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Development of a tool to assess cognitive mastery of stress in children : a pilot study.

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A PILOT STUDY

A Dissertation Presented

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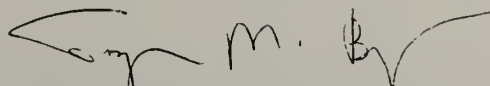
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ABSTRACT

DEVELOPMENT OF A TOOL TO ASSESS

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A PILOT STUDY

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The process of mastery of major stressors in
children has been much less studied than similar
processes in adults. The purpose of this pilot study
was to develop and to conduct beginning testing of a
new psychological measure to assess the construct of
cognitive mastery of stressful events in children,
i.e., the Child Cognitive Mastery Scale (CCMS).
First, 22 situations involving forced-choice responses
were developed around three previously-identified
domains: safety and security, just and controllable
world, and self-view and pictures portraying these
situations were drawn. Then, 56 children, ages 6 to
11 were tested with the CCMS and a depression measure.
Twenty-one children were re-tested 7 to 10 days later
with the CCMS. Teachers provided ratings of school
achievement and parents provided information regarding
stressful life events and the child's overall

behavior. Results showed evidence of overall test-
retest reliability and beginning evidence of inter-
administrator reliability. The results also
identified some initial "hints" at discriminative and
construct validity and seemed, for the most part, to
confirm the projective assumption that the childrens'
responses would reflect their own views of the world
and of themselves. This initial pilot study provided
some encouraging information regarding the
psychometric properties of the CCMS as well as
information regarding needed revisions and some
directions for further evaluation and development.

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CHAPTER 1

INTRODUCTION, CONCEPTUAL FRAMEWORK, AND
RESEARCH QUESTIONS

Introduction

The notion of childhood as a blissful time of
carefree existence is a romanticized view of a child's
experience, quite without empirical validity.
Although in a sense it is true that a child lives in a
different world from adults, it is a world that
entails its own stresses and tensions (Levine, 1985).
From an early age, children experience anxiety
regarding separation from their significant caretakers
and later, a fear of strangers. Sibling rivalry
provides another source of stress as does family
conflict or a move to a new city. Today's children
are also confronted with stories of child kidnappings
(reinforced daily by pictures on milk cartons and
posters in shopping malls), alleged sexual molestation
in day care centers, and the threat of nuclear war--
all possible threats to their safety and security even
when not personally experienced by the child.

Garmezy (1983) noted that "children are not
strangers to stress" and recognized that "over a
significant span of human history they have been more
often the victims of the slings and arrows of an
uncaring society than recipients of its beneficent

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protection" (p. 49). In the United States today, however, children are probably more recognized as needing adult care, protection, and understanding than ever before in human history. Still, we cannot protect children from everything (nor would we want to) and daily stressors are a fact of life to which children must and very often do learn to adapt, particularly with the help of supportive adults. Major, unexpected traumatic events still sometimes occur and call for even greater adaptations.

Stress has been defined by Goldenson (1970, p. 1263) as "a condition or situation that imposes demands for adjustment on a person". A certain amount of stress, therefore, is helpful in stimulating development. Sometimes, however, the stressful situation carries with it such a demand for psychological, emotional, and behavioral adjustment that the individual's usual abilities to cope become overtaxed and symptoms of post-traumatic stress syndrome and/or depression can occur.

Purpose of the Study

Mastery of a major stressor is achieved when the individual's coping efforts have enabled him/her to integrate the changed circumstances in a way that equilibrium is once more restored, at a functional level (cognitive and behavioral) at or above that which existed before the trauma. The process of

mastery of major stressors in children has been less studied than similar processes in adults. The purpose of this study is twofold: to develop and begin to explore the validity and reliability of a tool designed to assess cognitive mastery of stressful events in children and second, to begin to determine to what extent various child variables determine mastery of stressful events.

Emotional Equilibrium

An individual can be viewed as existing in a state of emotional equilibrium with his/her goal being always to return to or maintain that state. This does not mean that the individual remains in a static state of equilibrium. If this were true, to borrow a definition from chemistry, being in a state of static equilibrium would mean that for the same individual in each situation (or "reaction" between the individual and his/her environment), the "outcome" or behavior would be the same. Obviously this is not true, nor would it be desirable. For if one were to be satisfied with this type of passive equilibrium, "we would not progress, we would not grow, we would not create" (Carbone, 1967).

Much more preferable, is to view an individual as existing in a state of dynamic equilibrium. Again borrowing from chemistry, the analogy of molecules existing in a state of dynamic equilibrium is useful

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here. When two opposing forces occur at the same
rate, the system is in a state of dynamic equilibrium
(Murphy & Rousseau, 1969). Molecules in this state
are never static--they are constantly moving, changing
from one state to another. But, the key to the
maintenance of the equilibrium is that they change at
the same rate.

It is known, if by no other empirical
verification than ones own intuition and experience,
that an individual's emotional state is also in
constant motion. As Jacobson describes it: "All of
us at any time are changing to some extent, simply
because one moment is never the same as the moment
before. Another way of saying the same thing is that
every day, and in fact every moment, we are, both
within ourselves and in relationship to others,
continuously facing some new tasks which have never
faced us in exactly that way before. If these changes
are minor, we barely notice them and we devise the
required new coping techniques readily and without
apparent strain" (1970, p.24).

Referring to the definition of "dynamic
equilibrium" given previously, "opposing forces" can
be looked at as being events and situations that are
new, threatening, challenging, or that represent a
loss (Rapoport, 1965). These "hazardous events" as
Rapoport (1965) terms them, "oppose" the individual's

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strategies for coping with and eventually mastering

them. Another way of looking at these "emotional

hazards" is to think of them as precipitating external

events that call for an internal adjustment on the

part of the individual (Shields, 1975, p.37). Thus in

the individual's "normal" state, he/she can be said to

have established a dynamic equilibrium between his

internal and external environments (Carbone, 1967).

Caplan stated that the normal consistency of

pattern, or equilibrium is maintained by "homeostatic

re-equilibrating mechanisms". These mechanisms work

so that temporary deviations from the usual pattern

call into operation opposing forces which

automatically bring the pattern back to a state of

equilibrium (Caplan, 1964, p. 38). When an individual

first encounters a hazardous emotional event, he

experiences a rise in inner tension and some

uneasiness. Usually these feelings of uneasiness and

tension are not excessive because of the usual short

period before a solution is found. The period is no

longer than the individual's previous experience in

dealing with such problems by similar methods. The

individual has developed the expectation of a

successful outcome and an ability to bear that degree

of tension as well as certain limits by means of

discharge mechanisms (Caplan, 1964). The individual

is therefore most often able to maintain or restore

his/her emotional state of equilibrium within a relatively short period. In children, care-taking adults often help to facilitate this process.

But, what if an individual encounters a hazardous event that he/she is unable to meet with his/her "homeostatic regulating mechanisms"? This lack of fit between the event and the available skills to cope with and master it proves disorganizing and disrupting for the person (Barrell, 1974). In discussing the experience of victims of traumatic events, Bard and Sangrey (1979) also note that victims experience a "loss of eqilibrium. The world is suddenly out of whack. Things no longer work the way they used to" (p. 14). The response syndrome that sometimes results when an individual encounters a stressor/hazardous event that is outside the usual range of daily experience and coping strategies has recently been termed "post-traumatic stress syndrome". A number of responses to major stressors experienced by children have been observed.

Children and Severe Stress

Mason (1975) has noted that "The single most remarkable historical fact concerning the term 'stress' is its persistent wide usage in biology and medicine in spite of almost chaotic disagreement over its definition" (p. 6). There does seem to be, however, widespread agreement that a crucial factor in

defining stress is the individual's perception of the
situation. "Stress, to paraphrase an old cliche, lies
in the eyes of the beholder" (Sedgewick, 1975, p. 20).

Freud (1926) emphasized that the sole determinant
of the psychological consequences of a situation is a
person's evaluation of the danger and "Whether he is
wrong in his estimation or not is immaterial for the
outcome" (p.166). Lazarus and his coworkers have
repeatedly demonstrated their view that "stress lies
not in the environmental input but in the person's
appraisal of the relationship between that input and
its demands and the person's agendas (e.g., beliefs,
committments, goals) and capabilities to meet,
mitigate, or alter these demands in the interests of
well-being" (Lazarus, DeLongis, Folkman, & Gruen,
1985, p,770; and Folkman & Lazarus, 1984; Lazarus &
Folkman, 1984; Lazarus & Launier, 1978). Thus, there
is support from varied sources for the premise that
the stress response is a cognitively-determined
process.

This fact has tremendous implications for the
study of stress in children whose varying levels of
cognitive development predispose them to view a
variety of causes as very stressful that would not
necessarily be seen as such by adults. A child's
immature cognitive status and, in younger children,
magical thinking and inability to correctly deduce

cause-effect relationships at times can make the world seem threatening indeed. Events and situations that may seem minor to adults can be very threatening to a child. This enhanced vulnerability to stress has not been recognized by systematic study for very long, however.

Garmezy (1983) has noted that in the last fifteen years or so, we have seen a striking growth of interest in the study of stress, its antecedents and consequences. He further notes, however that "in this output of scientific and clinical studies, the effort to observe, record, and study the reactions of children to stressful events has remained an area of neglect in comparison to the many studies of adult reaponsivity" (p.51). He adds that "The degree of neglect is puzzling in the light of evidence that, in a world of heightened stress, children are frequently among the most affected victims of a range of threatening events" (p. 51). Frederick (1985; Galante & Foa, 1986) noted that in the event of a disaster, children are among the most susceptible people in the population to suffer from posttraumatic stress syndrome, and concluded from a review of the findings of a number of different disasters that in three-quarters of the children involved, symptoms were still evident two years after the traumatizing event.

One explanation for the lack of attention to this area in the past is "a long tradition of denying psychological sequelae in the child victim of trauma" (Eth & Pynoos, 1985a). Benedek (1984) suggested that countertransference reactions on the part of potential helpers take the focus off the needs victims have for support and intervention. Frederick (1985) noted that "Once the impact of the event is over persons tend to count their blessings and become imbued with the thought that everything of an unsettling nature is past. Nothing could be further from the truth. Because of the need not to dismiss unpleasant events from their own thoughts, adults may not be alert or responsive to signs of distress in children" (p.88). Whatever the reason, the fact remains that we continue to lack a systematic literature regarding the responses of children to severe stress. This lack has been recognized by a number of investigators (Anthony, 1986; Eth & Pynoos, 1985a; Garmezy, 1983; 1986; Terr, 1984).

Children's Responses to Traumatic Events

Although largely anecdotal, there have been a number of attempts to systematically describe the experiences and responses of children to a number of very stressful experiences such as: the evacuation of children in London during World War II (Freud & Burlingame, 1943); a tornado in Vicksburg, Mississippi

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(Bloch, Silber, & Perry, 1956); a follow-up on

civilians in Hiroshima 17 years after the bomb was

dropped (Lifton, 1967); a California earthquake

(Blaufarb & Levine, 1972); the artillery shelling of a

kibbutz during the Six-Day War (Ziv & Israeli, 1973);

the Yom Kippur war (Milgram & Milgram, 1976); the

Buffalo Creek Dam disaster (Newman, 1976; Titchener &

Kapp, 1976); World War II concentration camp

experiences (Krystal, 1978); the school-bus kidnapping

of children in Chowchilla, California (Terr, 1979;

1981; 1983); a severe winter storm and flood in

Massachusetts (Burke, Borus, Burns, Millstein, &

Beasley, 1982; Burke, Moccia, Borus, & Burns, 1986);

the Mt. St. Helens volcano eruption (Adams & Adams,

1984); children who witness homicide, rape, or suicide

(Pynoos & Eth, 1984; Eth & Pynoos, 1985b); a crane

striking a school pedestrian overpass, (Blom, 1986);

the Three Mile Island nuclear accident (Handford, et

al., 1986); diplomats' children during crises in

Afganistan and Pakistan (Rigamer, 1986); an earthquake

in Italy (Galante & Foa, 1986); terrorizing attacks on

children by psychotic parents (Anthony, 1986);

children who witness parental murder (Malmquist,

1986); concentration camp-like experiences in Cambodia

(Kinzie, Sack, Angell, Manson, & Rath, 1986); and

severe flooding in rural Missouri (Earls, Smith,

Reich, & Jung, 1987). All of these accounts found

significant emotional and behavioral upset in the
affected children, sometimes even years after the
traumatic experience (Kinzie, Sack, Angell, Manson, &
Rath, 1986; Krystal, 1978; Terr, 1983; 1988;
Wallerstein, 1984; 1985, 1987).

The area of children's reactions to stressful
experiences that has received the most focus is that
of children's reactions to hospitalization and
surgery. A number of reviews of this literature have
been compiled (e.g., Hunsberger, Love, & Byrne, 1984;
Lewandowski & Baranoski, 1988; Melamed, Klingman, &
Siegel, 1984; Rutter, 1981; Thompson, 1985; Vernon,
Foley, Sipowitz, & Schulman, 1965). Other stressors
that have been investigated in terms of their effect
on children are parental separation and divorce
(Kalter, 1987; Kelly & Wallerstein, 1976; Wallerstein,
1979; 1983; 1984; 1985; 1987; Wallerstein & Kelly,
1975) and severe illness of other family members
(Kaplan, Grobstein, & Smith, 1976).

From the above studies, some of the most
commonly-observed responses of children to severe
stresses have been observed to be: sleep disorders
(e.g., difficulty falling asleep, fear of sleeping
alone, nightmares, night terrors); regressive
behaviors (e.g., thumb-sucking, eneuresis, clinging,
fear of being separated from parents--depending on the
age of the child); hyperalertness and tendency to

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easily startle; persistent thoughts of the trauma
("troubling and intrusive imagery"); belief/fear that
another traumatic event will occur; avidance of any
stimulus or situation symbolic of the event; fear of
death; misidentification of perpetrators and/or
hallucinations of perpetrators; conduct disturbances;
increased nervous tension; withdrawal; depression;
difficulty concentrating; lowered school performance;
somatic symptoms; increased vulnerability to further
stresses; a modified sense of reality. Children often
do not experience the psychic numbing or traumatic
amnesia that is common in adults (Terr, 1979, 1981)
instead, in children withdrawal into uncustomary
behavior patterns is often seen (Frederick, 1985).

Additional long-term effects have also been
identified such as: pessimism about the future,
belief in omens and prediction, memories of incorrect
perceptions, thought suppression, shame, fear of re-
experiencing traumatic anxiety, trauma-specific and
mundane fears, posttraumatic play, behavioral
reenactment, repetitions of psychophysiological
disturbances that began with the traumatic event,
repeated nightmares, and dreams of personal death
(Terr, 1983). Kinzie, Sack, Angell, Manson, & Rath
(1986) found evidence of mild but prolonged depressive
symptoms and symptoms of posttraumatic stress disorder
years after the traumatic experience. A study seven

months after the Mount St. Helens volcano showed that for both children and adults: domestic violence increased 46%, stress-aggravated illess increased 198%, the monthly average of mental cases incresed 236% and psychosomatic illnesses increased 219%. Additionally, among children, the following increases occurred: increases of 2 1/2% in juvenile criminal bookings, 24% in vandalism/malicious mischief, and 10% in disorderly conduct.

<u>Post-traumatic Stress Syndrome</u>

Post-traumatic stress syndrome or disorder has been receiving increased attention in recent years (Breslau & Davis, 1987; Brett & Ostroff, 1985; Burstein, 1985; Emery & Emery, 1985; Eth & Pynoos, 1985; Green, Lindy, & Grace, 1985; Mendelson, 1987; van der Kolk, Greenberg, Boyd, & Krystal, 1985, Visintainer, in press). It is clear from the above description of children's responses to stresses that children often do meet the criteria for post-traumatic stress disorder (PTSD) as described in the <u>Diagnostic and Statistical Manual of Mental Disorders-Revised</u> (DSM-III-R)(American Psychiatric Association, 1987). The essential feature of this disorder is the development of characteristic symptoms after the person has experienced an event that is outside of the range of usual human experience and would be markedly distressing to almost anyone. The characteristic

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symptoms involve re-experiencing the traumatic event

(e.g., through recurrent distressing recollections or

dreams, repetitive play which incorporates some aspect

of the event), avoidance of stimuli associated with

the event or a numbing of general responsiveness (e.g.

psychogenic amnesia, diminished interest in

significant activities, feelings of detachment,

restricted range of affect), and increased arousal

(e.g., difficulty falling or staying asleep,

hypervigilance, exaggerated startle response).

(American Psychiatric Association, 1987).

It was not until the third version of the

American Psychiatric Association's Diagnostic and

Statistical Manual of Mental Disorders (DSM-III) that

PTSD was recognized as a clinical entity. Earlier

versions of the DSM and the International

classification did recognize some clinical and

conceptual precursors to this diagnosis but tended to

view stress disorders as acute, time-limited phenomena

which diminish over time unless the individual has

some preexisting characterological disturbance which

would contribute to symptom maintenance (Green, Lindy,

& Grace, 1985). For example, DSM-I listed a diagnosis

termed "gross stress reaction" which was thought to

decrease rather rapidly unless maintained by

preexisting personality traits. A diagnosis called

"transient situational disturbance" or "anxiety

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neurosis" was Included In DSM-II which again gave the impression that by nature stress responses were translent unless something else was wrong with the person. Thus, that severely traumatic events might have prolonged psychological consequences in a previously "normal" individual exposed to extreme stress is a relatively recent conceptualization (Green, Lindy, & Grace, 1985).

