population. Recommendations for further research concerning the scale's reliability and validity were made. The study concluded with a discussion of the PCSS' utility for research on stress in parents of handicapped children.
CHAPTER I

Introduction

Mattsson (1972) estimated that 30 to 40 percent of all children have some degree of learning disability, mental retardation, physical handicap, speech or language problem, or behavior problem which could be considered a handicap. These children can create greater family stress than nonhandicapped children because of the extra amount of physical and financial resources which are required for their care. Stress also occurs in these families because emotional demands on parents and siblings are likely to be high (Crnic, Friedrich, & Greenburg, 1983).

How do parents of handicapped children cope with the extra care-giving demands? Since families in similar circumstances exhibit differing levels of stress reactions, it appears that strategies for coping with these demands vary in effectiveness (Crnic et al., 1983). One factor that may aid coping effectiveness is the parents' beliefs about the child's development and behavior (Lazarus & Folkman, 1984). Attribution theory provides a conceptual framework for studying these differences in parental beliefs.

The central hypothesis in attribution theory is that people make inferences about the causes of events. Expounding on this theory, Abramson, Seligman, and Teasdale
(1978) suggested that people make three types of causal attributions. The first causal attribution is described as internal versus external. When an individual makes this type of attribution, he/she either blames him/herself for an event or identifies something or someone else as being responsible. The second type of attribution is global versus specific. Here the individual decides if the event's cause is due to a factor affecting many other areas of the person's life or if it affects only one specific area. The third causal attribution involves viewing the cause of an event as stable or unstable. A stable attribution is a belief that the cause of an event will be present again in the future while an unstable attribution is a belief that the cause of an event will only be present at the current time.

These types of attributions have been observed in parents of handicapped children. Corresponding to the internal - external attribution style, parents may blame themselves for the child's handicap or, conversely, they may feel it was an act of God (Lavelle & Keogh, 1980). Furthermore, parents may see the handicapped child as having weaknesses in more areas of his/her life than is actually the case and become overprotective of the child. This approach can be conceptualized as a global attribution. Finally, parents make an unstable attribution when they believe the child will "grow out" of a problem, in contrast to a stable attribution that the handicap will
be with the child for the rest of his/her life (Poznanski, 1984).

Past research has been focused on the internal -
external attributions of mothers with handicapped children
and their relationship to stress (Affleck, McGrade, Allen,
& McQueeny, 1985). The results of that research, however,
are questionable because of the lack of a reliable and
valid measure of parental attributions toward handicapped
children. Due to the lack of a satisfactory measure and
because research has not specifically addressed the other
two attributional types in relation to parents of
handicapped children, the development of a measure of
parental attributions is necessary. The purpose in this
research is to develop such a measure based on the three
hypothesized attributional types. This measure will be
tested for reliability. Indices of the measure's validity
will also be provided using Pearson product-moment
correlations, a multitrait, multimethod matrix, and a
factor analysis.
CHAPTER II

Review of Literature

Mental health professionals have observed a variety of parental reactions to handicapped children. Poznanski (1984) reported on his contact with a family who had a severely deformed child. The parents exhibited acceptance and warmth for their child despite the extensive problems caused by the deformity. In contrast, other parents have been observed to totally reject a child with only a relatively minor handicap. These differences in parental reactions will be explored further in the following review of the research literature.

The Handicapped Child

The first issue of concern is the definition of a "handicapped child." A handicapped child has been defined as a child "with mental retardation or other related neurological conditions that constitute a substantial limitation and can be expected to continue indefinitely" (Schilling & Schinke, 1984, p. 196). This definition can be applied to a variety of handicapping conditions ranging from severe mental retardation to cerebral palsy where delays in development are obviously due to underlying medical conditions. The terms "handicapped" or "developmentally delayed," however, have also been applied to children whose underlying medical components are
unclear. Children diagnosed with attention deficit disorder, minimal brain dysfunction, pervasive developmental disorder, or learning disability, for example, are suspected to have an underlying neurological condition, but this generally cannot be medically ascertained. These children are without extreme limiting factors, but cause parental concern because of their delays in social, intellectual, motor, and speech and language development. Murphy (1982) called this type of child "marginally handicapped." He noted that, in contrast to the severely handicapped child, "the child's limitations cannot be clearly defined, (therefore) the parents are repeatedly tempted into unrealistic hopes which are repeatedly dashed" (p. 81).

Since many of the children involved in this study do not have clearly defined medical problems leading to their handicap, a more general definition will be utilized. For the purpose of this study, a "handicapped" or "developmentally delayed" child refers to a child who is behind the normative population in meeting developmental milestones or whose behavior is outside the normal range for his/her chronological age. Children will be placed in this group on the basis of a psychological evaluation. Details of this evaluation will be provided later.

**Psychological Stress**

Psychological stress will not be dealt with directly in the research portion of this paper. It is the basis,
however, for this study of parental attributions toward handicapped children. Stress will be discussed here briefly and will be defined as it relates to parents of handicapped children.

The evolution of the concept of psychological stress was reviewed by Lazarus and Folkman (1984). An early theory put forth in the 19th century by Sir William Osler views stress resulting from a "workaholic lifestyle." Walter Cannon in 1932 suggested that stress is a physiological state characterized by a loss of the body's homeostasis. Hans Selye in 1936 proposed that stress is a "universal set of reactions and processes created by...an environmental demand" (p. 2). Harold Wolff, in the 1940's and 1950's, extended the concept of stress to include "life stress" and suggested its possible relationship to physical disease. The above views posit the individual at the mercy of environmental demands. During the 1960's this view began to shift, and it was suggested that individuals react differently to environmental demands based on their own interpretations of these demands. Richard Lazarus has been a leading proponent of this view.

Lazarus and Folkman (1984) defined psychological stress as "a particular relationship between the person and the environment that is appraised by the person as taxing or exceeding his or her resources and endangering his or her well-being" (p. 19). According to this definition stress is a result of the individual's cognitive appraisal
of environmental situations. In relation to parents of handicapped children, stress can be defined as a lowering of the parents' well-being because of a cognitive appraisal that the care-giving demands of the child exceed parental resources. The general concept of a lowering of well-being is useful for defining stress since it is difficult to specifically define how stress will manifest itself in a parent. It could, for example, appear as depression or child abuse. In other words, stress is a negative parental reaction to the demands of the child. The type of negative reaction cannot be specifically defined and may include some behaviors which are not typically considered as stress. This broad concept of stress will be used in order to simplify the following review of the research on parental stress.

**Parental Stress with a Handicapped Child**

**Contributing Factors**

When a child with a significant physical, mental, or motor handicap is born into a family, that family may incur increased hardships. McCubbin, Cauble, and Patterson (1982) listed eight categories of possible hardships for a family with a child who has cerebral palsy. These categories of hardships are also applicable to families who have children with other types of handicaps. First the authors noted that family relationships with friends may be altered due to the child. Second, major changes in activities may occur because of the child's needs. Third,
the family may have increased concerns about the child's health. Fourth, intrafamily strains may occur. Fifth, the child may require more financial expenditures in various areas. Sixth, specialized child care may be required. Seventh, time commitments to the handicapped child may be unusually large. Finally, the child may have increased medical problems requiring continuous treatment or medication. These hardships may recur throughout the child's life.

How do parents react to these hardships? One popular model attempting to explain crisis reactions suggests that an individual goes through stages of adjustment to a stressful event (Kubler-Ross, 1969). Theories which resemble the Kubler-Ross model have been applied to parental reactions toward a handicapped child. An American Medical Association publication (1964), for example, listed three stages of adaptation. First, the parents are in emotional disorganization. Following this, reintegration begins until the third stage of mature adaptation is reached and "undue stress" is dealt with effectively. A number of other similar stage theories of adaptation were reviewed by Blacher (1984). Research has not supported the stage theory in general (Kessler, Price, & Wortman, 1985) and, likewise, has not supported the stage theory with parents of handicapped children (Blacher, 1984; Wikler, 1981; Wikler, Wasow, & Hatfield, 1981). A more appropriate view of parental reaction to a handicapped child appears to
be the "chronic sorrow" model proposed by Olshansky (1962). Chronic sorrow occurs when, rather than accepting and adjusting to the child, parents internalize a depressive mood which resurfaces at various times during the child's development.

Wikler (1981) posited ten stressful events for the family based on developmental periods and events unique to the mentally retarded child. Her theory parallels the chronic sorrow model because she predicts that parental stress will surface throughout the child's life. Five periods when stress surfaces are when the child fails to reach developmental milestones at expected ages. One time parental stress may surface is when the child is 12 to 15 months of age and not yet walking. Stress may also increase when the child is 24 to 30 months and not yet talking. A third time of increased stress may occur at the beginning of school. Fourth, parental stress may increase at puberty, and finally, at the child's twenty-first birthday when most children are gaining independence from parents. Five events noted by Wikler which are stressful and experienced only by families with mentally retarded children include the diagnosis of mental retardation, younger siblings having higher intellectual functioning than the delayed child, discussion of the possibility of placing the child outside the home, increased behavior and medical problems, and concern over guardianship and care of the child. These critical events may differ depending on
the specific handicap of the child, however, it is evident that unique events and hardships exist for parents of any child whose behavior and development deviate from what is considered normal. Considering the above-noted hardships, it is not surprising that most research has found that parents of handicapped children experience more stress than their counterparts without handicapped children (Crnic et al., 1983).