PTSD, by its very name, which includes the word "disorder", and by the fact that it is included in a manual of disorders is usually viewed as something abnormal, that is wrong with a person. However, not everyone views the syndrome in this way. Visintainer (in press) makes a cogent argument for the response syndrome being instead "a normal response to a deviant environment". She contends that post-traumatic stress disorder is actually a mis-classification of an adaptive response to environmental demands. She notes that "These demands--traumatic events--are those for which the victims are unprepared and lacking in effective coping strategies. These events cause disorganization and helplessness. The syndrome is a three-phase adaptive response that leads to reorganization, a re-establishment of coping strategies, and dissipation of the helplessness" (p. 53). The above dsicussion of PTSD as well as the discussion of the Horowitz model that follows both

point to further evidence for the cognitive mediation of an individual's reaction to stressful and traumatic experiences.

The Stress Response Syndromes Model

The Horowitz model of stress response syndromes (Horowitz, 1973; 1974; 1976) has been conceptualized as a useful way of conceptualizing the natural history of PTSD and the processing of the stressful experience (Green, Lindy, & Grace, 1985). His description also entails a nonpathological response process to a traumatic event and implies cyclicity of the symptoms. Horowitz has conceptualized trauma as a stress on the individual's information processing system; it is new information that the individual must integrate into his/her preexisting view of self, others, and the world. He contends that a traumatic event continues to be stressful because it is outside of the realm of the individual's experience. Because of this the individual is unable to process the meaning of the event(s) in his/her cognitive schema of the world. He views the intrusions (flashbacks, nightmares, etc.) as important representations of the event in the person's memory which break through repeatedly because there is a need for the cognitive structure to assimilate them. In his model the numbing symptoms are seen as a defense against the intrusions and serve to slow down cognitive processing and reduce the anxiety

asssociated with the intrusions. Thus his model discusses oscillations between intrusions and avoidance. He notes that the intrusive representations may be gradually processed and assimilated over time, at the pace that the cognitive structures are able to deal with them until the experiences are finally integrated into the person's view of himor herself and the world. Pathology reuslts when this pattern of intrusion/avoidance is prolonged, blocked, or exceeds a tolerable quality.

Coping Toward Mastery

Coping has been defined as "the person's constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the person's resources" (Folkman, Lazarus, Dunkel-Schetter, De Longis, & Gruen, 1986, p.993; Lazarus & Folkman, 1984). As in the above description, most of the major views on coping in humans have concerned themselves with alterations in behavior as well as some type of cognitive component (e.g., Abramson, Seligman, & Teasdale, 1978; Coelho, Hamburg, & Adams, 1974; Hamburg, 1974; Hamburg, Elliott, & Parron, 1982; Levine, Weinberg, & Ursin, 1978; Pearlin & Schooler, 1978; Vitosky, Hamburg, Goss, & Lebovitz, 1961). Coping in children has been less well studied (Garmezy & Rutter, 1983; Murphy, 1962; Murphy & Moriarty, 1976;

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Rutter, 1981; Werner & Smith, 1982) than coping in adults but again, given the limited information available, both behavioral and cognitive components seem to be important.

It has been noted that an individual "is presumed to be coping if his behavior consists of responses to environmental factors that help him master the situation" (Levine, Weinberg, & Ursin, 1978, p. 7). And indeed, the concept of mastery is, in essence, the basis of the concept of coping (Caplan, 1981; Levine, Weinberg, & Ursin, 1978, Solnit, 1979, White, 1974). Caplan (1981) describes mastery as a particular type of behavior in response to stress that "1) results in reducing to tolerable limits physiological and psychological manifestations of emotional arousal during and shortly after the stressful event and also 2) mobilizes the individual's internal and external resources and develops new capabilities in him that lead to his changing his environment or his relation to it, so that he reduces the threat or finds alternate sources of satisfaction for what is lost" (White, 1974, p. 413).

However, mastery is more than just a set of behaviors, it is a state of being. Mastery of a major stressor is achieved when the individual's coping efforts have enabled him/her to integrate the changed circumstances in a way that equilibrium is once more

restored, at a functional level (cognitive and behavioral) at or above that which existed before the trauma.

Mastery and Victimization

One definition of "victim" might be taken from the DSM-III-R criteria for PTSD; that is, an individual who has experienced a stressor that would evoke significant symptoms of distress in anyone, a stressor that is "outside the range of usual human experience". It is important to remember that for children, many events and situations that would not seem terribly unusual to adults are novel and can be very frightening and disorganizing. Breslau and Davis (1987) point out the complex differential effects even "ordinary" stressors can have upon individuals, noting that charcteristics of the person experiencing the event in large part determine the response. Thus, in assessing situations that may lead to a feeling of victimization and/or PTSD in children, a criterion of "outside of the range of usual childhood experience" should be utilized.

Janoff-Bulman and Frieze (1983) have noted that the posttraumatic stress suffered by victims of traumatic events is attibutable in large part to the shattering of very basic assumptions they have held about the world. They further have stated that coping with the victimization felt by one who has experienced

a traumatic event includes coming to terms with
shattered assumptions; the individual's view of self
and of the world have been called into serious
question and the assumptions that have enabled the
person to function effectively until the point of the
trauma are no longer able to serve as guides for
behavior. They add that: "The state of
disequilibrium that results is marked by intense
stress and anxiety. The coping process involves
re-establishing a conceptual system that will allow
the victim to once again function effectively; the
parts of the conceptual system that have been shaken
will have to be rebuilt. Thus the coping process will
involve coming to terms with a world in which bad
things can and do happen to oneself. While the victim
is not apt to ever again view him or herself as
entirely invulnerable, the victim will still need to
work on establishing a view of the world as not wholly
malevolent or threatening. The victim will also face
the task of reestablishing a view of the world as
meaningful, in which events once again make sense; and
coping will involve reestablishing a positive self-
image, including self-perceptions of worth, strength,
and autonomy" (Janoff-Bulman & Frieze, 1983, p.12).

The unexpected occurrence of a major stressor
challenges a number of assumptions and expectations
that individuals hold about themselves and their world

and can lead to a sense of increased personal vulnerability. This pilot study focuses on three areas in particular, which, (as identified in the quote above) seem to be most affected, i.e., the individual's: (1) view of the world as safe and secure (2) view of the world as just and controllable, and (3) self-concept. (adapted from Janoff-Bulman & Frieze, 1983). These three areas are, for the purposes of this study, viewed as the major determinants of cognitive mastery of stressful events and thus were the three areas addressed by the Children's Cognitive Mastery Scale (CCMS), the tool tested in this pilot study. Janoff-Bulman (in press) has revised and expanded this three category model since the development of this study. The implications of these revisions for the future development of the tool that was tested in this pilot study will be discussed in Chapter 4.

Although this basic framework for viewing an individual's response to traumatic events and resultant sense of personal vulnerability has been developed and tested through studies with adult subjects (Janoff-Bulman & Frieze, 1983), these three areas also seem to be important in assessing children's responses to such events. Because the level of a child's cognitive development and extent and variety of life experience differ from those of

adults, however, the operationalization of these three areas and the assumptions associated with them will be somewhat different in children.

View of the World as Safe and Secure

In the course of day-to-day functioning, adults operate on the basis of an illusion or myth of invulnerability (Janoff-Bulman & Frieze, 1983; Perloff, 1983;). Although we know traumatic events happen, we simultaneously "believe" that "it can't happen to me". Children, on the other hand, tend in general not to view themselves as invulnerable. Their myth is more likely that their "all powerful" adult caretakers, usually their parents, will be able to protect them or that they will be protected in some magical way, e.g. magical rituals.

In early school-age children, magical thinking, an egocentric view of the world, and transductive reasoning (associating two events that occur at the same time) combined with a developing imagination sometimes make it difficult for the child to differentiate reality from fantasy (Flavell, 1963; Phillips, 1975). Thus, the potential for misunderstanding is increased and the child may feel vulnerable to a host of imagined threats--most of which can be held "at bay" by their overall trust in the protection of their parents (e.g., "If ghosts make

me afraid in my room, I'll go sleep with mommy and daddy and I'll be safe there.").

At around age seven, the child enters the cognitive period of concrete operations and, although still functioning very much in the present and at a concrete level, the child begins to be able to use deductive reasoning and logical thought (Flavell, 1963; Phillips, 1975). This increased cognitive ability combined with greater life experience allows the older child to have more ideas about what could happen and to better understand possible (or actual) negative consequences of traumatic events. This is a time of magical rituals, however, that help the child cope and give him/her a sense of security and control, e.g., crossing fingers, "step on a crack, break your mother's back", etc. (Waechter & Blake, 1976). Enhanced feelings of vulnerability result when the child learns that the "magic" is not strong enough to protect him or her and neither are his/her parents.

Sandler (1960) has ascribed the psychological "righting" mechanism that restores equilibrium after a major disruption to a specialized ego function that is responsible for generating a sense of safety and freedom from apprehension under normal circumstances. He notes that the child gradually develops his/her own "code of safety" but that until this developing code is reliable, the child's security is buttressed by the

adult caretakers. After a major traumatic event,
however, there is a striking decrease in the child's
sense of safety, increased feelings of vulnerability,
and a heightening of attachment behavior, increased
use of transitional objects or activities, and a
search for cover and support (Anthony, 1986).

Thus, one area that was assessed in the CCMS was
the child's view of the world as potentially
threatening or as generally good and safe; a world in
which the child is able to count on supportive adults
who are able to protect and shield him or her from
negative events or consquences--or a world in which
adults are not there when the child needs them or
cannot be counted on for protection.

View of the World as Just and Controllable

Janoff-Bulman and Frieze (1983) point out that
our view of the world as optimally benign comes from
our sense that the world is just and controllable and
that it is also the view that what happens to us is
somehow controllable that allows us to "make sense" of
our world (Seligman, 1975). Lerner's just world
theory (1970; 1980) states that we tend to believe
that people get what they deserve and deserve what
they get and thus it is problematic when we experience
events that are counter to our expectations. As noted
earlier, less work in these areas has been conducted

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In children but these views also seem to fit with developmental theory and some work that has been done in this area.

Some remnants of magical thinking are still present in school-age children, paticularly younger ones, and the perception of control, that they were responsible in some way for the terrible thing that has happened can be very frightening. Still, the perception of control granted them through their magical cognitions, e.g., the magical rituals mentioned above, can be very reassuring to children as are other ways in which they can perceive order and predictability in the world. Gunnar (1980; Gunnar-Vongnechten, 1978) has identified the positive effects of control in decreasing the distress of infants exposed to a frightening stimulus, thus demonstrating that the reassuring effects of perceived control start at an early age. Again, although the child does not always feel that he or she has the ability to control events and situations, it is important for the child to believe that someone, i.e., adults, can control things.

Concepts of justice and morality are still developing in the school-age period. Early school-age children tend to believe that rules are unalterable and imposed from above (Piaget, 1965). They learn to judge the rightness or wrongness of an act by its

consequences, rewards, or punishment rather than by its motives (Brazelton, Holder, & Talbot, 1953). They see behavior as either totally right or totally wrong and believe everyone else sees it that way too. Thus, children of 6 or 7 years are still likely to interpret accidents or other misfortunes as punishments for misdeeds (Whalley & Wong, 1983).

Older school-age children no longer view rules as rigid and unchangeable, but understand that rules are sometimes flexible or changeable based on specific circumstances (Piaget, 1965). They no longer judge an act solely on its consequences but are able to take into account the motivation and intentions behind an act and the context in which it appears. It is not until adolescence or later, however, that they will be able to view the morality of a situation on an abstract basis with sound reasoning and principled thinking (Whalley & Wong, 1983) but are still tied to concrete, here and now data and experiences (Flavell, 1977). It is likely that the view that people tend to get their "just desserts" continues operative in this period as it has been found to continue on into adulthood.

Self-concept

If children believe that if something bad happens they are being punished and therefore they must be

bad, it follows that they will have a lowered self-concept. Emery and Emery (1985) state that the regulation of self-esteem is "primarily affected by the subjective experience of the individual in its dealings with external reality" (p.546). The experience of a an unexpected, unwanted and seemingly unfair traumatic event calls into question an individual's self-perception as competent and "good". A number of investigators have discussed the negative effects on self-perception that follow a victimizing experience (Coates & Winston, 1983; Horowitz, Wilner, Marmar, & Krupnick, 1980; Janoff-Bulman & Frieze, 1983; Krupnick, 1980; Peterson & Seligman, 1983)

Need for a New Measure

Although recent work has been conducted attempting to develop a tool to measure psychological responses of adults to major stressful events (Janoff-Bulman, in press), no such tool currently exists for children. One purpose of this study was to develop and begin to test a tool designed to assess cognitive mastery of major stressful events in children utilizing the three-factor framework just discussed.

The particular vulnerability of children to stressful events in their lives has been alluded to previously. Indeed, early events may, either directly or tranactionally, alter a child's course of subsequent development (Rutter, 1981). Thus, the

Impact of early events may be more pervasive than
similar events occuring during adulthood. "Coping and
adaptational skills are also developing during these
periods, changing the effects which events exert on
individual functioning" (Compas, 1987, p. 276).
Because of these facts, childhood and adolescence have
been identified as critical target periods for
prevention programs designed to enhance coping skills
and reduce the negative effects of certain events
(Compas, 1987; Segal, 1983).

As noted earlier, children often respond to
stressful experiences with changes in their behavior.
Once their behavior returns to a pre-stressful-event
level, the child has often been viewed as having
resolved his or her upset. This study hypothesizes
that, although a child may be able to resolve upset to
the point that behavioral functioning is restored,
longer-lasting cognitive changes that are not
immediately apparent but that may play an important
role in the child's life may still be present. Having
a negative view of the world and of oneself may
influence a child's development and long-term outlook
and functioning ability. If in the future we are able
to identify children who are most at risk after
stressful life experiences of developing a view of the
world as threatening, unsafe, punishing, and
uncontrollable and therefore of developing a negative

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view of themselves, then we might be able to develop
interventions to help these children learn to feel
safe, in control, and good about themselves once more.
This study is one initial step in that direction.

Other Variables that May Affect
Children's Responses to Major Stress

A second purpose of this study is to begin to
identify some of the influences various child and
family variables have on a child's response and
ultimate mastery of stressful events. A review of
research findings to date indicates that there is
substantial individual variation in the responses of
children to stressful life events (Compas, 1987).
While the above discussion has focused on children's
responses to traumatic events, it is important to also
consider possible mitigating variables that will
influence the child's response and the outcome. Such
variables have been termed "protective factors"
(Rutter, 1979; 1983) and have been noted to provide
resistance to risk and to foster outcomes marked by
patterns of adaptation and competence (Garmezy, 1983).
While a discussion of a number of important variables
will be presented here, it is important to note that
due to the necessarily limited nature of this current
pilot study, only a few of these variables were
actually examined in this current project. Future
studies will test these variables further.

Social Support

Social support has been defined as "information leading the subject to believe that he is cared for and loved, esteemed, and a member of a network of mutual obligations" (Cobb, 1976). Shonkoff (1985, p. 550) further states that "its essence is focused on the availability of meaningful and enduring relationships that provide nurturance, security, and a sense of interpersonal commitment". The importance of social support as a mediating variable in the coping process has been recognized in work with adults (Cobb, 1976; Cohen, Sherrod, & Clark, 1986; Thoits, 1982; 1986) as well as with children (Haggerty, 1980; Shonkoff, 1984; 1985). The importance of parental/family support in relation to children has been discussed earlier, but bears emphasis as this factor is so important in a child's response to stress.

Attributional Style

Seligman and his colleagues (Abramson, Seligman, Teasdale, 1978; Seligman, 1978) through their work with animal models and later with adults, postulated a learned cognitive attribution style they termed "learned helplessness". Dweck and her co-workers (Dweck & Bush, 1976; Dweck, Davidson, Nelson, & Enna, 1978) further investigated some aspects of this phenomenon with children. This style varies on the

dimensions of the extent to which people anticipate positive outcomes, on the extent to which they perceive the outcomes as within or outside their control, and on the extent to which failure is attributed to unalterable faults in themselves rather than to behaviors which they can modify or to external factors which may change (Rutter, 1981). Attributions of outcomes are viewed as existing on three dimensions: internal-external, stable-unstable, and global-specific. Attributions of failures to factors that are global, internal, and stable (i.e., uncontrollable) predispose the individual to the symptoms of learned helplessness (Abramson, Seligman, & Teasdale, 1978). Attributional style is viewed as influencing the child's interpretation of the traumatic event. Additionally, it is proposed that the child's view of his or her self-competence after having coped with a traumatic event will in turn affect the child's attributions to future events.

Sex

A number of studies have reported sex differences in the ways children respond to stressful events (Rutter, 1970; 1981). Dweck and her co-workers have investigated sex differences in the learned helplessness response pattern to stress (Dweck & Bush, 1976; Dweck, Davidson, Nelson, & Enna, 1978). In a study of fifth graders ten months after a major

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blizzard and flood, girls demonstrated higher
emotional distress compared to boys (Burke, Moccia,
Borus, & Burns, 1986). In a prior study of younger
children five months after the same disaster, these
authors found that boys had higher anxiety ratings
compared to their pre-disaster scores and girls had
lower ratings. A similar sex difference was found in
a study of fifth and sixth-grade Israeli children
studied two months after the 1973 Yom Kippar War
(Milgram & Milgram, 1976). Heatherington, Cox, & Cox
(1979) showed that distress was more enduring and
intense for preschool boys after their parents'
divorce. After a crane struck a school pedestrian
overpass, boys were distinguishable from girls in
taking a longer time to recover and in showing a
higher frequency of sleep disturbances, fighting and
fears while girls showed more startle reactions to
noise, asked many questions and thought frequently
about the accident (Blom, 1986). Although the
mechanisms and types of response difference have not
been fully explained, sex differences in children's
response to major stresses do seem to exist.

Age and Cognitive Ability

The effects of age and cognitive ability on
response to stressful events are less clear. Age has
been found to influence response in some studies of
children in stressful situations (Blom, 1986; Wolfer &

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Visintainer, 1975; Visintainer & Wolfer, 1979) while

not in others (Terr, 1983). Maccoby (1983) suggests

that there is unlikely to be any linear increase or

decease with age in vulnerability to stress. She

notes that the younger child is more vulnerable

because more situations are unfamiliar and they are

lacking in a wide number of coping skills. However,

to counterbalance this greater vulnerability, she

notes that individuals cannot be upset by "events

whose power we do not understand; we cannot be

humiliated by failure to handle problems whose

solutions are someone else's responsibility; we cannot

be distressed by anticipating others' contemptuous or

critical reactions to our weaknesses if we are not

aware of others' probable reactions and if our egos

are not yet invested in appearing strong and

competent" (p. 219). Older children have more life

experience and a greater repertoire of coping skills

but also greater cognitive ability to understand

possible consequences and to fall prey to all of the

difficulties mentioned in the above quote.

Cummulative Effect of Stresses

      After an extensive review of the literature on

stress and life events occuring during childhood and

adolescence, Compas (1987) has concluded that the data

indicate that there is a relationship between

stressful life events and adjustment in children and

adolescents. He notes that "specifically, the frequency of negative life events and/or total life events is positively related to levels of psychological and physical dysfunction" (Compas, 1987, p. 284). He adds that when a comparison is made between the association of symptoms or behavior problems with total life events as opposed to negative events, the correlations obtained are usually higher with the negative events. This finding that negative events seem to be more stongly related to distress in children than life events or changes, per se, is consistent with findings from similar studies of adults (Compas, 1987). There is also evidence that it is not just the number of stressful experiences, but how the stresses were viewed and coped with at the time and whether the result was succesful adaptation (mastery) or "humiliating failure" that determine long-term outcome (Rutter, 1981).

Depression

Depression is also likely to be a common response pattern after major stresses. It is included in this study as a validity check on the mastery tool. Although one might expect some correlation between depression and mastery, a very strong correlation might suggest that the two tools are measuring the same construct.

Research Questions

This study will address two main questions: (I.) Is the Child Cognitive Mastery Scale a valid and reliable measure of cognitive mastery? and (II.) To what extent do certain child variables influence mastery of a traumatic event?

(I.) <u>Is the Child Cognitive Mastery Scale a valid and reliable measure of cognitive mastery</u>?

(A.) Test-retest reliability will be assessed using $r = .60$ as criterion. Internal consistency will be assessed in later studies once the sample is large enough to permit a valid factor analysis.

(B.) The CCMS will be considered to have evidence of discriminant validity if:

(1.) There are significant and meaningful negative correlations between number and negativity of life events and mastery scores.

(2.) Children with more recent negative life events show lower mastery scores than children whose negative life events occurred more in the past.

(3.) There is a significant positive correlation between mastery scores and school performance.

(4.) There are significant correlations between mastery scores and the scores on the Child Behavior Checklist (i.e., the higher the mastery

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scores, the less the behavior problems and the higher the social competence).

(C.)   The CCMS will be considered to have beginning evidence of construct validity if:

(1.)   There is no (or low) significant correlation between scores on the Children's Depression Inventory and the CCMS.

(II.)   <u>To what extent do child variables determine mastery of a traumatic event</u>?

(A.)   What is the relationship between mastery and selected child variables:

(1.)   What is the relationship between age and mastery?

(2.)   What is the relationship between sex and mastery?

Studies in the future will examine the relationships between mastery and cognitive level, attibutional style, and degree of family support. They will also explore the question of whether combinations of variables will be better predictors of mastery scores than any of the variables individually.

CHAPTER 2

THE METHODOLOGY

Sample Criteria

The sample for this study consisted of children aged 6 to 11 and their parents. After proper approval from school officials was obtained, children and parents were recruited from an elementary school in West Haven, Connecticut. All of the children were English-speaking and were recruited from ten regular classrooms, two classrooms each, of grades one through five. Approximately 250 study cover letters and informed consent forms were sent home asking parents to consent to participate and to allow their children to participate. A cover letter from the school principal was also attached to let the parents know that this study had been approved by the proper school officials (See Appendix A for all three forms). Parents were asked to return the informed consent forms whether they agreed to participate or not, having marked the appropriate "agree" or "disagree" space. Reminder notices were sent home with the children approximately one week after the parents had received the cover letter and consent forms encouraging those who had not yet returned the forms to do so.

The sample for this pilot study was, therefore, a convenience sample. The children, having been volunteered by their parents, were asked if they wished to participate before they left their classroom.

The Setting

This study was conducted at Forest Elementary School in West Haven, Connecticut. At the time of the study, this school had an enrollment of 627 students. A racial breakdown of these students noted that 391 students were Caucasion, 181 were Black, 31 were Hispanic, 23 were of Asian origins, and 2 were American Indians. This breakdown yields a total of 37.8 minority students and 62.2 white students. Although precise figures on socio-economic status of the students was not available, estimates by a knowledgeable school administrator were that approximately 10% of the student body came from families on welfare, approximately 10% of the students came from upper middle class families, and the remaining approximately 80% likely came from a low-middle range of income.

The physical structure was of a clean, modern, spacious building with a large cafeteria, a good-sized gymnasium, separate rooms for art, music, and band classes, and brightly-colored bulletin boards exhibiting student work lining all of the halls and

classrooms. The teachers utilized a team-teaching model in which children moved from room to room for various subjects while also having a "home base" in their homerooms. Clear rules were consistently enforced by a very involved and enthusiastic principal and teaching staff, and student and teacher morale was reported and observed to be high.

Although each grade was taught in four or five classrooms, only two classrooms per grade were utilized for this pilot study. The two classrooms in each grade were selected by the school principal. Class sizes were approximately 20 to 25 students. Cooperation during this pilot study among the teachers and other school personnel, e.g., principal, secretaries, was excellent.

Instruments

This section will discuss the various instruments that were utilized to measure the various parameters of interest. Mothers of children included in this study were asked to complete the Child Behavior Checklist and the Child Life Events Checklist. Children were asked to repond to the Children's Cognitive Mastery Scale and the Children's Depression Inventory, while teachers were asked to fill out the School Achievement Form. Each of these tools will now be described in turn followed by detailed descriptions of how the data from each were obtained.

<u>Child</u> <u>Behavior</u> <u>Checklist</u> (<u>CBCL</u>)

The CBCL (Achenbach & Edelbrock, 1978; 1981;
1983) is designed to obtain parents' descriptions of
their children's behavior problems and competencies in
a standardized format and has become a very popular
research tool in recent studies that require a measure
of child behavior. It can be utilized for children
aged 4 through 16. The CBCL instructions ask the
parent to consider their child's behavior during the
last six months and to utilize a three-point scale
(i.e., not true, sometimes or sometimes true, and very
true or often true) to rate 118 behaviors. The
Checklist also includes 20 items designed to measure
social competence from parents' reports of their
child's participation in sports, hobbies, games,
activities, organizations, jobs, chores, and
friendships; how well the child gets along with others
and plays and works by himself/herself; and school
functioning. The CBCL can be read by individuals
whose reading skills are at a fifth grade level or
above and takes approximately 15-17 minutes to
complete.

The eight Behavior Problem Scales and the three
Social Competence Scales were empirically derived
using a principal components (factor) analysis of the
118 behavior items and the 20 social competence items,
respectively. Once scored, the results can be viewed

on the Child Behavior Profile which demonstrates norms

for children aged 4 to 16. A Total Behavior Problem

score can be obtained by adding the 0, 1, or 2 parents

ratings on the 118 behavior problems and a total

social competence score can be obtained by summing the

raw scores on the social competence scales. Two

overall factors: Internalizing and Externalizing were

also empirically derived from the behavior items.

Reliability of the CBCL was determined in several

ways. The investigators (Achenbach & Edelbrock, 1983)

computed intraclass correlation coefficients (ICC)

from one-way analyses of variance (Bartko, 1976) to

assess various types of reliability. The test

constructors note that the ICC, when computed in this

way, "reflects the proportion of total variance in

item scores that is associated with differences among

the items themselves, after the variance due to a

specific source of unreliability has been subtracted"

(Achenbach and Edelbrock, 1983, p. 40.). They further

note that the ICC can be affected both by differences

in the rank ordering of the correlated scores as well

as differences in their magnitude as opposed to more

commonly utilized correlational indices of reliability

such as the Pearson correlation which reflect mainly

differences in rank ordering. Thus, they viewed this

method as more appropriate to an evaluation of their

Checklist.

Test-retest reliabilities were computed from CBCL scores of nonreferred children obtained from mothers by a single interviewer one week apart. The overall ICC was .952 for the 118 behavior problems and .996 for the 20 social competence items (N = 72; both p < .001). For scale scores, total problem, and competence scores, the median Pearson correlation for 1-week retest of mother's ratings was .89. The ICC for 3-month stability of 12 mother's ratings of individual items collected on another sample were .838 for behavior problems and .974 for social competence (both p < .001) (Achenbach & Edelbrock, 1983).

Interparent agreement was computed from CBCL's independently completed by mothers and fathers of 168 children being evaluated in mental health settings with the median Pearson correlation found to be .66. The overall ICC for the behavior problems was .985 and .978 for the social competence items (both p < .001) (Achenbach & Edelbrock, 1983). Although the differences between parents' rating were small, when they did occur, they were viewed as being clinically significant. Thus, in an effort not to introduce an additional possible source of variation in this pilot study, it was decided to limit responders to mothers.

To assess inter-interviewer reliability of the item scores, the investigators compared the scores that were obtained by three interviewers on 241

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matched triads of children (total N = 723). They found the overall ICC for the 118 behavior problems to be .959 and the the ICC for the 20 social competence items to be .927 (both p < .001).

In terms of content validity, the investigators found that 116 of the 118 behavior problem items and all 20 of the social competence items were significantly (p < .01) associated with clinical status as determined independently of the CBCL. Criterion-related validity using referral for mental health services as the criterion was demonstrated by significant differences (p < .001) between demographically-matched referred and nonreferred children on all Profile scores for all sex/age groups. Significant correlations with other behavior rating scales, i.e., the Conners (1973) Parent Questionnaire and the Quay-Peterson (1983) Revised Behavior Problem Checklist, and empirically-derived syndromes (e.g., psychiatric disorders according to Reserach Diagnostic Criteria), provide evidence for the scales's construct validity (Achenbach & Edelbrock, 1983).

Child Life Events Checklist (CLEC)

Johnson and McCutcheon (1980) have developed a life events scale for use with children and adolescents that was revised for use in this pilot study (See Appendix B). The scale as adapted for this study contains 43 events. Included in the scale are

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seemingly positive events, such as making the honor
roll or getting a new pet, seemingly negative events,
such as the death of a family member or trouble with
teacher, as well as events that may be viewed very
differently by different children, such as getting a
new brother or sister or a parent getting a new job.
Also included in the revision of this scale was a
place for the parents to indicate when the event
occurred in the child's life (i.e., if the event
occurred in the past year or previous to one year ago)
and a five-point rating scale to indicate how the
parent believes the child was affected by the event
(i.e., very positively affected to very negatively
affected).

Because test-retest reliability data were not
found for this tool, the investigator conducted a
small test-retest reliability study. A convenience
sample of four mothers of six children were asked to
complete the CLSC and then were asked to fill it out
again one week later. Their test-retest percentages
of agreement were .84 for identification of events.
Internal consistency reliability is not appropriate to
assess in this type of tool as many of the events
would not be expected to occur contemporaneously
(Compas, 1987).

<u>Teacher</u> <u>Form</u>

School achievement and behavior in school was
assessed by means of a short questionnaire that was
completed by the child's teacher. This Teacher Form
was developed for this study and used Likert scales to
gain information regarding: (a.) each child's school
performance (ratings from well below average to well
above average), (b.) the extent to which each child
seemed to be working to his/her expected abilities
(well below expected to well above expected), (c.)
the child's behavior in the classroom (very disruptive
to very well-behaved), and (d.) a description of the
child in the classroom (very withdrawn to very out-
going). This form took only a couple of minutes to
complete (See Appendix C).

<u>Children's</u> <u>Depression</u> <u>Inventory</u> (<u>CDI</u>)

The CDI (Kovacs, 1980/1981) is the most widely
cited self-report measure of childhood depression
(Kazdin, 1981). It is a downward extension of the
Beck Depression Inventory for adults and is a 27-item
self-report paper and pencil measure designed on a
first grade reading level for school-age children and
adults. On each of the items, the child is asked to
choose the one of three descriptions that best applies
to him or her during the last two weeks (e.g., "I am
sad once in a while; I am sad many times; I am sad all
the time"). Responses are scored on a 0-2 scale with

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O denoting the absence of the symptom and 2
representing the severe form of a depressive symptom.

Friedman and Butler (1979) in a study of 875
Canadian children reported acceptable internal
consistency (coefficient alpha = .86) and
statistically significant item total score
correlations ranging from .31 to .54. No discernable
sex or age differences were noted in this study.
Test-retest assessed over a one-month interval
indicated that the CDI is a reasonably stable measure
(r=.72; N = 28). Kazdin (1981) reported additional
data on internal consistency for both clinic and
nonpsychiatric samples and inter-item and item-total
score correlations that were moderate but
statistically significant.

Concurrent validity was found to be acceptable in
several studies (Friedman & Butler, 1979; Hodges,
McKnew, Cytryn, Stern, & Kline, 1982; Kovacs, 1983;
Kovacs & Beck, 1977) as was discriminant validity
(Carlson & Cantwell, 1980; Kovacs, 1983). It is
sensitive to changes in depression over time and is
also an acceptable index of the severity of the
depression (Kovacs, 1983). (See Appendix D).

Procedure

The procedure for this pilot study took place in
two parts. First, the initial development of the
Child Cognitive Mastery Scale (CCMS) will be

discussed. Second, the procedure for data collection
for the first major trial of the CCMS will be
described.

Development of the Child Cognitive Mastery Scale (CCMS)

The CCMS consists of 22 items or situations
designed to assess the child's cognitive mastery of
stress in the three previously-identified domains:
safety and security, just and controllable world, and
self-concept. (See Appendix E) Each item consists of
an initial brief verbal description of a situation
depicted in an initial "cartoon" picture and then two
short verbal descriptions of two possible outcomes to
the situation, each of which is also depicted in a
picture. The child is asked to indicate which of the
two stated outcomes would probably come next after the
initial picture, i.e., the child is asked to make a
forced-choice response. As in projective testing, the
assumption was made that the child's responses would
be indications of how he or she views the world and
him/herself.

The initial stages of development focused on
identifying situations that served as the basis for
the items on the scale. These situations were
reviewed by five psychologists for wording, structure,
parallelism, and appropriateness of the choice of
outcomes given the developmental stages of the

children being studied. Appropriate wording and content changes were made based on their feedback.

Because this is an initial pilot study, the total sample size was not large enough to validly conduct a factor analysis to determine whether the items actually do fall into the hypothesized domains or factors. Therefore, in order to facilitate initial analysis of the tool, the expert opinions of five professionals in various disciplines (i.e., one clinical psychologist, one psychiatric clinical nurse specialist, two psychology interns, and one pediatrician) were utilized. Each professional was asked to evaluate each situation and classify each according to which of the three identified domains it most taps, safe and secure world, just and controllable world, or self-concept. That is, each was asked to made "educated guesses" regarding on which of the hypothesized factors each situation was most likely to most highly load. The results of these ratings will be presented in the Results section of this report.

An artist was utilized to draw appropriate pictures for each situation. Initial drafts of the pictures were reviewed by the investigator as well as two clinical psychologists who work with children and revisions were made to promote clarity of the depiction of each situation and each possible outcome

and to remove any potential distractors. Once the situations and pictures were believed by the investigator to be clear and appropriate, the next step was begun, testing the tool with children.

Data Collection From the Children

The prinicipal of the school introduced the investigator to each of the ten teachers whose classrooms were involved in the study. Testing of the children occurred during regular school hours. The timing of the removal of each child from classes or activites was determined by each teacher, the investigator seeking to remove children at the least disruptive times.

Each child was reminded of the permission forms they had taken home and of the fact that their parents had given permission for them to help out in a project as they walked with the investigator down the hall to the room being used for the study that day. They were told that what they were going to do was not a test; that it was part of a project that the investigator was doing to find out more about what children thought about different situations.