**Between Group Research**

Before reviewing the research comparing parents of handicapped and nonhandicapped children, some problems with this research will be noted. The first problem involves possible researcher bias toward finding pathology in the families with handicapped children. Crnic et al. (1983) suggested that research has "seemed to rally around the concept of anticipated pathology in these families" (p. 126). Erikson (1969), for example, in his stress-reaction hypothesis suggested that the stress of a handicapped child leads to pathology in parents. Second, methodology employed in past research has been problematic. Regarding this, Crnic et al. (1983) stated:

The research has had a narrow focus, proving generally to be unidimensional...and unimodal. Many report data from measures of undetermined or poor reliability and validity. Perhaps the most critical shortcoming is the lack of prospective longitudinal investigations detailing familial adaptation and functioning from the
time at which retarded children are identified. (p. 125)

A third problem, to be discussed in more detail later, is that differences within parents of handicapped children can be greater than differences between parents of handicapped and nonhandicapped children. Therefore, studies of differences between the two parent groups miss an important issue: the cause of the variance in stress within the parents of handicapped children (Crnic et al., 1983). With these drawbacks noted, research comparing parents of handicapped and nonhandicapped children will be reviewed.

Maternal Stress. Mothers of handicapped children have received more research attention than fathers. They have been described as rejecting, punitive, and overprotective when compared to mothers of normal children (Cook, 1963). Cummings, Bayley, and Rie (1966) found mothers of retarded children to exhibit greater than normal depressive and dysphoric affect, some overprotectiveness of the child, and less enjoyment of the child. Breslau, Staruch, and Mortimer (1982) reported that mothers with children of differing handicaps exhibit more "psychological stress" than a matched control group of mothers with nonhandicapped children. Higher levels of stress in mothers of handicapped children have been found by other researchers as well (Bradshaw & Lawton, 1978; Burden, 1980; Dorner, 1975; Tew & Laurence, 1973). Holroyd (1974) found mothers
with handicapped children to experience more constrictions and loss of personal freedom, to have poorer health, to be more aware of the child's "fit" in the community, and to be more attuned to marital harmony. Holt (1958) reported that mothers of handicapped children experience increased health problems and exhaustion.

In a more positive vein and in contrast to the above studies, some researchers have found no differences between mothers of handicapped and nonhandicapped children in personality variables and parenting attitudes (Boll, Domino, & Mattson, 1978; Gayton, Friedman, & Tavormina, 1977). Other researchers suggested that mothers of handicapped children were psychologically "normal," but did have more parenting concerns than mothers of nonhandicapped children (Tavormina, Boll, Luscomb, & Taylor, 1981). Furthermore, no differences in anxiety and self-sentiment were found between these two groups of mothers in a study by Busch-Rossnagel, Peters, and Daly (1984).

In summary, most researchers have found that maternal stress increases with a handicapped child. It is notable, however, that several researchers reported no differences between mothers of handicapped and nonhandicapped children in levels of stress.

**Paternal Stress.** Studies of fathers with handicapped children indicate that adverse parental reactions to the child often occur. Fathers of retarded children were reported to be more depressed, have lower self-esteem, and
lack interpersonal satisfaction compared to fathers of nonretarded children. They were also found to have neurotic-type personalities (Cummings, 1976). Gayton et al. (1977) reported that fathers of handicapped children exhibit greater "emotional disturbance" than fathers of nonhandicapped children. The fathers in this study also had more emotional problems than their wives, possibly because fathers have more difficulty accepting a handicapped child (Fletcher, 1974).

**Marital Stress.** The parents of handicapped children are reported to have greater marital stress as evidenced by high divorce and suicide rates (Price-Bonham & Addison, 1978). Another indication of marital stress was reported by Gallagher, Beckman, and Cross (1983). These authors looked at parental responses to measures of marital conflict and concluded that stress was greater for parents of handicapped children.

In contrast to these studies, Waisbren (1980) reported no differences in scores on the Locke-Wallace Marital Adjustment Inventory between parents with handicapped and nonhandicapped children. Also, other researchers of divorce rates in parents of handicapped children have found no difference between these parents and norms for the general population (Buchanan, La Barbera, & Olson, 1979; Freeston, 1971; Starr, 1981). Petersen (1984) attempted to explain these findings. He suggested that parents of handicapped children may be more closely united because of
the child.

A number of researchers have studied both parents simultaneously in areas other than marital stress. Embry (1980) suggested that handicapped children are at greater risk of parental abuse than are nonhandicapped children. Marcus (1977) reviewed a number of research studies. He reported that, overall, parents of autistic children have higher levels of fatigue, anger, guilt, and anxiety than other parents. He described them as cold and formal, rigid and perfectionistic, obsessive, overstimulating, emotionally impoverished, disturbed in their thinking process, unhappy and infantilizing.

As indicated by the above review, many parents experience increased stress due to the handicapped child. Parents of handicapped children, however, have differing levels of stressful reactions. At times the stress in parents of a handicapped child may be no different than the stress in parents of a nonhandicapped child. It is apparent from the research that having a handicapped child does not predispose a parent to a stress reaction. Petersen (1984) summed up this point, "Despite the assumption that handicapped children have a negative impact on the family, not all families with handicapped children are in crisis. There is a variance in families' responses to the child" (p. 338). Research seeking to explain this variance in parental reaction to the handicapped child will now be reviewed.
Mediating Factors in Parental Stress

An increasingly popular term in relation to stress is "coping." Shapiro (1983) defined coping as "all responses made by the individual who encounters a potentially harmful outcome, including overt behaviors, cognitions, physiological responses, and emotional reactions" (p. 915). The author also noted the importance of considering "coping resources." She stated:

Coping resources are aspects of the individual's external and/or internal environment which are either not directly or completely under the individual's control; they exist in a quiescent state, ready to mediate in a positive or negative direction the individual's response to the advent of the stressor.

(p. 915)

The observed differences in levels of stress in parents of handicapped children can be accounted for by the concepts of coping and coping resources.

Coping can be studied by looking at factors which appear to increase or decrease parental stress (Drotar, 1981). This type of study appears to be superior to past studies looking for differences between parents with handicapped and nonhandicapped children. This view is summed up by Crnic et al. (1983), "A competence or coping-based framework should be considered as an alternative to the pathology concept...as it emphasizes the tasks and strategies involved in living with a handicapped
The task for researchers is to sort out those factors affecting the parents' competency in dealing with the child.

Research on mediating factors in parental stress has been limited somewhat by the difficulty in sorting out the direction of effect for the variables being studied. For example, does the quality of the marital relationship affect the level of parental stress or does the stress create a decline in marital satisfaction? Another problem is the infinite number of variables that can affect the family. A third problem is that only a limited number of instruments are available to measure these variables. Finally, researchers have generally focused on one family member and have not taken into account the family system. To overcome these problems research incorporating a multidimensional and multi-modal approach is needed (Crnic et al., 1983).

A Multidimensional Framework

A multidimensional framework is useful for organizing the research on coping and coping resources. This framework is provided by Folkman et al. (1979) who listed five factors involved in coping with the extra demands of the handicapped child. These factors were utilitarian resources, health/energy/morale, social networks, problem-solving skills, and general and specific beliefs. Another useful category suggested by Friedrich et al. (1985) is child variables. The review of research on
coping will be organized around the above six categories.

**Utilitarian Variables.** Utilitarian variables include parent education levels, socioeconomic status, and the availability of financial resources. In a study of parent education level Fredrich et al. (1985) found this variable to be a poor predictor of parental stress. Likewise annual family income was not predictive of stress. Friedrich (1979) reported similar findings in a previous study also using multiple regression. In a study that more directly tested the effect of income level on the family, Bradshaw and Lawton (1978) followed a group of British families receiving financial support because of a handicapped child. The authors found no difference between levels of maternal stress before these funds were received and after this support had been provided for several weeks. The authors concluded that variation in the level of parental stress may only be slightly related to the external social and physical conditions of the family.

**Health/Energy/Morale.** The area of health/energy/morale relates to the general physical and mental well-being of the parents. Research in this area has not been longitudinal making it difficult to establish health-related changes in parents (Friedrich et al., 1985).

Friedrich et al. reported that a positive relationship exists between maternal depression and parental stress. This finding is to be expected since it is difficult to separate depression and parental stress. Parental
depression, in many cases, could be subsumed under the heading "parental stress." These authors also found that neither positive nor negative feelings experienced by the parent in the previous week were predictive of current stress levels. The level of health/energy/morale intuitively seems related to parental stress, however, confirming evidence of this relationship is lacking.

Social Networks. The category of social networks refers to people who provide social support for the family with a handicapped child. Social networks can be either positive or negative. It is apparent how social networks provide positive support for the family. These networks may adversely affect the family, however, if they provide incorrect information or stigmatize the child (Kazak & Marvin, 1984). The importance of the social network was emphasized by Bronfenbrenner (1979) who views the family and its environment as an ecological system. This author analyzes the interaction between the family and outside network. If this interaction is disrupted increased dysfunction in the family may result. McCubbin (1979) also theorized about the importance of social support in minimizing parental stress. Finally, Shuval (1981) suggested social support can be analyzed on three levels. The first level of support is the nuclear family, the second includes neighbors and distant friends, and the third involves superficial contacts with other people.

Research on social networks appears to support the
importance of positive social support as a coping resource. In a study of life stresses in the general population, Sarason, Johnson, and Siegal (1978) found that the amount of social support is related to level of life stress. Also, in a multiple regression study of parental stress with handicapped children, social support contributed a small but significant amount of variance in the regression equation (Friedrich et al., 1985). Furthermore, Waisbren (1980) reported that parents with a supportive extended family network generally find the demands of a handicapped child as less stressful. Another aspect of the social network that reduces parental stress is general community tolerance and attitude toward the handicapped person (Wikler, 1981). Finally, Petersen (1984) found a significant correlation between a factor involving social support and level of parental stress.

Problem-Solving Skills. Problem-solving skills have received very little research attention. This area includes intelligence which was suggested as a mediating factor by Gallagher et al. (1983). It appears logical to assume that a parent with good problem-solving skills could better cope with the demands of a handicapped child. Apparently, however, no research has formally tested this hypothesis.

Child Variables. The category of child variables includes factors such as severity of handicap, age, sex, rate of progress, and type of behavior problems. These
variables intuitively appear to contribute to the amount of parental stress, but the research findings have been inconsistent. Bristol (1979) found variables such as "degree of dependency" and "degree of physical incapacitation" to account for a significant amount of variance in mothers of autistic children. Also, Beckman-Bell (1980) found that "additional or unusual care-giving demands" accounted for 66% of the variance in the number of reported family problems.

In contrast to these studies, Bradshaw and Lawton (1978) found level of stress not to be highly correlated with the severity of the child's conditions. Also, Friedrich (1977) reported that the degree of handicap, as rated on a 3-point scale, was negatively related to parental stress. Furthermore, Wilner and Crane (1979) found parents of marginally handicapped children have more difficulty dealing with their child's problems than parents of a severely handicapped child. An explanation for the findings that severity of the child's handicap is not related to parental stress is provided by Murphy (1982). She suggested that because the limitations of a severely handicapped child are more clearly defined than those of a marginally handicapped child, less ambiguities about the child's limitations exist for the parents of the first group. Parents of the marginally handicapped children may experience "chronic disappointment" because the child's limitations are difficult to specify.
Beckman (1983) found that the child's responsiveness, temperament, and repetitive behavior were correlated with maternal stress while the child's rate of progress was not. In a multiple regression study Friedrich (1979) found that having a handicapped female child or an institutionalized child were significant predictors of maternal stress. Neither race of the child nor number of siblings were significant predictors.

Belief Systems. Researchers have suggested several beliefs which may act as coping mechanisms. One type of belief is locus of control. Locus of control refers to the individual's view of events as being controlled by either internal or external factors. An internal locus of control appears to be related to a more effective coping style (Friedrich, Wiltturner, & Cohen, 1985; Sarason, Johnson, & Siegel, 1978). Second, researchers have found that religiosity is a good predictor of successful parental coping (Levinson, 1976; Zuk, 1959; Zuk, Miller, Bartram & Kling, 1961). Apparently, attributing the child's handicap to a religious purpose may aid parental coping.

A third type of belief which has received research attention is attributions of causality. Affleck, McGrade, Allen, and McQueeny (1985) measured internal versus external attributions in mothers of handicapped infants and then related those attributions to maternal stress. The authors found that internal attributions were related to lower stress levels. They suggested that self-blame
increased coping because it gave the mothers a sense of control over the child's problems. Another study of self-blame had different results. Chodoff, Friedman, and Hamburg (1964) reported that an intermediate range is superior to blaming self or an external factor. These authors suggested that attributing blame to either extreme creates greater anxiety.

One probable reason for the contradictory findings in the studies of parents' causal attributions is the lack of a reliable measure. This will be discussed in more detail later. The purpose of the present research is to develop such a measure so that the role of causal attributions in parental stress can be better studied. Attribution theory will be discussed next as it is the basis for the development of such a scale.

Causal Attributions

Attribution Theory

Attribution theory grew from Heider's (1958) theory of "phenomenal causality." Heider suggested that people attribute causes to certain events by using "experiments." Individuals use experiments to "assess the degree to which observed behavior or events occur in the presence but not in the absence of each potential causal factor under consideration" (Metalsky & Abramson, 1981, p. 17). Kelley (1971) elaborated on Heider's work and developed the "covariation principle." He proposed that people observe how events "covary" with possible causal factors. Causal
attributions are then made about either an aspect of the person (distinctiveness), an aspect of the environment (consensus), or a special property of the situation (consistency).

Abramson et al. (1978) based their reformulation of the learned helplessness model of depression on attribution theory. Their reformulation proposed that people make inferences about uncontrollable events according to an attributional style. An attributional style is defined as "a tendency to make particular kinds of causal inference, rather than others, across different situations and across time" (Metalsky & Abramson, 1981, p. 38). The individual is said to make three types of inferences for an event. First, an inference is made concerning the focus of blame for an event (internal versus external attribution). Second, the individual makes an inference about the perceived cause of an event as either far reaching or narrowly related to that specific situation (global versus specific attribution). Finally, an inference is made concerning the likelihood that the cause of an event will continue to be present in the future (stable versus unstable attribution). Abramson et al. (1978) proposed that a person making internal, global, and stable causal attributions about negative events will suffer cognitive, emotional, and motivational deficits.

Both clinical observation and laboratory research have supported the consistency of attributional styles over time.
(Beck et al., 1979; Ickes & Layden, 1978; Metalsky & Abramson, 1981; Seligman et al., 1979; Weiner et al., 1971). Cross-situational support for attributional styles, however, is not as strong. Cutrona, Russell, and Jones (1985) found low correlations between attributions made in different situations. These authors suggested that attributional styles may be consistent over time, but are not consistent across situations. Metalsky and Abramson (1981) suggested a middle ground to the consistency debate. They stated "an individual will display an attributional style to the extent that he or she relies on and utilizes the same or similar information to resolve causal ambiguity across different situations and across time" (p. 39).

In summary, attributional styles can be conceptualized as a combination of a personality trait to make certain inferences about events and information feedback from the environment. Three types of attributions have been described as internal - external, stable - unstable, and global - specific. With this background, a discussion of the relationship of causal attributions to parents of handicapped children will follow.

Parental Attributions

Internal - external attributions in parents of handicapped children have been described and researched in relation to parental stress (Affleck et al., 1985). The other two attribution types have apparently not been
applied to these parents. It appears, however, that these attribution types are related to other concepts put forth in the clinical literature. Poznanski (1984), for example, described some parents as overprotective. Overprotectiveness involves the inference that a child's handicap affects a wider range of situations than is actually true, hence it is a global attribution. The opposing specific attribution occurs when a parent acknowledges only a specific situation where the child's handicap is a factor. Another type of parent described by Poznanski holds a belief that the child will "grow out" of the problem. This belief can be conceptualized as an unstable attribution since the cause of the child's handicap is inferred to be absent in the future. The opposing stable attribution occurs when a parent infers that a child's problem will be present for the remainder of the child's life.

Many ambiguities face parents with a handicapped child since the cause of the handicap is often uncertain. Even when children have problems related to known causes, such as in genetic disorders, a number of inferences can be made by the parent about the child's problem. As indicated earlier, attributions are a combination of a style of making certain inferences and information provided about the event on which the inference is based. Parents make attributions about their child's handicap based on their style of making inferences in combination with information
about the handicap. Information is available from a number of sources for the parent such as professionals, media, friends, etc. Ultimately the parent must choose information to incorporate into a belief system about the child's handicap. A parent's tendency to make certain attributions may cause certain information to be incorporated. For example, if a parent tends to make unstable attributions and is confronted with a professional who reports that his or her child will have a permanent handicap, that parent may discount the information from the professional and choose to incorporate information from a friend who reports that children with that problem grow out of it.

What are the implications of parents making a certain type of attribution for a child's handicap. As noted earlier, Affleck et al. (1985) studied internal - external attributions in mothers. These authors suggested that self-blame aids coping with the child's handicap because it provides a sense of control for the mothers. Self-blame was also researched by Chodoff et al. (1964) with different findings. These authors suggested that a middle-of-the-road attribution is most predictive of successful coping for mothers. A third hypothesis about this relationship arises from the learned helplessness model of depression (Abramson et al., 1978). This theory predicts that a parent who blames the event on an external cause copes with the problem more successfully than a
parent making an internal attribution. Clearly each of these views is plausible and more research is required to find the most appropriate model of parental coping.