Once seated comfortably in the room, they were told the following: "I am going to show you some pictures about different situations. First I am going to show you one picture, like this one (the first card of the first situation was shown). Then, I am going

to ask you to pick which one of two possible pictures (the two choice cards were held up so that the child could see the backs of the cards that did not contain the pictures) would probably come next. There are no right or wrong answers. Children think differently about different situations so you should just pick whichever one you think would probably happen next. Like this." The child was then read the first situation and the verbal description of the two choices and asked to choose one. If the child indicated that he had understood the directions, she/he was told "That's right, you just pick whichever one you think would probably come next." If the child seemed not to understand, the directions were re-explained.

The children were also asked to identify any wording that they believed seemed difficult, unclear or confusing and to ask questions about any of situations or outcomes they were not sure about. In addition, they were asked to give their opinions on the pictures, i.e., whether anything seemed unclear, confusing, distracting, or whether anything in the pictures made it difficult for them to pick a choice.

The data-gathering on each child was carried out in one of several private areas in the school that were relatively free from distractions. Each child was seen individually and given the CCMS followed by

the Child Depression Inventory. This last measure was
read out loud to the first-graders and some of the
second graders who then themselves marked the
appropriate choice of answer. Children in grades
three through five seemed to have no trouble reading
or understanding the CDI, although they were
encouraged to ask questions if they did were not sure
of something.

Approximately four children from each of the five
grades were retested with the CCMS 7 to 10 days after
the initial test administration in order to assess
test-retest reliability. Although most of the testing
was done by the investigator, the assistance of a
graduate student in pediatric nursing was used to
collect data on some children and to assist with the
re-tests.

Data Collection From the Parents

Copies of the CBCL and the Child Life Events
Checklist were sent home with each participating child
in a large manila envelope accompanied by a cover
letter (See Appendix F). The packet also contained an
addressed, stamped envelope to facilitate return of
the completed materials to the investigator by mail.
A reminder letter was sent to those parents who had
not yet returned the forms one week after they had
been sent home with their children (See Appendix G).

Data Collection From the Teachers

Teachers were asked to provide information
regarding school achievement and behavior for each
child who participated utilizing the Teacher Form
described previously. The child's code number was
written on the Form at the top and the child's name,
grade, and room were written on an attached separate
sheet of paper. The teachers were instructed to pull
off these identifying sheets before returning the
forms to promote greater confidentiality. The
teachers returned the completed forms to the school
office where they were picked up by the investigator.

CHAPTER 3

DATA ANALYSIS AND RESULTS

Sample Obtained

The sample for this study consisted of 56

children aged 6 to 11 and their parents.   It was a

convenience sample, i.e., parents agreed to allow

their children to participate and agreed to

participate themselves.   Out of the approximately 250

children who were invited to participate, a total of

106 parents (42%) responded with returned informed

consent forms.   Sixty-two (58%) of the returned forms

were consents to participate, while forty-four (42%)

were refusals.   (Reasons for refusal were not

requested on the consent form and none of the parents

who refused permission spontaneously shared their

rationales.)   For various reasons, (e.g., child absent

on days of data collection, consent form returned too

late to include child), six children were unable to be

included in the study.   Of the 56 children included in

the study, 45 (80%) of their mothers returned the life

event and behavior questionnaires, thus, the analyses

that included data from these questionnaires were

conducted on this smaller subsample.   However, CCMS,

CDI, and school performance data were available and

utilized for the full sample and thus analyses using

these measures were done with the "participation" of

the entire 56 subjects. Both the larger sample and
the subsample will be described below.

Demographic Characteristics

The sample consisted of 29 (51.8%) girls and 27
(48.2%) boys. Despite the self-selected nature of the
sample, there were remarkably uniform representations
of boys and girls across the five grades as is
indicated in Table 1. The full sample was slightly
skewed toward the older grades with 46.6% of the
students coming from grades four and five, 34.0% from
grades one and two, and 19.9% were in the middle in
grade three.

The ages of the boys and girls in the full sample
and subsample are depicted in Table 2. It can be
noted that the full sample was fairly evenly split
between older children (i.e., nine, ten, and eleven
year-olds) younger children (i.e., six, seven, and
eight-year-olds) with 30 (53.5%) older children and 26
(46.6%) younger children. An even closer split is
evidenced in the subsample with 22 (48.1%) older
children and 23 (51.1%) younger children. The mean
age was 8.2 with a standard deviation of 1.8.

Three-quarters (75%) of the full sample was
white, approximately one-fourth (21.4%) was Black, and
two subjects (3.8%) were Malaysian and Asian-American,
respectively. This represents slightly less of a
minority representation than that of the total school

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Table 1

Crosstabulation of Sex By Grade

	Grade					
Sex	1	2	3	4	5	Totals
Girls	4	6	6	6	7	29
						51.8%
Boys	5	4	5	6	7	27
						48.2%
Totals	9	10	11	12	14	56
	16.1%	17.9%	19.9%	21.4%	25.0%	100%

Chi square = .329; p = .988

Table 2

Crosstabulations of Age By Sex of the Full Sample and
the Subsample

	Sex					
	Full Sample				Subsample	
Age	Girls	Boys	Total	Girls	Boys	Total
6	3	5	8 (14.3)	3	4	7 (15.6)
7	3	4	7 (12.5)	3	3	6 (13.3)
8	6	5	11 (19.6)	6	4	10 (22.2)
9	8	5	13 (23.2)	6	3	9 (20.0)
10	8	3	11 (19.6)	5	3	8 (17.8)
11	1	5	6 (10.7)	1	4	5 (11.1)
Totals	29	27	56	24	21	45
	(51.8)	(48.2)	(100)	(53.3)	(46.7)	(100)

population in which 62.2% of the students are white, 28.9% are Black, 3.7% are Asian-Americans, and 5.3% are of other minority backgrounds. The same relative proportions were represented across the sexes as 76% of the girls were white and 24% of minority backgrounds, while 74% of the boys were white and 35% were Black. In the subsample, 75.6% of the students were white, 20% were Black, and 4.4% were of the other minority groups stated above.

School Performance

On teachers' ratings of overall school performance, over one-half of the full sample (58.2%) were rated as performing above average (40%) or well above average (18.2%). Approximately one-third (32.7%) were appraised as performing in the average range, while 9.1% were rated in the below average (5.5%) to well below average (3.6%) range. A similar breakdown occurred in the subsample with 63.8% evaluated as performing in the above to well above average range, 29.5% in the average range, and 6.8% in the below to well below average range.

Approximately two-thirds (65.9%) of the students were viewed by their teachers as working at about the level of their expected potential abilities with 16.4% viewed as working at a level above their expected potential and 5.5% working well above their expected potential. Conversely 10.7% of the students were

believed to be working at a level below their expected potential and one student (1.8%) was seen as working well below his expected potential. Similarly, in the subsample, 65.9% were viewed as working about at an expected level in terms of their perceived abilities, with 15% viewed as working above expected levels and 9.1% viewed as working below their expected abilities.

For the most part, the students in this study were viewed by their teachers as being very well-behaved in the classroom with 40.0% of the students being rated as very well-behaved and 18.2% as quite well-behaved. About one-quarter of the group (27.3%) were rated as average in their classroom behavior while 12.7% were noted to be somewhat disruptive and one boy (1.8%) was rated as very disruptive. The same pattern holds true for the subsample in which 63.7% of the students were rated as very or quite well-behaved, 22.7% were rated as average, and 12.7% were rated as somewhat or very (the same boy) disruptive.

The last evaluation teachers were asked to make had to do with how out-going or withdrawn each student was noted as behaving. Somewhat less than half of the children (42.6%) were rated as being average in their socializing behavior with over one-third noted as being quite out-going (29.6%) or very out-going (9.3%). The remainder of the students were rated either as quite withdrawn (13%) or very withdrawn

(5.6%). For the children whose parents returned their forms, 45.5% were rated as average with 36.4% rated as quite or very out-going and 18.2% seen as quite or very withdrawn.

Chi square analyses revealed no significant differences by grade or by sex on any of the above four variables. However, the relatively small sample size that resulted in small numbers of subjects in many of the cells and the numbers of empty cells in most of these comparisons warrant caution in this interpretation.

Experienced Life Events

The life events that the parents noted had been experienced by the children in this study and how positively or negatively the parents judged their children to have been affected are depicted in Appendix H. The range of total events the parents noted had been experienced by their children was from four to twenty-eight with a mean of 11.1 and a standard deviation of 4.8. The number of total negative events experienced ranged from 0 to 15 with a mean, median, and mode all of 3.0 and a standard deviation of 2.7. The children were overall rated as having experienced relatively more positive events with a range of 2 to 15 and a mean of 6.1, a median of 6, a mode of 4, and a standard deviation of 2.9.

The number of life events as noted on the
Checklist that had been experienced in the past year
ranged from 0 to 11 with a mean of 4.5, median and
modes of 4, and a standard deviation of 2.4. The
number of parent ratings of "1" or "2", i.e., child
very positively affected by an event or somewhat
positively affected, were summed for each child and
the result was termed the number of positive events
the child had experienced. A similar process was
utilized with those events the parents rated as "5" or
"4", i.e., very negatively or somewhat negatively
affecting the child, which were termed the number of
negative events the child had experienced. Those
events the parents rated as having affected the child
"neither positively nor negatively" , a rating of "3",
were not included in the positive/negative event
totals. Thus, the designations of positive or
negative events depended on the parents' attributions
for each child rather than designations of particular
events themselves. This was necessary because the
same event was sometimes rated differently by
different parents, e.g., the event "changing to a new
school" was rated by eight parents as having been a
positive experience for their children, while four
parents rated it as having had a negative effect on
their children.

Overall, the mothers identified 533 events that had been experienced by the 45 children in the subsample. Events that were experienced by the children were most frequently rated as positive with 325 (61%) of the events rated in this way. Negative ratings were made for 130 (24%) of the events while "neither positive nor negative" ratings were made for 78 (15%) of the events. The ten most positively and most negatively rated events are shown in Tables 3 and 4, respectively while the rankings for the entire 43 events on the CLEC are depicted in Appendix I.

The children were rated as having experienced slightly more positive events during the past year than negative events. The range for positive events within the past year was 0 to 7 with a mean of 2.6, a median and mode each of 2, and a standard deviation of 1.7. The range for negative events that occurred within the past year was 0 to 4 with a mean of 1.2, a median of 1, a mode of 0, and a standard deviation of 1.3.

Parents' ratings of the number of events the children had experienced in past years ranged from 1 to 25 with a mean of 6.6, a median of 6, a mode of 5 and a standard deviation of 5. Again, the children were noted as having experienced more positive events than negative ones with the range of positive events being from 0 to 9 with a mean of 3.5, a median and a

Table 3

Ten Most Positively Rated Events

Event	N	Mean
1. Making the honor roll	8	1.13
2. Recognition for good grades	35	1.17
3. Recognition for athletics	16	1.25
4. Making an athletic team	13	1.31
5. Getting a new pet	33	1.45
6. New family car	29	1.55
7. New boy/girlfriend	12	1.75
8. New brother or sister	22	1.77
9. Joining a new club	26	1.80
10. Getting own job	7	1.86

Table 4

Ten Most Negatively Rated Events

Event	N	Mean
1. Falling grades	6	4.33
2. More parent arguing	20	3.75
3. Death of a pet	22	3.82
4. Parents separated	10	3.70
5. More arguing with parents	14	3.64
6. Trouble with teacher	9	3.56
7. Illness/injury of friend	2	3.50
8. Losing close friend	8	3.50
9. Trouble with classmates	14	3.43
10. Parents divorced	6	3.33

mode both of 3, and a standard deviation of 2.5.
Negative events that occurred in past years were rated
as ranging from 1 to 12 with a mean of 1.8, a median
of 1, a mode of 0, and a standard deviation of 2.4.

There is evidence in the literature that
individuals are affected by both positive and negative
events, with both types of events calling for some
type of adjustment and having an impact on one's view
of the world and one's self. Thus, a total score
denoting an overall "affected by events" score was
calculated by summing all of the parents' ratings on
all of the events for each child. The range of these
scores was very large with a span from 5 to 94. The
mean "how affected by events" score was 27.2 with a
median of 26, a mode of 20, and a large standard
deviation of 14.6.

Depression

Most of the children in the sample fell into the
non-depressed range as measured by their own self-
report on the Children's Depression Inventory. Scores
ranged from 1 to 21 with a mean of 7.1, a median and
mode of 7, and a standard deviation of 4. Thirteen
children scored at or above the cut-off value of 10
which is seen as indicating depression. Five children
scored 10, five children scored 11, and one each
scored 18, 19, and 21. The scores in the subsample

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showed the same range and other parameters as above
with ten children who fell into the ten or above
category.

Behavior

The mothers' ratings of their childrens' behavior
on the Child Behavior Checklist indicated that the
behavior of most of the children fell into the normal
range. In terms of a summary scale of total problem
behaviors, approximately 86% of the children fell into
the normal range, receiving T scores of sixty-three or
less. (Sixty-three is the high limit of the normative
normal range.) Only six children were rated above
this range with T scores that ranged from 63 to 66. T
scores ranged from 30 (the lowest possible score) to
66 with a mean of approximately 54.

The two broad band groupings of behavior problems
on the CBCL, internalizing and externalizing, reflect
a distinction between feaful, inhibited,
overcontrolled behavior and aggressive, antisocial,
undercontrolled behavior (Achenbach & Edelbrock,
1983). None of the children's scores exceeded the 63
T score limit for the non-clinical range in terms of
internalizing behavior. T scores for internalizing
behavior ranged from 35 to 63. Only three children
received T scores of greater than 63 on externalizing

behavior and were thus judged to be in the clinical range. Their T scores were 64, 65, and 66, respectively.

The findings on the narrow band behavior groupings are shown in Table 5. The normal range includes T scores of 55 through 70 and it can be seen tha none of the children in this sample exceeded the normal range on any of these behavior factors.

The majority of the children in the sample were also rated in the normal range of social competence with approximately 80% scoring higher than a T score of 39 which has been determined to be the lower limit of the normal range (Achenbach & Edelbrock, 1983). Nine children scored below this range with T scores of approximately 30 to 37. T scores of social competence ranged from 30 to 64 with a mean of approximately 47.

Testing of the Child Cognitive Mastery Scale Overall Scores Obtained

The frequencies and percentages of the mastery and non-mastery choices on the initial administration of the CCMS are shown in Table 6. It can be seen that for most of the situations, this sample of children overall tended to choose the mastery choices.

The CCMS was scored by assigning a value of "1" to the choice in each situation that indicated a sense of mastery and a value of "0" to each non-mastery choice. The total score on the CCMS was thus the sum

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Table 5

Descriptive Findings on the CBCL Narrow Band Behavior

Factors (N=45)

Factor	Range	Mean	Standard Deviation
Depressed	55-67	56.9	3.0
Aggressive	55-67	56.8	3.0
Somatic			
Complaints	55-70	56.7	3.3
Hyperactive	55-66	56.9	3.2
Delinquent	55-70	58.0	4.2
Social			
Withdrawal	55-69	56.7	3.3
Girls:			
Schizoid-			
Obsessive	55-64	57.3	3.5
Sex Problems	55-63	56.3	3.0
Cruel	55-68	58.4	4.4
Boys:			
Schizoid-			
Anxious	55-59	55.6	1.2
Uncommuni-			
cative	55-58	55.3	0.9
Obsessive-			
Compulsive	55-62	55.8	1.9

of the answers chosen for the 22 situations resulting
in a possible range of scores from 0 to 22. The
actual range of scores that was obtained by the full
sample of 56 children was from 7 to 22 (see Table 7)
with a mean of 19.1, a median of 19, and a mode of 22.
The standard deviation was 2.6. The range for the
subsample was the same as the mean for the full
sample. The subsample mean was 18.9 with a median of
19 and a mode of 19. The standard deviation for the
scores in this subsample was 2.7.

Based on the results obtained from the ratings
done by the "expert" reviewers, the 22 CCMS situations
were divided into three subscales. Ten situations
were classified as falling into the "safe world"
category: 1, 4, 5, 7, 9, 12, 17, 18, 20, and 21. Six
situations were viewed as making up the "just and
controllable world" subscale: 3, 6, 11, 14, 15, and
19, with the six remaining situations classified under
the "self-view" subscale: 2, 8, 10, 13, 16, and 22.

Scores on the safe world subscale ranged from 3
to 10 with a mean of 8.29, a median of 9, a mode of 8,
and a standard deviation of 1.4. The just world
subscale showed a range of 3 to 6 with a mean of 5.22,
a median of 5, a mode of 6, and a standard deviation
of .9. Scores on the self-view subscale ranged from 1
to 6 with a mean of 5.36, a median and a mode, both of
6, and a standard deviation of .98.

Table 6

Frequencies and Percentages of Mastery and Non-mastery
Choices on the CCMS for the Initial CCMS
Administration

	Non-Mastery		Mastery	
Situation	#	%	#	%
1.	28	50.0	28	50.0
2.	9	16.1	47	83.7
3.	18	32.1	38	67.9
4.	6	10.7	50	89.3
5.	16	28.6	40	71.4
6.	5	8.9	51	91.1
7.	2	3.6	54	96.4
8.	5	8.9	51	91.1
9.	6	10.7	50	89.3
0.	6	10.7	50	89.3
11.	7	12.5	49	87.5
12.	9	16.1	47	83.9
13.	5	8.9	51	91.1
14.	4	7.1	52	92.9
15.	2	3.6	54	96.4
16.	5	8.9	51	91.1
17.	3	5.4	53	94.6
18.	5	8.9	51	91.1
19.	7	12.5	49	87.5

Table 6 (cont.)

Situation	Non-Mastery		Mastery	
	#	%	#	%
20.	10	17.9	46	82.1
21.	4	7.1	52	92.9
22.	4	7.1	52	92.9

Table 7

Frequencies and Percentages of Total Scores on the
CCMS Obtained by the Full Sample and the Subsample

Total Score	Full Sample		Subsample	
	#	%	#	%
7	1	1.8	1	2.2
12	0	0.0	0	0.0
15	1	1.8	0	0.0
16	6	10.7	6	13.3
17	6	10.7	5	11.1
18	6	10.7	5	11.1
19	9	16.1	8	17.8
20	9	16.1	8	17.8
21	8	14.3	5	11.1
22	10	17.9	7	15.6
Totals	56	100.0	45	100.0

Test-Retest Reliability

A convenience sample of 21 children (38%) were retested from 7 to 10 days after the first CCMS administration using the same methodology. The retest sample included 11 girls and 10 boys, 76% being white students and 24% minority students. There were four children each from grades one, two, three, and five, and five children from the fourth grade.

A test-retest pearson correlation of .595 was obtained for the CCMS which was statistically significant at the .002 level. This correlation (rounded-off) met the .6 criterion that had been previously established to suggest acceptable reliability of the tool. Statistically significant item correlations were found for 14 of the 22 situations (See Table 8). Seven of the individual situations met the established criterion of .6 or greater that pointed to acceptable reliability. Three item correlations were unable to be calculated due to extremely low variance in either the test or retest scores. A breakdown of the frequencies and percentages of the mastery and non-mastery choices the children selected for each situation in the test and retest conditions are presented in Table 6 along with the item correlations.

Table 8

<u>Item</u> <u>Correlations</u> on the CCMS Test-Retest Choices

_____

Item	r	<u>p</u>	Item	r	<u>p</u>
1.	.135	.280	20.	-.198	.195
2.	.495	.011	21.	---	---
3.	.337	.068	22.	.611*	.002
4.	.689*	.000			
5.	.612*	.002			
6.	-.050	.415			
7.	---	---			
8.	.382	.044			
9.	.548	.005			
10.	.689*	.000			
11.	.447	.021			
12.	.611*	.002			
13.	1.000*	---			
14.	---	---			
15.	---	---			
16.	.447	.021			
17.	1.000	---			
18.	.447	.021			
19.	.842*	.000			

_____

*Items that met the .6 reliability criterion

A test for stability across administrators was conducted as ten of the retests were conducted by the investigator and eleven by a graduate student research assistant. No significant difference was found between the two groups (F = 2.48; p = .174) in terms of their obtained scores on the CCMS. This finding provides evidence for inter-administrator reliability in addition to the test-retest reliability indicated above.

Initial Tests of Discriminant Validity

CCMS Scores and Life Events.

No significant correlations were found between the mastery scores obtained on the CCMS and the life event parameters that were utilized. (See Table 9) These variables were: number of total life events experienced (as indicated by each child's mother), total number of positive events experienced, total number of negative events experienced, number of events experienced in the past year, number of positive events experienced in the past year, number of negative events experienced in the past year, number of events experienced in past years, number of positive events experienced in past years, and number of negative events experienced in past years. Thus, for the events that were included on the Child Life Events Checklist with mothers as raters, the CCMS was unable to detect differences in those who had

Table 9

Pearson Correlations Between Mastery Scores,

Depression Scores, and Other Parameters Tested

Variable	Mastery	Depress.	Safe World	Just World	Self-View
Total # events+	-.027 p=.430	-.167 p=.137	-.023 p=.441	.035 p=.410	-.073 p=.195
Total pos. events+	-.116 p=.224	-.254 *p=.046	-.015 p=.460	-.117 p=.222	-.187 p=.110
Total neg. events+	.066 p=.334	.093 p=.272	.008 p=.480	.039 p=.399	.131 p=.195
# events past 1 year+	-.118 p=.219	-.211 p=.165	-.054 p=.723	-.217 p=.152	-.045 p=.772
Pos. events past 1 year	-.221 p=.073	-.217 p=.151	-.084 p=.84	-.320 *p=.032	-.185 p=.224
Neg. events past 1 year+	-.067 p=.332	-.107 p=.483	-.046 p=.762	-.261 p=.083	.126 p=.411
# events prev.years+	.048 p=.376	-.049 p=.748	.043 p=.788	.128 p=.400	-.046 p=.765
Pos. events prev. years+	-.037 p=.404	-.155 p=.309	.015 p=.921	-.001 p=.994	-.123 p=.423
Neg. events prev. years+	.103 p=.251	.164 p=.283	.036 p=.816	.145 p=.342	.095 p=.534
School performance++	.098 p=.239	-.291 *p=.016	.175 p=.101	-.096 p=.243	.100 p=.234

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Table 9 (cont.)

Variable	Mastery	Depress.	Safe World	Just World	Self-View
Working to	-.119	-.351	-.080	-.151	-.065
potential++	p=.194	p=.004	p=.281	p=.136	p=.319
Behavior in	-.014	-.122	-.030	.074	-.144
class++	p=.459	p=.187	p=.413	p=.297	p=.147
Socializing	.008	-.203	-.057	-.085	.174
in class++	p=.478	p=.069	p=.339	p=.268	p=.102
Total problem	-.175	.282	-.147	-.301	.025
behavior@	p=.128	*p=.032	p=.171	*p=.023	p=.437
Total social	-.120	-.350	-.196	.210	-.247
competence@	p=.220	*p=.010	p=.101	p=.086	p=.053
Depression@@	-.190	1.000	.115	-.102	-.243
	p=.080	p= ---	p=.199	p=.036	*p=.036

* = statistically significant

+= N = 45; ++= N = 55; @= N = 44; @@= N = 56

experienced more negative events and those children who had experienced less. There were also no significant correlations between the total "how affected by life events" score and any of the following: mastery score, scores on the three CCMS subscales, total behavior problem score or total social competence score.

CCMS Scores and School Performance

No significant correlations were found between the mastery scores and the four areas rated by teachers indicating overall school performance, the extent to which the child seemed to be working to his/her potential abilities, behavior in the classroom, and degree of social interaction in school. Thus, for this sample of children, the CCMS was unable to discriminate differences between children who were doing better in school and those who were doing more poorly.

CCMS Scores and Behavior. Mastery scores did not correlate significantly with the total behavior problem score or the overall social competence score. The pearson correlation between the externalizing T score and overall mastery score was not significant (r = -.048; p = .377). The correlation between the internalizing T score and the overall mastery score approached significance (r = -.236; p = .061) but was also not statistically significant. There were

significant correlations in the hypothesized

directions, however, on several of the behavior

problem subscales. There was a significant negative

correlation (r = -.253; p = .049) between mastery

scores and aggressive scores, i.e., the higher the

child's score on aggressiveness, the lower the mastery

score. Another significant negative correlation was

between the somatic complaints subscale and mastery

scores (r = -.353; p= .009) indicating that the more

somatic complaints a child evidenced, the lower

his/her mastery score. A significant negative

correlation was also found to exist between scores on

one of the girl's scales, the schizoid-obsessive scale

and the mastery scores (r = -.331; p = .049). This

scale taps such behaviors as obessive thoughts,

compulsions, self-harm, little sleep, strange behavior

and ideas, and suicidal talk; many behaviors that are

noticeably similar to those found in children

experiencing post-traumatic stress syndrome.

Testing of the Three "Factors"

In order to examine one aspect of internal

consistency, pearson correlations were conducted

between the overall mastery score and the scores for

each of the three subscales. This analysis yielded

highly significant correlations. The correlation

between overall score and the safe world subscale

score was .867, for the just world subscale, .680, and for the self-view subscale, .795 (for all three, p = .000).

Pearson correlations conducted between the three subscales and the life events, school performance, total behavior, social competence and depression variables are depicted in Table 9. Two statistically significant correlations in the direction supporting discriminant validity were obtained from these analyses. There was a significant negative correlation between self-view and depression i.e., the less positive the child's view of him or herself, the higher the depression score. A negative correlation between self-view and social competence approached significance. A significant negative correlation was found to exist between the just world subscale and the total behavior problem score which indicated that the less just and controllable the child viewed the world, the more behavior problems the child exhibited.

A number of significant correlations were found between some of the narrow band behavior factors and the three CCMS subscales (See Table 10). Significant negative correlations were found between the safe world subscale and the depressed and somatic complaints subscales indicating that a lower view of the world as safe and secure with accompanied higher depressive and somatic symptoms. Significant negative

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Table 10

Correlations Between CBCL Narrow Band Behavior Factor

Scores and Mastery and CCMS Subscale Scores

Behavior Factor	Mastery	Safe World	Just World	Self-View
Girls & Boys: (N = 44)				
Depressed	-.230	-.289	-.102	-.122
	p=.066	*p=.029	p=.256	p=.216
Aggressive	-.253	-.124	-.526	.014
	*p=.049	p=.211	*p=.000	p=.465
Somatic Complaints	-.353	-.440	-.148	-.198
	*p=.009	*p=.001	p=.169	p=.098
Hyperactive	-.033	.047	-.249	.900
	p=.416	p=.381	*p=.051	p=.281
Delinquent	.007	.053	-.145	.085
	p=.482	p=.367	p=.174	p=.291
Social Withdrawal	.011	.034	.037	-.048
	p=.472	p=.413	p=.407	p=.379
Girls: (N = 24)				
Schizoid-Obsessive	-.331	-.177	-.313	-.263
	*p=.049	p=.193	p=.058	p=.097
Sex Problems	-.040	.118	-.439	.245
	p=.427	p=.291	*p=.016	p=.124
Cruel	-.171	.023	-.421	-.002
	p=.213	p=.457	*p=.020	p=.496

Table 10 (cont.)

Behavior Factor	Mastery	Safe World	Just World	Self-View
Boys: (N = 20)				
Schizoid-Anxious	-.-31	-.186	.098	.027
	p=.449	p=.217	p=.341	p=.455
Uncommunicative	-.011	-.042	.252	-.181
	p=.481	p=.430	p=.142	p=.222
Obsessive-Compulsive	.255	.288	.192	.165
	p=.139	p=.109	p=.209	p=.243

correlations were also found between the just world
subscale and the aggressive and hyperactive subscales.
These findings indicated that the less the children
viewed the world as just and controllable, the more
aggressive and hyperactive behaviors they showed.

The just world subscale also correlated with all
three of the "girls only" subscales of the CBCL:
schizoid-obsessive, sex problems, and cruel, again
indicating that as the girls viewed the world as less
just and controllable, the more behavior problems in
these three areas they exhibited. The schzoid-
obsessive constellation of behaviors was described
above. The sex problems factor taps such behaviors
as: feels guilty, talks too much, prefers older
children, plays with sex parts too much, and sex
problems or preoccupations. The cruel factor includes
such behaviors as: acting like the opposite sex, being
cruel to others or to animals, destroying property of
self or others, and fighting ot attacking people. The
self-view subscale of the CCMS did not correlate
significantly with any of the CBCL narrow band factor
scales, nor were there any significant correlations
with the "boys only" subscales.

Further Evaluation of the CCMS

Because of the very low variance obtained on some
of the CCMS items, it was decided to drop the items
with less than approximately 5% variation and to then

re-do some of the analyses. Three situations were thus removed from contributing to the total mastery score and to the appropriate subscales: situations 7, 15, and 17. Pearson correlations were conducted between the mastery and subscale scores and the depression score, the four school variables, the total problem behavior score and the total social competence score.

As noted earlier, a statistically significant negative correlation was found between the self view subscale and depression (r = -.243; p = .036). A negative correlation between the self-view subscale score and the social competence scale also approached significance (r = -.247; p = .053). A significant negative correlation was found between the just and controllable world subscale and the total behavior problem score (r = -.301; p = .023), indicating that the more just and controllable the child sees the world, the fewer behavior problems the child will exhibit.

The Effects of Major Events

Children who had experienced major events were selected out for further examination. Children were identified who had experienced one or more of the following major events: serious illness or injury of a family member or of themselves, death of a family member or close friend, parental divorce or

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separation, a fire or a break-in in the home where the child was living, a school bus accident, a family drug problem, or a move to a new country. Thirty-seven children met this criterion with eleven of them having experienced one of these events, seventeen having experienced two, four children had experienced three of these, three children had experienced four, and 2 children had experienced five of these major events.

A comparison of those children who had experienced one or more major event and the nineteen children who had not on various measures is shown in Table 11. Although the mean total mastery score is slightly lower for the group who experienced one or more major stressors than for the group who did not, t-tests revealed no significant differences between these two groups on the variables studied. It is interesting to note, however, that in almost every case, the standard deviations are higher for the group who had experienced one or more major stressors than for the group of children who had not.

Child Variables and Mastery

No significant correlations were found between age, sex, or grade and any of the following variables: total mastery score, the three CCMS subscales, depression, school performance, socializing in class, the number or type of events experienced, total bevior score, or total social competence score. Significant

Table 11

Means and Standard Deviations of Various Measures for
Children Who Had Experienced One or More Major
Stressful Events and Those Who Had Not

Measures	Major Stressor(s) (N = 37)		No Major Stressor(s) (N = 19)	
	Mean	S.D.	Mean	S.D.
Mastery Score*	15.838	2.49	16.842	2.04
Safe World Scale	6.297	1.22	6.895	1.05
Just World Scale	4.297	0.91	4.211	0.85
Self View Scale	5.243	1.04	5.737	0.93
Depression	7.000	4.11	7.263	3.98
Behavior Problem				
Score	23.667	12.11	27.750	7.23
Social Competence				
Score	19.458	3.51	18.075	3.92
School				
Performance	3.750	0.91	3.474	1.07
Working to				
Potential	3.222	0.83	2.895	0.46
Classroom				
Behavior	3.806	1.91	3.895	1.10

Table 11 (cont.)

	Major Stressor(s) (N = 37)		No Major Stressor(s) (N = 19)	
Measures	Mean	S.D.	Mean	S.D.
Socializing In Class	3.194	1.09	3.316	0.75

* t-tests between the two groups on all of above

meaures were not significant.

negative correlations were found, however, between sex
and both working to potential in the classroom and
classroom behavior indicating that boys tended to be
rated lower in these areas by their teachers than
girls. Pearson correlations between race, depression,
mastery, and the three CCMS subscales also yielded no
significant correlations.

A number of other interesting inter-variable
correlations also occurred. Ratings of school
performance showed a significant negative correlation
with the total problem behavior score ($r = -.286$; $p = .032$) and a significant positive correlation with the
social competence score ($r = .302$; $p = .025$)
indicating higher school performance occurs in
conjunction with fewer behavior problems and higher
social competence. School performance was also
significantly positively correlated with the extent to
which the child is viewed as working to his or her
potential ($r = .545$; $p = .000$) and behavior in the
classroom ($r = .266$; $p = .040$). This, not
surprisingly, indicates that children who work harder
and are better behaved in class are rated by teachers
as performing better in school. School performance
was also significantly negatively correlated with the
overall number of events a child has experienced in
past years (i.e., prior to the past one year)

(r = -.251; p = .05) and the overall number of
negative events a child has experienced at any time
(r = -.337; p = .013).

Children's behavior in the classroom was
significantly negatively correlated with their degree
of socialization in the classroom (r = -.284; p =
.031) indicating that more disruptive children tend to
be more outgoing and that more withdrawn children tend
to be rated as less disruptive. Children's behavior
in the classroom was also significantly negatively
correlated with the overall number of events a child
had experienced at any time (r = -.314; p = .019) and
with the overall number of negative events the child
had experienced at any time (r = -.375; p = .006)

CCMS Scores and Depression

As predicted, a significant correlation was not
found between the overall mastery score and depression
(r = -.190; p = .08). Correlations between depression
and the two world view subscales were not significant
(see Table 9) although as noted above, the correlation
between the self-view subscale and depression was
statistically significant. These findings are in the
direction of providing evidence for the validity of
the CCMS.

Significant correlations were also found between
depression and several other variables. As noted in
Table 8, depression was found to be significantly

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negatively correlated with the total number of
positive events a child has experienced, that is, the
lower the number of positive events a child has
experienced, the higher the depression score. A
significant positive correlation occurred between
depression and the total problem behavior score while
the depression score negatively correlated with the
overall social competence score, i.e., the higher the
depression score, the more behavior problems that are
exhibited and the less socially competent the child
appears. Depression was also significantly negatively
correlated with overall school performance and the
extent to which the child was viewed as working to his
or her expected potential ability. This indicates
that the more depressed a child is, the lower his or
her overall school performance, and the less apt the
child is to be working at or above his or her expected
potential.