A global attributional style is related to the concept of overprotectiveness discussed by Poznanski (1984). The problem here is "the child is overprotected both in comparison as to how much more he gets than is given his siblings and as to how much more he receives then is needed in terms of his handicap" (p. 216). This situation may lead to increased stress for the parent and family. In contrast, a parent making a specific attribution may cope with the child's problem more effectively because the child is allowed to do things which he/she can capably perform. The learned helplessness model also predicts that a specific attribution increases successful parental coping.

An unstable attributional style can be conceptualized as a belief that the child will "grow out" of a problem. Parents typically hope their child will be successful in life, perhaps attend a good college for example. When a child has problems this hope is challenged. Parents who deny their child's apparent limitations may decrease stress temporarially, but may in the long run face greater problems. Poznanski (1984) commented on this denial of a child's limitations:

This kind of denial may be a stage in the parental adjustment or may be a lifelong attitude. There are those who argue that some parental denial is necessary
to assuage the chronic sorrow of the parents and, in one sense, may be adaptive to a certain degree. Denial in its most blatant forms over a long period of time tends to interfere with good medical management and to hinder psychological adaptation by both parents and child. (p. 216)

Based on this observation, attributing a child's handicap to a stable or unstable cause in the extreme may result in poorer parental coping. Hope for the child's future is necessary but unrealistic expectations may be harmful.

A second prediction from the learned helplessness model is that an unstable attribution increases coping. This view does not take into account the possibility that denial may create future problems, as was noted above. As with the other attribution types, research concerning the relationship between parental beliefs and stress is necessary.

Measurement of Attributions

Researchers of mothers' internal - external causal attributions have utilized open-ended questions to assess these inferences (Affleck et al., 1985; Chodoff et al., 1964). In this method the researcher judges the internality or externality of a cause stated by the parent for the child's handicap. This method of measuring attributions is probably unsatisfactory because of the subjective nature of the scoring system. For example, a parent could report that the doctor was at fault for the
child's problem. The researcher likely judges this to be an external attribution. The parent, however, may actually blame him or herself because more care was not taken in selecting the doctor. Ross (1977) suggested that open-ended questions are problematic because the researcher categorizes responses more by grammatical form than attribution type. Petersen (1982) proposed that open-ended questions allow researchers to impose their own interpretations for causes of events. Elig and Frieze (1979) compared open-ended questions to a structured format for assessing attributions and found that, compared to the structured format, open-ended questions had poor reliability and validity.

The Attributional Style Questionnaire (ASQ) (Peterson et al., 1982) was developed to overcome the problems associated with the researcher assigning an attribution type. On the ASQ the subject is provided with several hypothetical situations and is asked to write a cause for each event. The subject then rates the cause on three 7-point likert scales with two fixed anchors. One anchor refers to one attribution type and the other anchor to the opposing type. The subject circles a number which corresponds to his/her belief of the direction of causality. This method allows the subject to rate the dimensions of his/her own perceived cause for events. An example of an item on the ASQ follows (Peterson et al., 1982, p. 292):
You have been looking for a job unsuccessfully for some time.

1. Write down the one major cause.

2. Is the cause of your unsuccessful job search due to something about you or something about other people or circumstances? (circle one number).

   Totally due to other people or circumstances
   1 2 3 4 5 6 7 to me.

Questions 3 and 4 for this situation are similar to question 2 but worded for the global - specific attribution and stable - unstable attribution. Responses to twelve hypothetical situations are summed to find total attribution scores for the three dimensions. The three attributional styles measured by the ASQ were reported to have coefficient alphas of .46, .59, and .69, respectively, for the internal - external scale, stable - unstable scale, and global - specific scale. Test-retest reliability for the three scales is reported to be .64, .69 and .57, respectively. Peterson et al. (1982) cited evidence of the ASQ's construct validity.

Criticisms of the ASQ have centered on the scale developers' implication that people have an attribution style across different situations. Cutrona et al. (1985) reported that the ASQ was a poor predictor of causal attributions across situations. In a cross-validation study these authors also found the ASQ to have much lower subscale alphas than were previously reported. Russell
(1982) developed the Causal Dimension Scale (CDS) for the purpose of measuring causal attributions in specific situations. As with the ASQ, this scale allows the subject to select a cause for an event and then rate the locus of causality, stability, and controllability for the cause. In terms of reliability and validity, Russell reported that the CDS was superior to the ASQ. This finding is likely due to the simpler task of assessing attributions in specific situations, as the CDS does, compared to assessing attributions across different situations, as the ASQ attempts to do.

Implications for Scale Development

Several problems limit the use of the ASQ and CDS with parents of handicapped children. The first is the lack of research on these scales' reliability and validity with this subject group. A second problem is that several situations on the ASQ are geared towards college students, for example, being turned down for a date. Also, the ASQ asks the subject to "vividly imagine" situations. This instruction may be unsuitable for nonstudent subjects. The third reason which limits these scales' usefulness for this population is the issue of cross-situational consistency. Since there is disagreement over the degree attributions are consistent across situations, the situations on the ASQ may not relate to situations involving parent-child interactions. Finally, the ASQ's format may create a response set. No attempts were made to vary the response
formats across the different situations. Apparently, no research has been done to address the possibility of a response set on this scale. For the above reasons, neither of these scales appear to be acceptable for a study of parental attributions.

Several implications emerge from the research to guide the development of a scale assessing parents' causal attributions toward handicapped children's behavior. First of all, the scale should include typical parent-child situations. This design will increase the subject's identification with the parent in the situation. Second, although it is more difficult to measure attributions across different situations, the proposed scale should do so since parental stress is produced by attributions across different parent-child interactions. This step follows the "chronic sorrow" model which views stress emerging from the various situations which the parent and child encounter. Third, the situations included in the scale should be somewhat ambiguous since this is typical of the "real world." Fourth, rather than the researcher rating the attributional dimensions of a cause named by a parent, each parent should rate his/her own causal attributions. The format of the ASQ and the CDS can be followed in this regard. Finally, the scale should be geared toward parents who may not have a college education.

**Summary and Research Purpose**

In summary, it was noted that parents of handicapped
children often experience greater stress than parents of nonhandicapped children. All parents of handicapped children, however, do not experience the same level of stress. A number of factors have been suggested as influencing parental coping to the child. One factor which has been studied is self-blame, or internal causal attributions. Other types of attributions, suggested by the developers of the learned helplessness model of depression, that have not been formally studied are causal attributions of stability and specificity. No formal scale exists to measure these three types of parental attributions. The purpose of this research is to develop such a scale. Studies of its reliability will be carried out, first with a group of college students and finally with mothers of handicapped children. Validity indices for the three attribution type constructs will also be assessed with Pearson product-moment correlations, a multitrait, multimethod matrix, and a factor analysis.
CHAPTER III

Method

Scale Development

A scale for measuring the attributions of parents of handicapped children, called the Parent - Child Situation Scale (PCSS) was developed. Appendix A contains the original version of the scale. As with the Attributional Style Questionnaire, the PCSS presented hypothetical situations to elicit subject responses. There were 12 situations in the initial scale, all involving parent-child interactions. Based on subject responses to these situations, parental attributions were assessed.

The 12 situations developed for the PCSS focused on behavior problems and developmental delays. These situations were relevant to the parents of handicapped children because they may be times of increased parental stress. Several of the situations derived for the PCSS were suggested by Wikler (1981). She observed that the periods when children usually begin walking, talking, and entering school are times of stress for parents. These times can be stressful to the parent because the child's developmental delays are highlighted. Also included in the PCSS were situations where the child was a behavior problem, since children with developmental delays are likely to have more behavior problems than other children.

34
(Gallagher et al., 1983). Another reason for the use of situations involving behavior problems is that this study included children with behavior-related handicaps such as attention deficit disorder and behavior management problems.

In summary, situations selected for the PCSS involved areas where increased parental stress may occur. The 12 situations included in the initial PCSS were related to developmental delays and behavior problems evidenced in the group of children broadly defined as handicapped. By looking at attributions in a variety of situations provided by the PCSS, a general style of making inferences should become apparent.

Four items on the initial PCSS were situations where the child exhibited positive behavior, or where development was ahead of other children. These positive items were placed on the scale to distract from the scale's intent to measure attributions of negative behavior. Also, these items were intended to provide a break from the negative items to avoid the occurrence of a response set.

Three statements which were felt to reflect each of the attribution types were written for each situation on the PCSS. Each statement was followed by seven responses ranging from Very Strongly Agree to Very Strongly Disagree. The subject circled the response reflecting the level of agreement. Five of the situations were followed by three statements that were written so that the agree dimension
was toward the external, specific, and unstable attributions. Seven of the situations contained statements that were written so that agreement reflected the internal, global, and stable attributions. The direction of the agree and disagree responses was varied as well--to the right on several situations and to the left on others. Finally, the order of the statements was varied so that an internal--external attribution statement was first in one situation, second in another, etc. These techniques were used to avoid the occurrence of a response set.

Scores from one to seven were assigned to the level of agreement for each attribution-related statement. Higher scores for each item reflected higher levels of internal, global, and stable attributions. Total scores for each attribution-type subscale were arrived at by summing all the item scores.