     Children with higher depression. The question
arose of whether children with higher depression
scores would look differently on various measures of
interest. Children with depression scores of 10 or
over were thus separated out for analysis. Thirteen
children fell into this category and the results of
the pearson correlations conducted are shown in Table
12. It can be seen that contrary to expectations that
children who show higher depression scores might show

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Table 12

<u>Pearson</u> <u>Correlations</u> <u>Between</u> <u>Children</u> <u>With</u> <u>Higher</u>
<u>Depression</u> <u>Scores</u> <u>(N=13)</u> <u>and</u> <u>Variables</u> <u>of</u> <u>Interest</u>

	Depression	
	r	p
Mastery	.063	.419
Safe World	.100	.373
Just World	.138	.327
Self-View	-.060	.423
School Performance	-.070	.410
Working to Potential	-.644	.009*
Behavior In Class	-.094	.380
Socializing In Class	-.406	.084
Total Behavior Problem Score	.106	.386
Total Social Competence Score	-.373	.144

* = Statistically significant

lower mastery scores, lower school performance, higher

behavior problems, and lower social competence scores,

the only significant correlation that was found was a

negative correlation between depression and the

teacher's perception that a child was working to his

or her potential. That is, with higher depression,

the child was less apt to be viewed as working to his

Qualitative Aspects of CCMS Testing

The Pictures and Process

The children were all told that the investigator

was doing a project to see what children think about

different situations and that the investigator was

also testing the pictures to see what children thought

of them. They were asked to give feedback on the

pictures regarding, e.g., how clearly they depicted

what the descriptions stated, if there was anything

confusing or distracting in the pictures or anything

in the pictures that made them think that they should

be answered one way or the other, etc. The vast

majority of the children stated that they thought the

pictures were very good (one child stated "Who drew

these? They're sure a good drawer!") and had no

suggestions for their improvement. The major

dissenting opinion came from one fifth grade boy who

expressed his view that the pictures, as well as the

process, were "stupid" and "they made me laugh".

Individual comments on the pictures will be noted as

each situation is discussed in turn below.

For the most part, the children seemed to easily understand the directions as to how the process worked and what they were to do.In a few cases, children thought they should put the three pictures in order (two children) or pointed to a picture stating "That one?" in a questioning voice indicating that they thought one or the other answer was correct and they were not sure they had picked the right one (approximately nine children). In those cases, the directions were re-explained or the fact that there was no right or wrong answer was re-explained. All of the children seemed to understand the directions and seemed to answer in the correct manner after brief re-explanations.

The Individual Situations

Comments about the pictures, situations, or their choices were sometimes asked for and were often spontaneously volunteered. Children's responses to each situation will now be discussed in turn.

Situation 1, which asked what a child would probably do if when shopping, he turned around and could no longer see his parents anywhere, was the response that showed the most variance. It was interesting to note that even older children would occasionally choose the helpless, crying response. This was the situation in which the children seemed to

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see the highest likelihood of both choices of behavior
occurring with several children making comments such
as "Well, first, he'd probably wait there and then he
might start to cry" or "Really both could be the one
because you'd probably cry if you were scared, and
then you'd wait there". Several children expressed
their view that they would not do either choice but
would instead find a clerk or go to the store desk. A
couple of children (older ones) pointed out that it
would depend on the age of the child, noting that
younger children would be more likely to cry than
older ones. Most of the children, however, seemed to
have no difficulty choosing one response or the other
and had no criticisms of the pictures.

The children had few comments regarding
situations 2 (one child telling another about her
problem) and 3 (the child falling off his bike
accidentally or because he was showing off). One
child noted in response to number 2 "Well, they say
talking about a problem helps so maybe just talking
about will help". Several of the children seemed to
identify with the child showing off on his bike in
situation 3 with one noting "I do that and fall off
sometimes; I messed up my bike!". Comments such as
this provided evidence that the children were
personalizing the situations and thus support for the
assumption that their responses would reflect their

own personal views. Only one child pointed out that the child riding the bike would have seen the hole, so if he fell off after hitting it, that would be his own fault, too. The rest of the children seemed to agree with the accidental/it's his fault distinction.

The second child who was tested pointed out in response to situation 4 that it would make a big difference in which response he chose depending on whether or not the child knew the adult who was offering to help him. This information seemed so pertinent and important that it was incorporated into the "someone comes to help" response that this <u>was</u> an adult who was known to the child. The importance of this was emphasized in the responses of a number of children who clarified "He does know this adult, right?" or talked in some way about not trusting adults that they do not know. One child reflected that "the chances aren't too good that an adult would be around at just the right time, but, I'll choose that one, anyway". A couple of children noted "sometimes adults don't come" as they chose the response in which the child has to go home alone after falling off of his bike. One boy shared an alternate solution stating "I'd probably have a friend with me, so, I'd just send him to go get my mom!".

Situation 5 in which the girl is faced with entering a dark room and turning on the light or

walking quickly away seemed to be one that most of the
children easily personalized with comments such as
"That's what I would do " as they indicated their
choice. A couple of children indicated their fear of
an unknown dark room rather graphically with one child
stating "I would leave; there might be a kidnapper in
there--you never know!" and another noting "There
might be a ghost or somebody really mean!". A couple
of children indicated that when they were younger they
would have walked away but that now that they were
older, they would go in and turn on the light. This
situation is the only one in which one child commented
on the sex of the child in the picture (the various
situations changed from a boy main character to a girl
main character in somewhat random order). This fifth
grade boy noted as he pointed to the picture of the
child walking away from the room "That's a girl for
you!". The other children seemed to be relating to
the situation more than to the child character, per
se.

The children made very few comments to situation
6 of the girl going to the doctor's. For situation 7,
the most common comments were ones such as "All
doctors are nice" and "The doctor gives me lollipops
and stickers!". This overwhelmingly positive response
toward doctors led to very little variance on this
item and Situation 7 was one that was dropped in the

re-analysis described above.

In response to situation 8 in which the teacher asks for volunteers to help her do something, most of the children quickly chose the volunteering response with comments such as "I'd raise my hand' I try my best" or "The more you help the teacher, the more you could get an award at the end of the year". When asked what it was that they thought the teacher might be wanting someone to do, most of the children asked focused on the blackboard in the background stating such things as writing something on the board or cleaning the board or the erasers. The children who chose the "I probably won't be able to do it" response seemed to also be those who were less likely to spontaneously comment during the testing process and most likely to answer questions such as "What do you think the teacher wants someone to do?" with "I don't know".

Situation 9 in which the child's mother either picks him up on time after school or the child has to wait, uncertain of when she will come seemed to reflect personalizations of their own experience in some children e.g., "My father is always on time". Other children seemed to expand the situation to reflect more of an overall world view with comments such as "People aren't always on time" or "If it was my mother, it would be A (child waiting), but, I'll

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say B (mother on time) because most mothers are organized". Along the same lines, another child noted "She'll be there, otherwise people would call".

In situation 10, a child throwing a basketball attempting to make a basket. A number of children shared the fact that they or one of their siblings play and often again personalized the situation either to themselves or to a sibling or friend, e.g. "That would be my brother, he always misses" or "My brother is really good!". Several children responded more to how the child's friend behaves than to whether or not the first child makes the basket (in the "miss" choice, the child's friend says "Ah, you never get it in!"). Comments were made such as "Even if he misses, I wouldn't care" or, upon making the choice in which the child makes the basket and he and his friend jump up and down and cheer, "This one, because then his friend is being a good sport". One child commented on the drawing stating "Because you can see from the angle the ball will hit the rim; it would be a miracle if he gets it in!".

Situation 11 depicts an interaction between a boy standing next to a broken window he is not responsible for and a policeman who either unfairly blames him or is friendly and listens to what happened. Most of the children reflected a positive attitude toward the policeman commenting that he would listen first before

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accusing the child. One boy noted "In A he is accusing him and he doesn't have any proof!" with a "that couldn't be the one, that wouldn't be fair" tone. A different reaction was exemplified by a boy who stated "In my old neighborhood, you can't trust anybody--here it's better". One child observed that the policeman's hat had been drawn differently in two of the pictures and suggested it be fixed.

In the next situation, situation 12, a child's parents tell him to get into the car because they are all going someplace and the child is either happy or unhappy about this. When the children made their choice of whether they believed the child would be happy going to a good place or unhappy going to a place they didn't like, they were asked where they thought they were going. Although some children answered "I don't know" and gave no response, most did suggest a location. The "good" places they thought the child and his parents might be going included: the zoo, a circus, a carnival, shopping, a restaurant, grandma's house, a hockey game, vacation, or an amusement park. The "not so good" places included: shopping with mother and sister, going to lumberyard where there is nothing to do, grandma's house, and going to the state for coupons.

In situation 13, a child goes outside and sees other children playing and is either allowed to play

or told to go away because the other children don't think the child plays well. This situation seemed to elicit the most "moralizing" and "sense of fair play" responses from the children. They made comments such as "I would try them out and see if they're any good; even though they're bad, maybe they could get better at it", "If it's the first time, kids will try a new kid out and if the kid can play good, then they'll play with them another time", "That's the way it is with me, once I start a game, I'd say maybe next game because they already started", "In A they're being friendly, in the other one they didn't give her a chance to see if she can play or not". Responses such as these indicated that at least some of the children were identifying more with the responses of the other children than to the competency of the child going out to play as had been originally intended by this situation.

The situation presented in 14 is one in which a child is getting himself a drink of water and in doing so drops and breaks the glass on the floor responding either that it was an accident he would clean up or with self blame and helplessness. This situation is one in which the wording overtly pulls for both a view of controllability as well as competency and thus was hard to classify although it was placed in the just world subscale until it was dropped due to very low

variance. Children made few comments on this
situation, although the few that were made seemed to
indicate good understanding of the situation such as
"He's having confidence and not blaming himself
because it was an accident".

In situation 15, the above story continues and a
grown-up comes in and either yells at the child or
agrees it was an accident and helps the child clean it
up. Again, some children personalized stating "My mom
would yell" and some again reflected an overall world
view even though it might differ from their own
experience in this particular instance, e.g., "I'd say
that one (Helpful adult), but my mom hollers!". One
child noted "since he cleaned it up, she'd probably be
happy" with several other children focusing on the
"cleaning it up rather than leaving a mess" aspect.

In the next situation, number 16, a child is
getting ready for school and stops to look into a
mirror where she either thinks about the fact that she
likes herself and the way that she is or that she
doesn't like herself much and wants to change many
things about herself. The responses to this situation
were very interesting in that the children who most
wanted to change themselves were in several instances
attractive-looking, seemingly popular children who
surprised the investigator with their response. One
noted "I know there are a lot of things I want to

change about me" and another "Everybody wants to
change some things". One boy noted "some people want
to change some things about them so they can get more
girls!". Others noted that they liked themselves the
way they were with one commenting "I really don't
care what people think about me, if they don't like
the way I dress, that's their problem"--seemingly more
evidence that the children did personalize the
situations.

Situation 17 depicts a woman and child coming out
of a big building with the child either looking sad
and crying or looking happy. The vast majority of
children chose the happy response and this was also an
item that was deleted from the further analysis due to
low variance. They were asked in each case what they
thought had gone on in the building and positive
responses included: shopping, visiting somebody,
seeing something fun, going where his father works,
seeing the teacher on parent night, watching a hockey
or basketball game, and "there was a test and they got
100!". The negative responses were less specific
such as "He might have broke something and someone
might have yelled at him" and "You usually don't go
into a big building unless you did something bad".

The story in situation 18 is that a girl is
sitting on her bed having a bad day and feeling sad
and in the choices, either she stays alone or someone

comes to try to help her feel better. Again, the
children who commented personalized with such comments
as "When I'm in my room, someone would come to see if
I was OK" or "When I'm sad at my grandmother's house,
they give me something to drink and ice cream!". The
children who chose the "no one comes" response did not
comment.

In the next situation, 19, a child has worked
very hard on an assignment which the teacher is
handing back. In one choice, the child does poorly
and the teacher tells him to try harder and in the
other the child does well and the teacher tells him he
did a good job. Few children commented on this
situation but share their views. One child
philosophically noted "Sometimes I mess up on
something and I say I'll try my best next time".
Another responded to the teacher's response stating
"If I had worked real hard and then she said that to
me, I'd pow! right in the kisser!". One child noted
that a similar experience had happened to her older
stepsister who had worked very hard on a paper and had
still gotten a poor grade.

Situation 20 seemed to have a lot of significance
for most of the children. In this situation, a mother
tells her daughter that it it time to go to bed and
once in bed, the child either feels safe and goes to
sleep or stays awake and is scared. A number of

children shared their fears about going to sleep at night, identifying with that choice of picture while some stated that it was easy for them to get to sleep. One girl noted "I'm friends with my pillow and blankets!". It was interesting to note that this situation elicited stories from several children about people they knew who had died recently, their fears and feelings about these deaths seeming to be somehow connected with their feeling safe to go to sleep at night--or not. Several of the children commented that they used to feel more scared at night but that now that they are older, they can go to sleep with no problems.

The next situation, number 21, depicted a child in a store with his parents who sees a scary-looking man standing next to them in a line. The choices relate to feeling confident that the child's parents can protect him or staying frightened even though his parents are there. The children who commented talked about feeling secure because their parents could protect them. One child noted that it depended on the neighborhood.

The last situation, 22, shows a girl going on vacation who asks her friend to care for her dog while she is away. In one choice, the child takes good care of the dog while in the other, she does not and the dog runs away. The children responded to this

situation with personal comments such as "That would
be me! (Dog ran away) My brother asked me to feed his
fish while he went away and we had to flush them down
the toilet because "They were dead as doornails
because I forgot to feed them!" or "I would feed him
everyday". Some comments also reflected a sense of
how the world works such as "Well, when you picked
someone to watch your dog, you would pick a
responsible person so I would say this one" (good care
of dog).

When asked what they thought of going through the
situations, most of the children stated that they
thought it had been fun. The situations seemed to
raise thoughts of various events that had happened to
some children, however, as three children talked about
people they knew who had recently died, one child
shared her sad feelings about a bird who had died, one
talked about the divorce of his parents and not seeing
his dad often, and another talked about his older
sister's drug problem and the effect this had had on
his family.

CHAPTER 4

DISCUSSION, CONCLUSIONS, AND

IMPLICATIONS FOR FUTURE RESEARCH

This pilot study was designed to conduct
beginning testing of a new psychological measure to
assess the construct of cognitive mastery of stress in
children. This initial evaluation has provided some
encouraging information regarding the psychometric
properties of this new measure as well as information
regarding needed revisions and some directions for
further evaluation and development. A discussion of
the findings and implications regarding initial
reliability and validity of the tool will be discussed
below.

Reliability of the CCMS

Overall, in regard to test-retest reliability,
the CCMS met the a priori established criterion of a
correlation of 0.6. This provides beginning evidence
to support the tool's reliability across time.
Testing of results across two administrators of the
tool showed no significant differences between the two
groups and this therefore provides evidence for the
tool's reliability across persons administering it.

Only about one-third of the individual situations
(i.e., 7) met the established criterion for
reliability with test-retest correlations of .6 or

greater, however. Three situations had so little
variability that correlation coefficients could not be
calculated for them. This points to the need for a
closer look at those responses that did not meet
criterion and a need to question children on an
initial testing as well as at a re-test session
regarding their reasons for making their choices. It
may be that for some children, a learning effect
occurs in which after exposure to both choices, they
learn and remember the more socially acceptable choice
or may "learn" that one choice seems to be the right
answer and pick that choice the second time.

It will be important to test the tool's
reliability overall and the reliabilities of the
individual situations on different child populations
to see if the tool maintains stability and also to
test it over different periods of time. Although the
CCMS would be expected to remain stable in the short-
term (barring any new major events or occurrences
before the retest), it would be expected to change
over the long-term if a child were exposed to major
stressors, the implications of which the child had not
yet mastered. An interesting further analysis of this
data might be obtained by pulling out the items that
did meet the reliability criterion and re-doing the
correlations with the life events, behavior, school
performance, and depression measures to ascertain if

these items have different properties than the overall
tool. It will also be important in the future to do
test-retest determinations that also take into account
age, e.g., dividing the sample into older and younger
children and seeing if there are differences in
response stability.

Initial Testing of Discriminant Validity
The CCMS and Life Events

The hypothesis that the CCMS would be able to
discriminate between those children who had
experienced major life events and those who had
experienced none or much less was not bourne out in
this study. A look at the possible reasons for this,
however, points to many reasons why the question of
whether or not the CCMS would actually be able to
discriminate between populations in this way remains
unanswered.

An important consideration here is the validity
of the Child Life Events Checklist that was used to
gain the life event information. Although the events
were for the most part taken from a checklist
previously devised by Johnson and McCutcheon (1980),
the use of the checklist was changed for this current
study in a couple of important ways. First, the 1 to
5 "very positively affected to very negatively
affected by the event" scale was added and secondly,

the responders were the children's mothers, not the children themselves.

Although the validity and reliability of parents' reports of behavior problems in their children have been established in previous studies (e.g., Achenbach & Edelbrock, 1983), the validity of parents as reporters of how their children are actually affected by events has not been previously demonstrated. The results of this current study suggest that their ability to accurately judge their children's cognitive and emotional responses to events may not be as accurate as was originally believed. Several findings suggest this. The findings that 61% of the ratings the mothers made were positive while only 24% were negative suggest that the mothers were much better at identifying positive responses to events than negative ones.