**Study 1**

**Subjects**

The PCSS was initially administered to 84 college students (52 female, 32 male) in freshman and sophomore psychology classes. Each subject received extra credit for participating. The subjects were informed that their responses would be kept confidential and were debriefed concerning the nature of this study.

**Procedure**

Cronbach's coefficient alpha (Ghiselli, Campbell, & Zedeck, 1981) was used to determine the internal
consistencies of the three attribution subscales. This statistic provided an average estimate of consistency across items. This measure was useful because it reflected the degree to which attributions were consistent across the different situations on the PCSS.

The purpose of Study 1 was to test the feasibility of this type of scale and determine its reliability with a group of college students. This information provided a comparison group for the second study which involved mothers of handicapped children.

**Study 2**

**Subjects**

Subjects for Study 2 were mothers obtained from a local agency serving preschool handicapped children. Records for children who had received psychological evaluations during the past two years were reviewed. Mothers with a child diagnosed as having a developmental delay, behavior, or emotional problem were selected. These children had been evaluated with widely used intelligence tests, achievement measures, and adaptive behavior measures. Parent and teacher reports were also included in the assessments. The children ranged in age from two to seven years. Mothers with below an eighth grade education were excluded from this study to insure all participants had an adequate reading ability. A total of 112 mothers met the above criteria and were mailed the PCSS. Sixty-five mothers returned the questionnaire (58% return
rate). One questionnaire was returned with too few responses to be scored. A total of 64 mothers participated in Study 2.

Procedure

The PCSS was mailed to these mothers along with a cover letter explaining the nature of the research study. Subjects were told that all responses would be kept confidential, and that they were selected for this study because of their child's involvement with a local agency serving developmentally delayed preschool children. This letter included $1.00 as compensation for time spent completing the PCSS. A self-addressed, stamped envelope was also included for return of the questionnaire.

Reliability. The internal consistencies of the three subscales on the PCSS were determined using Cronbach's coefficient alpha. The reasons for using this statistic were discussed in Study 1.

Items were dropped from the initial version of the PCSS until an optimum alpha was obtained for all three subscales. The number of items on each subscale was kept equal to facilitate the validity studies described below. All of the following analyses included only items which remained after this procedure.

Validity. Evidence for the construct validity of a measure can be provided from studies of convergent and divergent validity (Ghiselli et al., 1981). The PCSS contained three attribution subscales which were
hypothesized to be separate constructs. Support for the construct validity of the PCSS was assessed by the following analyses of the convergent and divergent validity of the subscales.

The first analysis examined the relationships between the subscales of the PCSS using Pearson product-moment correlations. Support for the divergent validity of the PCSS subscales was assessed from these correlations. If correlations between subscales were low then separate constructs were being measured. One problem with this initial analysis was that items on different attribution subscales share common situations. These shared situations may have increased the correlations between subscales. This possibility was analyzed through the next procedure.

The multitrait, multimethod matrix (mtmm) is a method for determining convergent and divergent validity of a construct (Ghiselli et al., 1981). Using this technique the Pearson product-moment correlations between two or more constructs measured by two or more scales can be compared. A matrix of correlations between all the constructs and all the scales used to measure those constructs is formed. The correlations between two scales purported to measure the same construct should be high for convergent validity. On the other hand, two scales which are purported to measure two different constructs should have a low correlation for divergent validity.

In relation to the PCSS, a mtmm was used to assess
convergent and divergent validity of the three attribution subscales. A special adaptation of the mtmm was done because of the situations each of the three subscales have in common. This shared variance was controlled by splitting each of the three attribution subscales in half. As a result six scales were obtained (first half of internal – external, second half of internal – external, etc.). These six measures were then correlated and placed on a matrix. For convergent validity, the first half of an attribution subscale should have a high correlation with the second half of that same subscale (a type of split-half reliability). For divergent validity, the first half of each attribution subscale should have low correlations with the second halves of the other two attribution subscales (e.g., first half of internal – external subscale compared to the second half of the global – specific subscale and stable – unstable subscale). This technique provided an estimate of correlations between the subscales without shared variance because of the situations in common. The Spearman-Brown formula (Ghiselli et al., 1981) was used to estimate the correlations between subscales with all the items included rather than only half of the items.

Factor analysis is a technique for grouping items that are related to each other (Nie, Hull, Jenkins, & Bent, 1975). If three unique attribution styles were measured by the PCSS, three factors should have emerged from this analysis. Items of the same attribution type
Several methods of factor analysis exist. The statistic used for this study was the factor analysis with a varimax rotation. The varimax rotation was used because the three attributional types probably share variance from the common situations across different subscale items. Nie et al. (1975) noted that using a varimax rotation is appropriate when the variables are correlated due to an identified shared determinant. This rotation selected factors based on the unique variance accounted for by each.
CHAPTER IV

Results

Study 1

Coefficient alphas for the group of college students (N = 84) on the initial 12-item subscales of the PCSS were .52 for the internal - external subscale (M = 45.54, SD = 6.48), .28 for the stable - unstable subscale (M = 46.81, SD = 5.12), and .54 for the global - specific subscale (M = 50.00, SD = 5.93). Item - total correlations, means, and standard deviations of items on the three attribution subscales are listed in Tables 1, 2, and 3, respectively.

Study 2

Reliability

Coefficient alphas for the mothers of handicapped children (N = 64) on the initial 12-item subscales of the PCSS were .67 for the internal - external subscale (M = 39.25, SD = 9.07), .63 for the stable - unstable subscale (M = 39.97, SD = 8.15), and .59 for the global - specific subscale (M = 46.14, SD = 7.86). Item - total correlations, means, and standard deviations of items on the three attribution subscales are listed in Tables 4, 5, and 6, respectively.

Items were deleted from the three attribution subscales until the highest alpha levels were obtained. In order to maintain equal item numbers for the three
Table 1
Item - Total Correlations, Means, and Standard Deviations for College Students on the Initial Internal - External Attribution Subscale of the PCSS

<table>
<thead>
<tr>
<th>Item Number</th>
<th>Item - Total Correlation</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1a</td>
<td>.12</td>
<td>3.93</td>
<td>1.48</td>
</tr>
<tr>
<td>3c</td>
<td>.36</td>
<td>3.23</td>
<td>1.41</td>
</tr>
<tr>
<td>4b</td>
<td>.14</td>
<td>3.11</td>
<td>1.43</td>
</tr>
<tr>
<td>5a</td>
<td>.28</td>
<td>4.48</td>
<td>1.47</td>
</tr>
<tr>
<td>7a</td>
<td>.11</td>
<td>5.13</td>
<td>1.50</td>
</tr>
<tr>
<td>8c</td>
<td>.19</td>
<td>3.68</td>
<td>1.32</td>
</tr>
<tr>
<td>10b</td>
<td>.29</td>
<td>3.75</td>
<td>1.14</td>
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<tr>
<td>11a</td>
<td>.12</td>
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<td>1.35</td>
</tr>
<tr>
<td>13c</td>
<td>-.01</td>
<td>4.94</td>
<td>1.03</td>
</tr>
<tr>
<td>14a</td>
<td>.44</td>
<td>3.65</td>
<td>1.31</td>
</tr>
<tr>
<td>15c</td>
<td>.25</td>
<td>3.57</td>
<td>1.32</td>
</tr>
<tr>
<td>16a</td>
<td>.16</td>
<td>3.48</td>
<td>1.41</td>
</tr>
</tbody>
</table>

Note.  \( N = 84 \) (52 female, 32 male).
Table 2

Item - Total Correlations, Means, and Standard Deviations for College Students on the Initial Stable - Unstable Attribution Subscale of the PCSS

<table>
<thead>
<tr>
<th>Item Number</th>
<th>Item - Total Correlation</th>
<th>Mean</th>
<th>Standard Deviation</th>
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<tr>
<td>lb</td>
<td>-.03</td>
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<td>3a</td>
<td>.21</td>
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<td>1.40</td>
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<tr>
<td>4c</td>
<td>.00</td>
<td>4.63</td>
<td>1.07</td>
</tr>
<tr>
<td>5b</td>
<td>.02</td>
<td>4.82</td>
<td>1.43</td>
</tr>
<tr>
<td>7b</td>
<td>-.02</td>
<td>4.29</td>
<td>1.21</td>
</tr>
<tr>
<td>8a</td>
<td>.20</td>
<td>2.91</td>
<td>1.36</td>
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<tr>
<td>10c</td>
<td>.01</td>
<td>3.91</td>
<td>1.13</td>
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<td>11b</td>
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<tr>
<td>16b</td>
<td>.17</td>
<td>3.71</td>
<td>1.25</td>
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Note. N = 84 (52 female, 32 male).
Table 3

Item - Total Correlations, Means, and Standard Deviations for College Students on the Initial Global - Specific Attribution Subscale of the PCSS

<table>
<thead>
<tr>
<th>Item Number</th>
<th>Item - Total Correlation</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1c</td>
<td>.17</td>
<td>4.24</td>
<td>1.37</td>
</tr>
<tr>
<td>3b</td>
<td>.13</td>
<td>4.69</td>
<td>1.26</td>
</tr>
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<td>4a</td>
<td>.23</td>
<td>3.31</td>
<td>1.28</td>
</tr>
<tr>
<td>5c</td>
<td>.13</td>
<td>3.27</td>
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<tr>
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<td>.22</td>
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<tr>
<td>10a</td>
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<td>14c</td>
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<td>.15</td>
<td>4.88</td>
<td>.99</td>
</tr>
<tr>
<td>16c</td>
<td>.29</td>
<td>3.55</td>
<td>1.20</td>
</tr>
</tbody>
</table>

Note. N = 84 (52 female, 32 male).
Table 4

Item - Total Correlations, Means, and Standard Deviations for Mothers of Handicapped Children on the Initial Internal - External Attribution Subscale of the PCSS

<table>
<thead>
<tr>
<th>Item Number</th>
<th>Item - Total Correlation</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>2b</td>
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<td>4.05</td>
<td>1.96</td>
</tr>
<tr>
<td>3c</td>
<td>.49</td>
<td>2.62</td>
<td>1.58</td>
</tr>
<tr>
<td>4b</td>
<td>.44</td>
<td>2.97</td>
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<tr>
<td>11a</td>
<td>.37</td>
<td>2.73</td>
<td>1.60</td>
</tr>
<tr>
<td>13c</td>
<td>.51</td>
<td>4.19</td>
<td>1.63</td>
</tr>
<tr>
<td>14a</td>
<td>.31</td>
<td>2.61</td>
<td>1.45</td>
</tr>
<tr>
<td>15c</td>
<td>.41</td>
<td>2.92</td>
<td>1.60</td>
</tr>
<tr>
<td>16a</td>
<td>.01</td>
<td>2.72</td>
<td>1.67</td>
</tr>
</tbody>
</table>

Note. N = 64.
Table 5

Item - Total Correlations, Means, and Standard Deviations for Mothers of Handicapped Children on the Initial Stable - Unstable Attribution Subscale of the PCSS

<table>
<thead>
<tr>
<th>Item Number</th>
<th>Item - Total</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>la</td>
<td>.29</td>
<td>3.97</td>
<td>1.78</td>
</tr>
<tr>
<td>3a</td>
<td>.36</td>
<td>2.84</td>
<td>1.68</td>
</tr>
<tr>
<td>4c</td>
<td>.38</td>
<td>3.91</td>
<td>1.47</td>
</tr>
<tr>
<td>5b</td>
<td>.22</td>
<td>3.94</td>
<td>1.81</td>
</tr>
<tr>
<td>7b</td>
<td>-.01</td>
<td>4.08</td>
<td>1.31</td>
</tr>
<tr>
<td>8a</td>
<td>.46</td>
<td>2.53</td>
<td>1.36</td>
</tr>
<tr>
<td>10c</td>
<td>.34</td>
<td>3.33</td>
<td>1.57</td>
</tr>
<tr>
<td>11b</td>
<td>.26</td>
<td>2.91</td>
<td>1.15</td>
</tr>
<tr>
<td>13a</td>
<td>.26</td>
<td>3.72</td>
<td>1.70</td>
</tr>
<tr>
<td>14b</td>
<td>.10</td>
<td>2.08</td>
<td>1.38</td>
</tr>
<tr>
<td>15a</td>
<td>.54</td>
<td>2.81</td>
<td>1.48</td>
</tr>
<tr>
<td>16b</td>
<td>.13</td>
<td>3.86</td>
<td>1.58</td>
</tr>
</tbody>
</table>

Note. N = 64.
Table 6
Item - Total Correlations, Means, and Standard Deviations for Mothers of Handicapped Children on the Initial Global - Specific Attribution Subscale of the PCSS

<table>
<thead>
<tr>
<th>Item Number</th>
<th>Item - Total Correlation</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1c</td>
<td>.18</td>
<td>4.39</td>
<td>1.74</td>
</tr>
<tr>
<td>3b</td>
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<td>4.94</td>
<td>1.76</td>
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<td>4a</td>
<td>.13</td>
<td>2.20</td>
<td>1.33</td>
</tr>
<tr>
<td>5c</td>
<td>.02</td>
<td>2.83</td>
<td>1.57</td>
</tr>
<tr>
<td>7c</td>
<td>.21</td>
<td>3.87</td>
<td>1.30</td>
</tr>
<tr>
<td>8b</td>
<td>.36</td>
<td>4.11</td>
<td>1.42</td>
</tr>
<tr>
<td>10a</td>
<td>.46</td>
<td>4.00</td>
<td>1.54</td>
</tr>
<tr>
<td>11c</td>
<td>.18</td>
<td>3.75</td>
<td>1.38</td>
</tr>
<tr>
<td>13b</td>
<td>.40</td>
<td>4.83</td>
<td>1.24</td>
</tr>
<tr>
<td>14c</td>
<td>.33</td>
<td>3.81</td>
<td>1.87</td>
</tr>
<tr>
<td>15b</td>
<td>.23</td>
<td>4.64</td>
<td>1.65</td>
</tr>
<tr>
<td>16c</td>
<td>.21</td>
<td>2.77</td>
<td>1.47</td>
</tr>
</tbody>
</table>

Note. N = 64.
subscales, some items which contributed minimally to the alpha level were dropped. Six items remained on each subscale after the above requirements were met. Coefficient alphas for the three subscales were .74 for the internal - external subscale (M = 19.33, SD = 6.32); .70 for the stable - unstable subscale (M = 19.20, SD = 6.07); and .72 for the global - specific subscale (M = 26.33, SD = 6.17). Item - total correlations, means, and standard deviations for the final version of the PCSS are listed in Table 7.

Validity

The divergent validity of the three attribution subscales on the final version of the PCSS was assessed using Pearson product-moment correlations. The correlation between the internal - external subscale and the stable - unstable subscale was .45. The correlation between the internal - external subscale and the global - specific subscale was .26. The correlation between the stable - unstable subscale and the global - specific subscale was .35. All of these correlations were statistically significant (p < .05).

A multitrait, multimethod matrix was derived to assess convergent and divergent validity of the three attribution subscales. The six-item subscales were split in half and correlated using Pearson product-moment correlations. The correlations between and within subscales for the actual number of items were then estimated using the
Table 7

Item - Total Correlations, Means, and Standard Deviations for Mothers of Handicapped Children on the Final Version of the Parent - Child Situation Scale

<table>
<thead>
<tr>
<th>Item</th>
<th>Subscale</th>
<th>Item - Total Correlation</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>3c</td>
<td>int - ext</td>
<td>.48</td>
<td>2.63</td>
<td>1.58</td>
</tr>
<tr>
<td>4b</td>
<td>int - ext</td>
<td>.40</td>
<td>2.97</td>
<td>1.63</td>
</tr>
<tr>
<td>8c</td>
<td>int - ext</td>
<td>.44</td>
<td>3.09</td>
<td>1.47</td>
</tr>
<tr>
<td>10b</td>
<td>int - ext</td>
<td>.61</td>
<td>3.53</td>
<td>1.63</td>
</tr>
<tr>
<td>13c</td>
<td>int - ext</td>
<td>.53</td>
<td>4.19</td>
<td>1.63</td>
</tr>
<tr>
<td>15c</td>
<td>int - ext</td>
<td>.43</td>
<td>2.92</td>
<td>1.60</td>
</tr>
<tr>
<td>1b</td>
<td>sta - uns</td>
<td>.37</td>
<td>3.97</td>
<td>1.78</td>
</tr>
<tr>
<td>3a</td>
<td>sta - uns</td>
<td>.46</td>
<td>2.84</td>
<td>1.68</td>
</tr>
<tr>
<td>8a</td>
<td>sta - uns</td>
<td>.46</td>
<td>2.53</td>
<td>1.36</td>
</tr>
<tr>
<td>10c</td>
<td>sta - uns</td>
<td>.46</td>
<td>3.33</td>
<td>1.57</td>
</tr>
<tr>
<td>13a</td>
<td>sta - uns</td>
<td>.44</td>
<td>3.72</td>
<td>1.69</td>
</tr>
<tr>
<td>15a</td>
<td>sta - uns</td>
<td>.39</td>
<td>2.81</td>
<td>1.48</td>
</tr>
<tr>
<td>3b</td>
<td>glo - spe</td>
<td>.43</td>
<td>4.94</td>
<td>1.76</td>
</tr>
<tr>
<td>8b</td>
<td>glo - spe</td>
<td>.46</td>
<td>4.11</td>
<td>1.42</td>
</tr>
<tr>
<td>10a</td>
<td>glo - spe</td>
<td>.47</td>
<td>4.00</td>
<td>1.54</td>
</tr>
<tr>
<td>13b</td>
<td>glo - spe</td>
<td>.55</td>
<td>4.83</td>
<td>1.24</td>
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<tr>
<td>14c</td>
<td>glo - spe</td>
<td>.44</td>
<td>3.81</td>
<td>1.87</td>
</tr>
<tr>
<td>15b</td>
<td>glo - spe</td>
<td>.42</td>
<td>4.64</td>
<td>1.65</td>
</tr>
</tbody>
</table>

Note.  \( N = 64 \).
Spearman-Brown formula. These estimated correlations are listed in Table 8. Correlations which provide evidence of convergent or divergent validity are indicated. Since the first half of the global - specific subscale shared one situation in common with the second half of the other two subscales, no comparisons for divergent validity were made utilizing these subscales.