Another indicator that mothers may not always be aware of the ways in which their children are affected by events is the fact that for 78 (15%) of the events the children had experienced, the mothers stated that their children had been unaffected, i.e., had not been affected either positively or negatively by them. These "affected neither positively nor negatively" ratings occurred even for such major events as a death in the family, a death of a close friend, and parental divorce. It is very hard to believe that such major

events would have no effect on a child and thus it may be that mothers don't always realize (or don't wish to admit) negative reactions their children may experience. An anecdotal example of the lack of the validity of at least some parent's perceptions of their children's reactions is the following. On one occasion, a boy described, during administration of the CCMS and CDI, his saddness and upset at the fact that his older sister who had behavior and drug problems had been "kicked out" of the family home and eventually sent to a hospital for treatment while on the CLEC his mother rated "brother or sister leaving home" as having very positively affected her son. The earlier described phenomenon of countertransferance reactions which have led to "a long tradition of denying psychological sequelae in the child victim" (Eth & Pynoos, 1985a) may come into play in providing at least partial explanation for the above findings. It also may be that in some cases, parents may project their own feelings about and reactions to certain events onto their children.

Another important consideration is that the events Johnson and McCutcheon (1980) identified had been for use with adolescents who answered the questionnaires for themselves and were merely adapted somewhat for use in this study with younger children and parent responders. The events listed, therefore,

may not have included some events that might be very
important to younger children and are, at any rate,
not an exhaustive list of stressful situations that
could occur for a child. Thus, although some children
were rated as having experienced few events and no
negative ones of those listed on the checklist, this
does not preclude the possibility that a child may not
have experienced some other traumatic event that may
have affected his or her view of self and the world,
e.g. receiving a frightening dog bite from a strange
dog in a familiar neighborhood with his parent present
and unable to prevent this. Thus, the presence of
unknown major negative events in the children rated as
having experienced none would affect discriminant
validity determinations. Such phenomena as physical
or sexual abuse were also not asked about and such
experiences would certainly be apt to affect a child's
view of him/herself and the world and would not be the
types of occurrences that mothers would be likely to
write in as an "other".

An additional fact that could have affected
discriminant validity was that the overall number and
severity of negative events the children had been
rated as experiencing were low. Thus, the sample
tended to look fairly homogeneous, an occurrence that
does not act to maximize the experimental variance but
rather, would likely result in few differences as was

found In this study. The finding that those children who experienced major stressors did show slightly higher standard deviations on the major variables In this study than those who did not have Identifiable major stressors provides, perhaps, a subtle clue that with more significant stressors, the variation In responses might be more significant.

Another consideration Is that many of the events rated as most negatively affecting the children were not discrete events that the children experienced but were more of an on-going nature. These Included such events as falling grades, Increased parent arguing, parental separation, and trouble with teacher or classmates. It Is likely that the process of adapting to and gaining a sense of mastery over continuous, or at least recurring events of these types Is different than the process of recovery and ultimately mastery after a major discrete event. The differential aspects of these processes and their relationship to outcomes bears further Investigation.

The timing of the occurrence of the life events the children In this study experienced was looked at only In a rough sense by separating those events the children had experienced within the past one year from those they had experienced In past years. The lack of significant findings resulting from this type of separation suggests that a more sensitive

determination of timing be utilized in future studies,
e.g., how many months or years ago each event
occurred. Concurrent with this would be an assessment
of the child's age at the time of occurrence of
different events and their potential differential
effects due to the child's developmental stage.

Given the high-functioning nature of the children
in this sample as exemplified, for example, by the
high overall ratings on school performance and
classroom behavior by the teachers and the fact that
mothers noted for 35 of the children recognition for
good grades, it may be that this sample of children is
particularly high in coping resources. Thus, it may
have been that no matter how valid the life events
measure had been, and even if they had experienced
more negative events, they still may have shown high
mastery scores if indeed these are the children who
have high emotional and problem-solving resources. A
potentially good test of the tool's discriminant
validity might be, then, to compare the scores and
measures of the children in this sample various other
samples of children. For example, a sample of
children who are themselves in a more vulnerable
position such as being hospitalized. Or, another test
would be to utilize the tool and various other

measures with a sample of psychiatrically-disturbed children who would be expected to have low mastery scores.

The CCMS and School Performance

Neither the CCMS mastery score nor any of the subscales correlated with school performance. This finding is of particular interest in view of the fact that school performance did show significant relationships with a number of other variables. Higher school performance was associated with a lower total behavior problem score, higher social competence, better behavior in the classroom, and a tendency to work to the child's potential abilities. School performance was also one of the few variables that was significantly influenced by life events. Higher school performance was associated with children who had experienced fewer life events in past years of their lives (i.e., events prior to the past year) and who had experienced less negative events at any time in their lives. The fact that these types of associations were obtained from such a rough measure of school performance as a five-point scale completed by the child's teacher points to the importance of further developing more sensitive measures of this variable. With more specific measures of school performance, it is possible that an association between mastery and this variable might be found. It

is also possible, however, relating back to the
incident-specific nature of the coping response
mentioned earlier, that even children with low mastery
scores are able to perform well in the familiar,
structured environment of school and may show
behavioral manifestations of a disturbed view of the
world and/or of themselves in more subtle,
situational-specific ways.

The CCMS and Behavior

Although there was not a significant correlation
between the overall mastery score and the total
behavior problem scale, there were some interesting
associations between two of the subscales of the CCMS
and the CBCL that were in the predicted direction,
i.e., that more behavioral upset/problems would be
associated with lower mastery scores. The lower the
mastery scores, the higher the children scored on
aggression and somatic complaints and the higher the
girls scored on the schizoid-obsessive scale which, as
was previously noted, taps many of the behaviors found
in children experiencing post-traumatic stress
syndrome.

Lazarus and his co-workers (1984) have discussed
the finding that coping appears in many ways to be
situation-specific. Because a child's reactions to a
major event may be manifest more in similar situations
or in ways somehow related to a particular type of

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occurrence, more global measures of behavior may not pick up residual negative behavior reactions that might be reflective of lack of mastery of the event. It would be interesting to assess the types of events the children who demonstrated high scores on the above behavior problem scales in conjunction with lower mastery scores had experienced to see if one could ascertain why their upset may have been manifest most highly on these particular subscales.

The CCMS subscale that assessed the child's view of the world as safe, secure, and protecting gained some evidence of its discriminant ability by its significant negative correlations with the depressive and somatic complaints CBCL scales. This finding means that children who feel less safe, secure, and protected, feel more depressed and have more physical complaints than children who feel more safe and protected. Although the association between this world view and depressive behavior may not be surprising (and it is encouraging that this tool was able to pick it up), the finding that physical complaints are significantly related to a child's cognitive views of the world is an interesting and not-frequently-discussed finding. This association along with the correlation of the somatic complaints scale with the overall mastery score suggest that an assessment of physical complaints might be useful

clinically in identifying children who are
experiencing difficulty adapting and working through
major events and certainly bears further
investigation.

The just world scale, although the subscale with
the fewest CCMS items seemed to have the best ability
to discriminate children with behavior problems with a
significant negative correlation with the total
behavior problem scale as well as with several of the
narrow band factor scales. While the safe world
subscale was associated with potentially depressed
children who tended to somaticize, low scores on the
CCMS subscale that assessed the child's view of the
world as just, fair, and controllable were
significantly associated with children who tended to
act aggressive and hyperactive. Thus it seems that
the two CCMS subscales were tapping into different
types of problem behaviors, or, that different types
of problem behaviors are manifest when a child's world
view in one of these two areas becomes problematic.
The just world subscale seemed to have particular
discriminating ability for the girls' CBCL subtests as
it was significantly correlated with all three: the
schizoid-obsessive scale, the sex problems scale, and
the cruel scale. Although the behaviors that "fell
out" into each of these scales by factor analysis
don't necessarily relate in every instance to the

subscale name, e.g., feeling guilty and talking too much are behaviors on the sex problems scale, it is still interesting to note that these were the problem areas that correlated significantly with the just, controllable world subscale and the reasons for these types of associations bear further investigation.

The fact that the girls' subscales correlated significantly but the boys' subscales did not is somewhat puzzling. One explanation, however, might be the low variability denoted by the low standard deviations on all three of the boys' scales compared to the other narrow band factor scales. It also may be that since the boys' scales tap different types of behaviors than the girls' scales, the types of behaviors the boys' scales tap may be related to mastery in some other way. The self-view subscale of the CCMS did not correlate significantly with any of the CBCL narrow band factors and the implications of this non-finding bear further investigation.

The CCMS and Other Child Variables

Age, sex, grade, and race were not significantly correlated with the mastery scale measures which provides some evidence that the tool is measuring a construct that cuts across these demographic descriptors--as mastery does. The relationships between the depression score and the mastery and subscale scores were in the direction that adds more

evidence of construct validity. The overall mastery
score and the scores on the safe world and just world
subscales did not correlate significantly with
depression, thus presenting evidence that the tools
were measuring different constructs. There was a
significant correlation between the depression score
and the self-view subscale, however. This finding
provides some evidence of concurrent validity for that
subscale in view of previous studies (e.g., Kaslow,
Rehm, & Siegel, 1984) that have demonstrated a
significant relationship between depression and self-
esteem; the latter being a major component of the
self-view scale.

Qualitative Assessment of the CCMS

Overall, with a few minor changes needed, the
children seemed to view the CCMS pictures as well-
enough drawn to clearly convey the intended content in
each situation. The directions seemed to be clear
enough for most children to understand the task on the
first try and, in the cases where they did not, only
brief clarifications were necessary.

It was clear from the children's comments that
they were well able to personalize the situations and
their responses. The children also demonstrated by
their remarks at times that they were looking at some
of the situations with more of a "world view" as in
the case of the child who noted that although his

mother probably wouldn't be on time to pick him up,
most mothers, he thought, were organized enough to be
there for their child on time.

Yet, there were still instances in which some of
the children had trouble with the "what would probably
happen next?" question as occurred several times with
a few of the older children who pointed out that what
the child would do depended on the child's age. In
those instances, it is not clear if the children
answered as they actually viewed the world or
themselves now or if they were thinking of themselves
as younger or of an younger sibling's behavior as one
child mentioned. In another instance, a first grade
girl who seemed rather withdrawn and spoke very
little, hesitatingly pointed to the mastery choice.
When asked what she would do in that situation, she
pointed to the non-mastery choice. This occurred
several times with this child. Changing the
directions to say "what would you do now?" changes the
projective, world view nature of the task, thus
standardized methods of handling these types of
occurrences need to be developed.

Most of the children found the experience of
going through the CCMS situations fun and none of the
children became upset by the experience. Something in
the situations and/or the process was able to elicit
comments about major situations that were causing the

children concern, e.g. a recent death of a sister's
boyfriend, an older sister's drug problem, the death
of a favorite pet, and a number of children talked
about such occurrences, particularly in relation to
the situations about the dark room and going to bed;
both situations that carried some threat or heightened
vulnerability for the children.

Theoretical Development of the CCMS

The three-factor schema of children's cognitive
mastery was derived and adapted from a framework for
viewing an individual's response to traumatic events
and resultant sense of personal vulnerability
discussed by Janoff-Bulman and Frieze (1983). Janoff-
Bulman (in press) has since revised and expanded her
Model of World Assumptions which is now comprised of
three primary categories of assumptions which is each
broken down into subcategories of assumptions. The
first assumption is termed the benevolence of the
world and is broken down into benevolence/malevolence
of the impersonal world and benevolence/malevolence of
people. The second assumption, distributional
principles, is comprised of the three subcategories of
justice, controllability, and randomness. The last
assumption, self-relevant dimensions, also has three
sub-groupings: self-worth, self-controllability, and
luck.

This model was also developed for and with adults. However, it holds some interesting questions for the study of this same process in children. Some of the subcategories, such as "luck" and "randomness" require cognitive ability beyond that of younger children. However, it would be very interesting to test situations relating to these dimensions with children of increasing ages to ascertain when in development these concepts become important in an individual's world view. Future development and refinement of the CCMS situations may be enhanced by a closer look at how elements of this revised model might apply to children. It will also be of interest to see if when the sample of children who have been tested with the CCMS becomes large enough to permit a factor analysis, similar factors to those described in the Janoff-Bulman model are obtained.

Summary

In summary, for the initial testing of a brand-new tool, the results of this pilot study are encouraging enough to warrant further development and investigation of the Child Cognitive Mastery Scale. There is evidence of overall test-retest reliability as well as item test-retest reliability for some of the situations; although many of the situations do require further testing to determine what types of

revisions will improve their reliability. There is
also beginning evidence of inter-administrator
reliability.

This study also identified some initial "hints"
at discriminative and construct validity in terms of
the significant correlations found between the overall
mastery score, the three subscales, and some of the
variables studied. This was true even though the
questionable validity of one of the major measures,
the Child Life Events Checklist, seems not to have
allowed a valid test of the CCMS's discriminant
validity in terms of life events.

The wording of the situations and the drawings of
the pictures seemed to be clear and understandable to
the children tested. The projective assumption that
the children's responses to the situations reflect
their own views of the world and of themselves seems
to be valid for the most part, although standardized
responses to situations in which this type of
responding is questionable need to be developed as
does a better understanding of when such deviations
are apt to occur.

The sample size, although adequate for an initial
pilot study, was not large enough or heterogeneous
enough to provide many definitive answers about the
CCMS. Enough information was able to be obtained,
however, to encourage continued research and

development in this area. Hopefully, the
beneficiaries of this endeavor will ultimately be the
children whose responses to a sometimes frightening
and unpredictable world we will be better able to
understand. And, in doing so, we will be better able
to help children at particular risk along the road to
cognitive mastery of major stress and a more positive
view of themselves and the world in which they live.

APPENDIX A

Initial Letters to Parents and

Informed Consent Form

February 22, 1988

Dear Parent,

I am a doctoral candidate at the University of
Massachusetts at Amherst. I am interested in learning
more about children's responses to stressful
situations that occur in their lives and am writing to
request your help. I have designed a set of pictures
that may help to give us more information about how
children who have experienced stressful events (almost
all children have had something stressful happen to
them) see the world and themselves. Eventually, these
pictures could be helpful in identifying children who
are needing some help in feeling safer in the world
and better about themselves. Right now, though, the
picture tool is in the development stages and that's
why I'm writing to ask your help. Over the next few
weeks, I will be testing these pictures with some
children in your child's school and would like to have
your permission for your child to be involved in the
project.

If you agree to allow your child to participate,
he or she will be shown a picture of a situation such
as a child doing something on a playground and will be
asked to choose which of 2 other pictures would
probably come after the first one. This will take
about 15-20 minutes. We will also help your child to
complete some questions about how he or she has been
feeling for about the previous two weeks. This will
probably take about another 10 minutes. A small group
of children chosen at random from those who
participated will also be asked to repeat the picture
task about one week after the initial information-
gathering.

In order for your child to participate in this
project, I will also ask you for some further
information about your child's behavior and about
certain life events your child may have experienced in
the past. This information will take you about 20
minutes to complete. I will ask you to return this
information directly to me in a stamped envelope that
I will provide.

One last bit of information that will be
important to this project is an estimate of your
child's school achievement which will be obtained by
asking your child's teacher to complete a brief form.

All of the information that will be collected in
this study will be kept strictly confidential and
information that you and your child provide will not
be seen by any of the people who work at your child's
school. No names will be used on the information
forms, only code numbers so that the information that

you provide can be matched with that obtained from your child. All children whose parents have given permission for them to participate will be asked if they wish to do so. No child will be forced to be involved or to respond to anything that he or she does not wish to. Due to the nature of the pictures and the questions, it is very <u>unlikely</u> that any children will become upset in any way by participating, however, if they do, I and supportive school personnel will be available to assist your child. You or your child are free to change your mind about participating and withdraw from the project at any time during the study. Your decision to allow your child to be involved in this study or not will in no way affect your child's grades or standing in his or her school.

If you have any questions about this project, please feel free to contact me at 756-7036. Please sign the attached Consent Form stating whether or not you agree to participate and to give your child permission to participate in this project and have your child return it to his/her teacher as soon as possible.

Most children who have so far been involved with the picture tool have found it an interesting and even enjoyable experience and I hope that you will give the question of whether or not you give permission for your child to participate and whether you will agree to participate yourself your full consideration.

Thank you very much for your attention to this request.

Sincerely,

Linda A. Lewandowski
Ph.D. Candidate

Consent Form

   I have read the attached letter explaining the
study that will test a picture tool aimed at assessing
how chhildren view themselves and the world.   I
understand that my participation and that of my child
is completely voluntary and that proper attention will
be given to our confidentiality.

_____   I agree that I would like to be involved in
this project and give my child permission to also be
involved.

_____   I do not agree to be involved in this project
and do not give my child permission to be involved.

_____   _____
Child's Name   Parent's Signature

_____   _____ Grade
Date

   If you agree to be involved and would like to
receive a brief summary of the findings of this study
once it is completed, please write your name and
address below:

          _____

          _____

          _____

        Thank you for your cooperation!!!

APPENDIX B

Child Life Events Checklist

Child Life Events Checklist

Below are a list of things that can sometimes happen in children's lives. Please follow these instructions:

   A.   Next to any event that your child has experienced <u>in the last year</u>, please write in the approximate month in which it happened, for example, if it happened about last July, write in "July" in the space to the left of the event.