A factor analysis with a varimax rotation was done to provide further evidence of the PCSS' construct validity. Three factors were extracted with eigenvalues above 1.0. This cutoff point is generally used for determining factors (Gorsuch, 1983). These three factors accounted for 71.4% of the variance. Factor loadings for the final six items on the three attribution subscales are listed in Table 9.
Table 8
Spearman-Brown Corrected Correlations Between First and Second Halves of Attribution Subscales on the Parent-Child Situation Scale

<table>
<thead>
<tr>
<th></th>
<th>Int1</th>
<th>Int2</th>
<th>Glob1</th>
<th>Glob2</th>
<th>Stabl</th>
</tr>
</thead>
<tbody>
<tr>
<td>Int2</td>
<td>(.70)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Glob1</td>
<td>.14</td>
<td>.36</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Glob2</td>
<td>.16*</td>
<td>.58</td>
<td>(.72)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stabl</td>
<td>.44</td>
<td>.60*</td>
<td>.34</td>
<td>.37*</td>
<td></td>
</tr>
<tr>
<td>Stab2</td>
<td>.29*</td>
<td>.67</td>
<td>.52</td>
<td>.51</td>
<td>(.75)</td>
</tr>
</tbody>
</table>

Note. Correlations within parenthesis provide evidence for the convergent validity of the PCSS without the shared variance due to common situations. Correlations with an asterisk provide evidence for the divergent validity of the PCSS without the shared variance due to common situations. Int1 = first half of the internal-external subscale; Int2 = second half of internal-external subscale, etc. N = 64.
Table 9

Factor Loadings of Items on the Final Version of the Parent-Child Situation Scale

<table>
<thead>
<tr>
<th>Item</th>
<th>Subscale</th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Factor 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>3c</td>
<td>int - ext</td>
<td>.7673</td>
<td>-.0832</td>
<td>-.0555</td>
</tr>
<tr>
<td>4b</td>
<td>int - ext</td>
<td>.4564</td>
<td>.0394</td>
<td>.2952</td>
</tr>
<tr>
<td>8c</td>
<td>int - ext</td>
<td>.4395</td>
<td>.3302</td>
<td>-.0240</td>
</tr>
<tr>
<td>10b</td>
<td>int - ext</td>
<td>.4290</td>
<td>.2267</td>
<td>.4322</td>
</tr>
<tr>
<td>13c</td>
<td>int - ext</td>
<td>.5311</td>
<td>.2158</td>
<td>.2074</td>
</tr>
<tr>
<td>15c</td>
<td>int - ext</td>
<td>.2942</td>
<td>.0060</td>
<td>.2021</td>
</tr>
<tr>
<td>1b</td>
<td>sta - uns</td>
<td>.2132</td>
<td>.1054</td>
<td>-.0200</td>
</tr>
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<td>3a</td>
<td>sta - uns</td>
<td>.2412</td>
<td>.0629</td>
<td>.4884</td>
</tr>
<tr>
<td>8a</td>
<td>sta - uns</td>
<td>.0137</td>
<td>.0066</td>
<td>.2175</td>
</tr>
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<td>sta - uns</td>
<td>-.0102</td>
<td>.1223</td>
<td>.8031</td>
</tr>
<tr>
<td>13a</td>
<td>sta - uns</td>
<td>-.0750</td>
<td>.1534</td>
<td>.2313</td>
</tr>
<tr>
<td>15a</td>
<td>sta - uns</td>
<td>.1417</td>
<td>.0990</td>
<td>.1665</td>
</tr>
<tr>
<td>3b</td>
<td>glo - spe</td>
<td>-.2289</td>
<td>.3630</td>
<td>-.1584</td>
</tr>
<tr>
<td>8b</td>
<td>glo - spe</td>
<td>.1081</td>
<td>.5278</td>
<td>.0170</td>
</tr>
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<td>10a</td>
<td>glo - spe</td>
<td>.0594</td>
<td>.7751</td>
<td>.2764</td>
</tr>
<tr>
<td>13b</td>
<td>glo - spe</td>
<td>.0781</td>
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<td>.0078</td>
</tr>
<tr>
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<td>glo - spe</td>
<td>.0491</td>
<td>.1387</td>
<td>.0794</td>
</tr>
<tr>
<td>15b</td>
<td>glo - spe</td>
<td>.0356</td>
<td>.2248</td>
<td>.0870</td>
</tr>
</tbody>
</table>

Note. N = 64.
CHAPTER V

Discussion

Reliability

The final version of the PCSS possessed sufficient internal consistency for each of the three attribution subscales when used with mothers of handicapped children. Reliability coefficients were as high or higher than other widely used attribution scales (Petersen et al., 1982; Russell, 1982). Cross-validation will be necessary to assess reliability of the PCSS with a second subject group.

Item Analysis

Items with the highest item-total correlations (see Table 2), and as a result most discriminating, appeared to be those that were most ambiguous. For example, all items associated with situation number 3 (see Appendix A), "A 3-year-old girl has not spoken any words," were retained on the final scale. In contrast, no items from situation number 5, "A 4-year-old girl is diagnosed as being mentally retarded" were retained on the final scale. An explanation for this finding is that the former situation contains greater causal ambiguity than the latter. A number of causes and possible outcomes for a child not speaking may have been perceived. In contrast, the mothers may have had more concrete ideas about a mentally retarded child because of more information present in society about this
condition. This knowledge may have created less variance in responses, hence the items were less able to differentiate attributional styles. The implication of this observation is that when situations are more ambiguous, responses are based on an attributional style. If, however, more concrete information about the situation is available, that information will be utilized for decisions about causality. This observation supports the separation of attributions into two categories, belief based and evidence based, which was proposed by Metalsky and Abramson (1981). Belief-based attributions are made when the individual utilizes an attributional style primarily to make causal inferences. Evidence-based attributions are made on the basis of existing information. The implication for parents is that providing more information about their child's handicap will decrease their reliance on a belief-based attributional style. This intervention, however, may not necessarily aid parental coping since a belief-based attributional style might function as a coping mechanism.

Differences in item responses existed between college students and mothers of handicapped children. Coefficient alphas for the college students were lower and, generally, items that were most discriminating for the mothers were not so for the college students (see Tables 1 to 6). Likely the experience of having a handicapped child affected item responses and created greater variance in
these responses. Other differences between these two groups were probably education level and socioeconomic status, although information was not gathered to verify these possibilities. A fourth difference between the groups was the inclusion of males in the college group. Ideally the PCSS could be used to measure attributions concerning handicapped children for the general population. The differences between the groups in item - total correlations and coefficient alphas, however, may indicate that the PCSS is most applicable to mothers of handicapped children.

Validity

Support for the construct validity of the PCSS was weaker than hoped. Correlations between the subscales were moderately high and statistically significant. This finding indicated that the hypothesized attribution constructs, as measured by the subscales, were not distinct. When the correlations were examined with the effects of the common situations removed, the constructs still appeared to have a moderate amount of overlap. The Spearman-Brown corrected correlations for the scale halves ranged from a low of .15 between the internal - external and global - specific subscales to a high of .60 between the internal - external and stable - unstable subscales (see Table 4). The latter correlation was close to the reliability estimates of the subscales themselves, suggesting that relationships between some items on
different scales may be as high as the relationships of items within scales.

On the factor analysis the first factor was most clearly related to the internal - external attribution construct (see Table 9). All items on the internal - external subscale loaded relatively high on this factor while items on the other subscales loaded relatively low. Four items on the global - specific subscale were highest loading on the second factor. Items 14c and 15b, however, loaded relatively low on this subscale suggesting that they may be measuring somewhat of a different construct. Two items from the internal - external subscale loaded higher on this factor than those two items. A similar situation occurred on the third factor where two items from the stable - unstable subscale obtained the highest loadings. Two items on the internal - external subscale also loaded relatively high on this factor. Overall it appeared that the internal - external subscale was relatively independent of the other two attribution subscales. However, there appeared to be a moderate amount of overlap between several items on the internal - external factor and the other two factors. This overlap was likely the reason for the moderately high correlations between the three subscales.

While the overall support for the PCSS' construct validity was only moderate, it is notable that the internal - external subscale had better reliability and validity indices than other attribution measures currently being
used. This subscale's .74 alpha level along with the factor analytic findings suggested that it can be used for further research on the relationship of internal–external attributions and parental stress.

It is difficult to sort out the reason for the overlap of several items on the internal–external subscale with the other factors since it cannot be accounted for by the common situations. Possibly the view of an event being either internally or externally controlled affected the other attributions which were made. For example, item 8c on the internal–external subscale loaded relatively high on the global–specific subscale. This item stated "It is most likely the parent's fault that this girl is behind the other children." If the individual perceived this to be due to the parent, possibly the inference was made that only this situation was affected. If, however, the parent perceived the cause of her daughter's poor school performance to be due to the child—an external attribution—it may have been inferred that the child was having other problems as well. A similar situation may have existed in item 10b's loading on the stable–unstable factor. If an internal attribution was made about the boy's illnesses it may also have been inferred that the parents can take better care of the child in the future. Put another way, if the parents were seen as being at fault then they can do something to correct the situation. If, however, the parents were not at all to blame for the
child's illnesses, no means of improving the child's future health may be perceived. The belief about the control of events referred to in the above discussion has been described as locus of control.

Locus of control refers to inferences which people make about their ability to control an event (Rotter, 1966). This concept is theoretically distinct from the idea of an internal-external attributional style (Metalsky & Abramson, 1981). For example, an individual may blame him/herself for an event but feel he/she had no control over its occurrence. While theoretically these constructs are orthogonal; they may not be so on the PCSS. Responses to the internal-external attribution subscale may have been affected by locus of control. This relationship could cause the overlap between subscales.

A second reason for the moderate correlations between the three subscales may have been a general factor of "optimism - pessimism." Perhaps some mothers had a tendency to view events in a more positive light, hence they made attributions which reduced self-blame and increased hope for the child. Likewise, pessimistic mothers may have blamed themselves and exaggerated the child's problems. This factor could have caused shared variance across the subscales and accounted for items loading on factors which were not predicted. Because of the small number of subjects used for this analysis (N = 64), further factor analysis with larger subject groups
should be done to obtain more evidence regarding the factor structure of the PCSS. If similar results are obtained, further qualifications of attribution theory as it relates to mothers of handicapped children may be necessary. Also, items that are not loading as expected on a factor could be revised.

Important clinical implications may be reflected in the overlap of attribution subscales on the PCSS. Mental health professionals should be aware that factors, such as those described above, can affect parental attributions. An assessment of these factors should be made so that interventions to aid parental coping can be planned.

Implications for Further Research

Further research with the PCSS should be done based on evidence of good reliability and moderate construct validity provided in this study. The internal - external subscale particularly appears to be an excellent measure for future research use since it surpasses other methods of measuring parental attributions currently being used.

The PCSS should next be cross-validated along with further study of the scale's validity. Also, the test-retest reliability of the PCSS should be assessed to look at its stability over time. Following these procedures, the scale can be compared to measures of parent stress to assess their relationship. Another area of study is the effect of the type of handicap which the child has on parent attributions. For example, do mothers of
children with a handicap of specific etiology differ from mothers with handicapped children of unknown etiology in attribution styles? Finally, the PCSS should be administered to fathers of handicapped children to assess its applicability to this group. With this information the PCSS can provide additional insight into successful coping mechanisms utilized by parents of handicapped children.
REFERENCES


PARENT - CHILD SITUATION SCALE

Directions
Following are 16 situations involving parents and children. Read each situation and respond to the statements which follow. Rate how much you agree with each statement by circling one of the responses. The letters in the responses stand for:

VSA = Very Strongly Agree; SA = Strongly Agree; MA = Mildly Agree; N = Neutral; MD = Mildly Disagree; SD = Strongly Disagree; VSD = Very Strongly Disagree.

SITUATIONS

1) A 6-year-old boy is with a parent in a grocery store and throws a fit.
   a) This boy's fit is mostly due to the parent. (circle one)
      VSA SA MA N MD SD VSD
   * b) This boy will probably throw fits when he is 10 years old. (circle one)
      VSA SA MA N MD SD VSD
   c) This boy likely has problems with more than just his behavior. (circle one)
      VSA SA MA N MD SD VSD

2) A 6-year-old boy is diagnosed as a genius on an intelligence test.
   a) This boy is smart totally because of his parents.
      VSD SD MD N MA SA VSA
   b) This boy will definitely be a genius when he is an adult.
      VSD SD MD N MA SA VSA
   c) This boy is probably better than other kids in most things he does.
      VSD SD MD N MA SA VSA

3) A 3-year-old girl has not spoken any words.
   * a) This girl may never speak.
      VSD SD MD N MA SA VSA
   * b) This girl is probably having a lot of problems right now along with her speaking problem.
      VSD SD MD N MA SA VSA
   * c) It is the parents' fault that this girl is not speaking.
      VSD SD MD N MA SA VSA

Note. Items preceded by an asterisk were retained on the final version of the scale.
4) An 8-year-old boy is teased by other children because he can hardly catch a baseball.
   a) This boy is probably good at a lot of other things he tries to do.
      VSA SA MA N MD SD VSD
   * b) It is definitely not the parents' fault that this boy is being teased.
      VSA SA MA N MD SD VSD
   c) This boy will probably turn out to be a good baseball player.
      VSA SA MA N MD SD VSD

5) A 4-year-old girl is diagnosed as being mentally retarded.
   a) It is probably not anything about the parents that made this girl retarded.
      VSD SD MD N MA SA VSA
   b) This girl might not be retarded when she is an adult.
      VSD SD MD N MA SA VSA
   c) This girl is probably good at a lot of things despite being retarded.
      VSD SD MD N MA SA VSA

6) A 10-year-old boy is going to skip a grade in school because he is way ahead of the class.
   a) This boy's parents should receive most of the credit for his good performance.
      VSA SA MA N MD SD VSD
   b) This boy will be very successful when he is an adult.
      VSA SA MA N MD SD VSD
   c) This boy probably is better than most kids in a lot of areas besides schoolwork.
      VSA SA MA N MD SD VSD

7) A 4-year-old girl is not toilet trained and all the neighbor's children were toilet trained by 3 years of age.
   a) It is not the parents' fault that this girl is not toilet trained.
      VSD SD MD N MA SA VSA
   b) This girl will not wet the bed when she is older.
      VSD SD MD N MA SA VSA
   c) This girl is probably ahead of other children in many other areas.
      VSD SD MD N MA SA VSA
8) A girl enters the first grade and the school wants to place her in a special class because she is behind other children her age.
   a) This girl will probably never go to college.
      VSA SA MA N MD SD VSD
   * b) This girl probably has a lot of other problems besides her schoolwork.
      VSA SA MA N MD SD VSD
   * c) It is most likely the parents' fault that this girl is behind the other children.
      VSA SA MA N MD SD VSD

9) A parent is told that her children are the best behaved in town.
   a) The children's good behavior is totally because of the parents.
      VSA SA MA N MD SD VSD
   b) The children are probably the smartest children in school also.
      VSA SA MA N MD SD VSD
   c) The children will probably always be the best behaved.
      VSA SA MA N MD SD VSD

10) A 4-year-old boy seems to be sick a lot. Ever since he was a baby he has had to visit the doctor more than most children.
   * a) This boy probably has many other problems besides being sick.
      VSD SD MD N MA SA VSA
   * b) The parents of this boy probably could take better care of him.
      VSD SD MD N MA SA VSA
   * c) This boy will probably be sick for most of his life.
      VSD SD MD N MA SA VSA

11) A 6-year-old boy cannot draw pictures as well as his 4-year-old sister can.
   a) It is not the fault of the boy's parents that he can't draw good pictures.
      VSA SA MA N MD SD VSD
   b) This boy will probably be able to draw good pictures in a few years.
      VSA SA MA N MD SD VSD
   c) This boy is probably better than his sister in everything else besides drawing.
      VSA SA MA N MD SD VSD
12) A 12-year-old girl wins the spelling bee at school.
   a) This girl's spelling ability is probably totally due to her parents.
      VSA SA MA N MD SD VSD
   b) This girl is probably ahead of other children in most areas.
      VSA SA MA N MD SD VSD
   c) This girl will always be the best at spelling.
      VSA SA MA N MD SD VSD

13) A 7-year-old girl will not obey the teacher at school.
    * a) This girl will probably be a behavior problem when she is in high school.
       VSD SD MD N MA SA VSA
    * b) This girl probably has a lot of other problems besides school behavior.
       VSD SD MD N MA SA VSA
    * c) It is probably the parents' fault that this girl does not mind at school.
       VSD SD MD N MA SA VSA

14) A 2-year-old girl is not walking.
    a) It is probably the parents' fault that this girl isn't walking.
       VSA SA MA N MD SD VSD
    b) This girl will probably walk funny when she is grown up.
       VSA SA MA N MD SD VSD
    * c) This girl is probably having a lot of problems besides walking.
       VSA SA MA N MD SD VSD

15) A boy is 1111d other children his age because of problems at birth.
    * a) This boy might be retarded for the rest of his life.
       VSD SD MD N MA SA VSA
    * b) Everyone in this boy's family is probably under stress because of this problem.
       VSD SD MD N MA SA VSA
    * c) The birth problems could have been avoided if the parents would have done something differently.
       VSD SD MD N MA SA VSA

16) A 4-year-old boy is diagnosed as being hyperactive.
    a) It is not the parents' fault that this boy is so active.
       VSA SA MA N MD SD VSD
    b) This boy will probably not be hyper when he is an adult.
       VSA SA MA N MD SD VSD
    c) This boy is probably doing well in a lot of areas besides his behavior.
       VSA SA MA N MD SD VSD