   B.   If the event <u>happened earlier</u> than this past year, please put an "X" in the space.

   C.   If your child has <u>never</u> experienced the event, please put an "O" in the space.

   D.   Please circle the response that correctly identifies how affected you believe your child was by each event he/she has experienced using the following scale:

 1= Very positively   4= Somewhat negatively
 2= Somewhat positively   5= Very negatively
 3= Neither positively or negatively

All responses will be kept strictly confidential and identified only by code number.

----

1. _____ moving to a new home   1 2 3 4 5

2. _____ new brother or sister   1 2 3 4 5

3. _____ changing to a new school   1 2 3 4 5

4. _____ serious illness or injury   1 2 3 4 5
          in the family

5. _____ parents divorced   1 2 3 4 5

6. _____ increased number of arguments 1 2 3 4 5
          between parents

7. _____ mother or father lost job   1 2 3 4 5

8. _____ death of a family member   1 2 3 4 5

9. _____ parents separated   1 2 3 4 5

10. _____ death of a close friend   1 2 3 4 5

11. _____ increased absence of parent   1 2 3 4 5
           from home

12. _____ brother or sister leaving home 1 2 3 4 5

13. _____ serious illness or injury of   1 2 3 4 5
a close friend

14. _____ parent getting into trouble   1 2 3 4 5
with the law

15. _____ parent getting a new job   1 2 3 4 5

16. _____ new stepmother or stepfather   1 2 3 4 5

17. _____ parent going to jail   1 2 3 4 5

18. _____ change in parents' financial 1 2 3 4 5
status

19. _____ trouble with brother or sister 1 2 3 4 5

20. _____ special recognition for good 1 2 3 4 5
grades

21. _____ joining a new club   1 2 3 4 5

22. _____ losing a close friend   1 2 3 4 5

23. _____ decrease in the number of   1 2 3 4 5
arguments with parents

24. _____ making the honor roll   1 2 3 4 5

25. _____ getting a new family car   1 2 3 4 5

26. _____ new boyfriend/girlfriend   1 2 3 4 5

27. _____ repeating a grade   1 2 3 4 5

28. _____ increase in the number of   1 2 3 4 5
arguments with parents

29. _____ getting his/her own job   1 2 3 4 5
(e.g., paper route)

30. _____ major illness or injury of   1 2 3 4 5
self (i.e., your child)

31. _____ getting into trouble with   1 2 3 4 5
police

32. _____ breaking up with boyfriend/ 1 2 3 4 5
girlfiend

33. _____ trouble with teacher   1 2 3 4 5

34. _____ failing to make a team   1 2 3 4 5

35. _____ being suspended from school   1   2   3   4   5

36. _____ getting failing grades on a   1   2   3   4   5
      report card

37. _____ making an athletic team   1   2   3   4   5

38. _____ trouble with classmates   1   2   3   4   5

39. _____ getting a new pet   1   2   3   4   5

40. _____ special recognition for   1   2   3   4   5
      athletic performance

41. _____ death of a favorite pet   1   2   3   4   5

42. _____ fire in home where child   1   2   3   4   5
      was/is living

Other events which you believe have had an important
impact on your child's life: (Please write in and
rate.)

43. _____   _____   1   2   3   4   5

           _____

44. _____   _____   1   2   3   4   5

           _____

45. _____   _____   1   2   3   4   5

           _____

Any other comments?

Thank you for your participation!!!

APPENDIX C

Teacher Form

Teacher Form

1. How would you rate the school performance of this
    child? (Please circle one.)

Well below   Below   Average   Above   Well Above
Average   Average   Average   Average

2. To what extent does this child seem to be working
    to his/her expected potential abilities?

Well below   Below   About at   Above   Well Above
Expected   Expected   Expected   Expected   Expected

3. How would you describe this child's behavior in
    the classroom?

Very   Somewhat   Average   Quite   Very
Disruptive   Disruptive   Well-   Well-
                                          behaved   behaved

4. How would you describe this child?

Very   Quite   Average   Quite   Very
Withdrawn   Withdrawn   Out-going   Out-
                                                      going

5. Any other comments:

Kids sometimes have different feelings and ideas.
This form lists feelings and ideas in groups of three
choices. From each group, pick the one sentence that
describes you the best for the past two weeks. After
you pick a sentence from the first group, go on to the
next group and so on.

There are no right or wrong answers. Just pick the
sentence that best describes the way you have been
recently. Put a mark like this X or a checkmark next
to your answer. Put the mark in the box next to the
sentence that you pick.

Here is an example of how this form works. Try it.
Put a mark next to the sentence that describes you
best.

Example:

_____ I read books all the time.

_____ I read books once in a while.

_____ I never read books.

APPENDIX D

Children's Depression Inventory

Remember, pick out the sentences that describe your feelings and ideas in the past two weeks.

1. _____ I am sad once in a while.

   _____ I am sad many times.

   _____ I am sad all the time.

2. _____ Nothing will ever work out for me.

   _____ I am not sure if things will work out for me.

   _____ Things will work out for me O.K.

3. _____ I do most things O.K.

   _____ I do many things wrong.

   _____ I do everything wrong.

4. _____ I have fun in many things.

   _____ I have fun in some things.

   _____ Nothing is fun at all.

5. _____ I am bad all the time.

   _____ I am bad many times.

   _____ I am bad once in a while.

6. _____ I think about bad things happening to me once in a while.

   _____ I worry that bad things will happen to me.

   _____ I am sure that terrible things will happen to me.

7. _____ I hate myself.

   _____ I do not like myself.

   _____ I like myself.

8. _____ All bad things are my fault.

   _____ Many bad things are my fault.

   _____ Bad things are not usually my fault.

9. _____ I do not think about hurting myself.

   _____ I think about hurting myself but I would not do it.

   _____ I want to hurt myself.

10. _____ I feel like crying everyday.

    _____ I feel like crying many days.

    _____ I feel like crying once in a while.

11. _____ Things bother me all the time.

    _____ Things bother me many times.

    _____ Things bother me once in a while.

12. _____ I like being with people.

    _____ I do not like being with people many times.

    _____ I do not want to be with people at all.

13. _____ I cannot make up my mind about things.

    _____ It is hard to make up my mind about things.

    _____ I make up my mind about things easily.

7. _____ I hate myself.

_____ I do not like myself.

_____ I like myself.

8. _____ All bad things are my fault.

_____ Many bad things are my fault.

_____ Bad things are not usually my fault.

9. _____ I do not think about hurting myself.

_____ I think about hurting myself but I would not do it.

_____ I want to hurt myself.

10. _____ I feel like crying everyday.

_____ I feel like crying many days.

_____ I feel like crying once in a while.

11. _____ Things bother me all the time.

_____ Things bother me many times.

_____ Things bother me once in a while.

12. _____ I like being with people.

_____ I do not like being with people many times.

_____ I do not want to be with people at all.

13. _____ I cannot make up my mind about things.

_____ It is hard to make up my mind about things.

_____ I make up my mind about things easily.

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14. _____ I look O.K.

     _____ There are some bad things about my looks.

     _____ I look ugly.

15. _____ I have to push myself all the time to do
             my schoolwork.

     _____ I have to push myself many times to do my
             schoolwork.

     _____ Doing schoolwork is not a big problem.

Remember, describe how you have been in the past two
weeks.

16. _____ I have trouble sleeping every night.

     _____ I have trouble sleeping many nights.

     _____ I sleep pretty well.

17. _____ I am tired once in a while.

     _____ I am tired many days.

     _____ I am tired all the time.

18. _____ Most days I do not feel like eating.

     _____ Many days I do not feel like eating.

     _____ I eat pretty well.

19. _____ I do not worry about aches and pains.

     _____ I worry about aches and pains many times.

     _____ I worry about aches and pains all the
             time.

20. _____ I do not feel alone.

_____ I feel alone many times.

_____ I feel alone all the time.

21. _____ I never have fun in school.

_____ I have fun in school only once in a while.

_____ I have fun in school many times.

22. _____ I have plenty of friends.

_____ I have some friends, but I wish I had more.

_____ I do not have any friends.

23. _____ My schoolwork is alright.

_____ My schoolwork is not as good as before.

_____ I do very badly in subjects I used to be good in.

24. _____ I can never be as good as other kids.

_____ I can be as good as other kids if I want to.

_____ I am just as good as other kids.

25. _____ Nobody really loves me.

_____ I am not sure if anybody loves me.

_____ I am sure somebody loves me.

26. _____ I usually do what I am told.

_____ I do not do what I am told many times.

_____ I never do what I am told.

27. _____ I get along with people.

_____ I get into fights many times.

_____ I get into fights all the time.

THE END

THANK YOU FOR FILLING OUT THIS FORM !

APPENDIX E

Children's Cognitive Mastery Scale Situations

Children's Cognitive Mastery Scale

<u>Directions</u>: Child is shown an initial picture with a brief story and asked which of two cards/choices of situations probably comes next.

1. This child was shopping with his parents. He was looking at a toy on the shelf and then turned around and couldn't see his parents anywhere. Which of these pictures do you think would probably come next?

   A. a. In this picture, he says "Oh well, I know what to do. I'll just wait here."

       b. In this picture, he says "Oh, no. I don't know what to do, I'm scared".

2. These two children are talking. This girl is telling her friend that she has a problem. What do you think her friend probably says next?

       a. In this picture, her friend says "It's hard when you have a problem, I don't know what you should do, either".

       b. In this picture, her friend says "Problems are hard sometimes, but I know what you could do..." and then she tells the first child something that she could do that might make the problem better.

3. This child fell off his bike. What do you think is probably the reason he fell off?

       a. In this picture, he was showing off and made a mistake so it was his fault that he fell off.

       b. In this picture, he was riding along and hit a hole and fell off by accident, he couldn't help it, it just happened.

4. What probably happened after he fell off?

       a. In this picture, he stays all by himself crying for a while and nobody comes. He has to get up and go home all by himself.

       b. In this picture, an adult that he knows comes to help the child get up and says "Here, I'll help you, you'll be OK, I'll help you get back home".

5. This child is looking into the doorway of a dark room. She isn't sure what is inside the room. What do you think the child will probably do?

    a. In this picture, the child quickly walks away because she is afraid something scary might be in the dark inside the room.

    b. In this picture, she says to herself "There's nothing to be afraid of" and walks inside the room and turns on the light.

6. This child is sick and had to go to the doctor's. What do you suppose she is thinking while she waits for the doctor?

    a. In this picture, the child thinks it was because she did something bad and that it is all her fault that she got sick.

    b. In this picture, the child thinks "I just got sick and nobody knows why. It wasn't anybody's fault."

7. What do you think this child is probably thinks next?

    a. In this picture she is thinking "I'm kind of scared, but it won't be so bad, the doctor is a good person and he will help me feel better."

    b. In this picture, she is thinking "I'm scared and I'll bet the doctor will be mean."

8. This child (point to child on examiner's left) is in school and his teacher asks for someone to help her do something. What probably happens next?

    a. In this picture, he raises his hand and says "I'll do it; I can do that very well".

    b. In this picture, he says to himself, "I'd better not say I will help because I probably won't be able to do it."

9. This child's mother told him that she would pick him up after school today. Which picture probably comes next?

    a. In this picture, the child waits and

waits; he isn't sure when his mother will come.

       b. In this picture, his mother is there right on time to get him.

10. This child is playing basketball with another boy and is trying to make a basket. What probably happens?

       a. In this picture, he makes the basket and they both cheer and jump up and down.

       b. In this picture, he misses the basket and the other boy tell him "Ah, you never get it in the basket!"

11. This boy was walking on the sidewalk when suddenly a ball came through the air and broke a store window. A policeman comes around the corner and sees this boy standing next to the broken window. What probably happens next?

       a. In this picture, the policeman scolds the child because he thinks the child broke the window even though the child really didn't.

       b. In this picture, the policeman is friendly. He listens as the child tells him what happened and he believes that the child didn't do it.

12. This child's parents tell him "Come on, get in the car, we're going someplace. What probably happens next?

       a. In this picture, the child is happy because they are going to a good place that he likes.

       b. In this picture, the child is unhappy because they are going to a place that is not so good; some place the child doesn't like.

13. This child just went outside and she sees some other kids playing together. What probably happens next?

       a. In this picture, the other children call her over to play with them. They like playing with this child.

b. In this picture, the other children say
"Go away, we don't want you to play with
us"; they don't think this child plays
very well.

14. This child was getting himself a drink of water
and he dropped the glass and it broke all over
the floor. What probably happens next?

a. In this picture, the child starts to cry
and thinks "It was all my fault; I can't
do anything right! What do I do now?!"

b. In this picture, the child thinks "Oh
dear, that was an accident, it really
wasn't my·fault, I'll just clean it up."

15. And then what probably happens?

a. In this picture, a grown-up comes in and
says "That's OK, you just broke one
glass, I'll help you clean it up."

b. In this picture, a grown-up comes in and
hollars at the child and says "you
always do everything wrong!"

16. This child is getting ready for school and walks
over to the mirror. What is she probably thinking
when she looks at herself in the mirror?

a. In this picture, she thinks "I like me and
the kind of person I am. I'm pretty good
just the way I am."

b. In this picture she thinks, "I don't like
myself very much or the kind of person I
am. I wish I could change a whole bunch
of things about me."

17. This child and this grown-up are walking into a
big building. Which card probably comes next?

a. In this picture, the child comes out
looking very sad and crying.

b. In this picture, the child comes out
looking very happy.

18. This child is having a bad day and is feeling very sad. Which card probably comes next?

    a. In this picture, some other people come and try to help her feel better.

    b. In this picture, nobody comes, the child just stays all alone and feels sad.

19. This child worked very hard on his assignment and now the teacher is handing back his assignment paper. What probably happens?

    a. In this picture, even though he worked hard, he still didn't get a good grade and his teacher tells him, "Next time work harder".

    b. In this picture, he got a good grade and his teacher smiles and tells him, "You did a good job!"

20. It's nighttime and this child's mother tells her that it's time to go to bed. What probably happens after she gets into bed?

    a. In this picture, the child stays awake and thinks "I get scared at night".

    b. In this picture, he child feels happy and safe in bed and she just goes to sleep.

21. This child is in a store with his parents and they are standing in line to pay for the things they want to buy when the child sees a sort of scary-looking person come to stand by them in the next line. What probably happens next?

    a. In this picture, the child goes to hang on to a hand of each of his parents and thinks "Nobody can hurt me with my mom and dad here." Then he feels better.

    b. In this picture, the child goes to stand closer to his parents and thinks "What if my mom and dad can't protect me?" He stays scared.

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22. This child's friend is going on vacation and asked her to take care of her dog, Rex, while her family is away. What probably happens?

      a. In this picture, the child forgot to feed Rex yesterday and today forgot to latch the door and Rex ran away. She didn't take very good care of him.

      b. In this picture, the child takes good care of Rex. She remembers to feed him every day and always remembers to lock the door after she takes him for a walk.

APPENDIX F

Second Letter to Parents

Linda A. Lewandowski
March 15, 1988

Dear Parent,

Thank you for agreeing to participate in this
study about children's responses to stress. Most of
the children have completed their parts of the study
and now it is the parents' turn!

Enclosed are two questionnaires, each of which
will take about 15 minutes to complete. One form asks
about life stresses your child has experienced and the
other asks for a description of your child's behavior.
Because it has been found that mothers and fathers
sometimes answer forms about their children
differently, in order to keep things uniform, it would
be helpful if <u>mothers</u> could complete both of the
forms.

I realize that everyone has very busy schedules
these days but, if you are able to complete and return
the forms this week (at any rate, as soon as
possible), this would help the study to proceed.

As I pointed out in the letter asking your
consent, the information you provide will be kept
strictly confidential and information about individual
children will not be shared with school personnel.
You will note that your child's name does not appear
on the forms, only his/her code number. In order to
maintain your confidentiality, I have attached a self-
addressed stamped envelope in which you are asked to
return the forms. These can be mailed directly to me,
or, if it is easier for you to return the completed
forms in the sealed envelope by sending it with your
child to school, I will also be able to pick them up
there.

As promised, I will be sending you a short
summary of the findings, probably in early May.
Please call me at 756-7036 if you have any questions
about the forms or the study. Thank you very much for
your cooperation and participation!

Sincerely,

Linda A. Lewandowski
Ph.D. Candidate

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APPENDIX G

Reminder Letter to Parents

March 23, 1988

Dear

Once again, my thanks for your agreement to participate in my study looking at children's responses to stresses in their lives. I am writing, though, to ask your help once again.

I am waiting to begin analyzing the information that has been collected but am still missing some of the Child Life Events forms (white) and the Child Behavior Checklists (blue). These were sent home with your child in a large brown envelope with your name and your child's name on it.

If you have not yet had a chance to fill out these forms and mail them back to me, could I ask you to please do so as soon as possible (perhaps even today!)? This would greatly help, as I do have a deadline by which I must complete this project and it is coming up soon!

If you have already completed and mailed these forms, thank you!

If you did not receive the brown envelope or if you have any questions, please feel free to give me a call at 756-7036.

Thanks again for your cooperation and I look forward to sharing the results with you soon.

Sincerely,

Linda A. Lewandowski
Ph.D. Candidate

Appendix H

Number and Percentages of Parents' Ratings of How

Positively or Negatively Affected Their Children

Were By Experienced Life Events

Number and Percentages of Parents' Ratings of How
Positively or Negatively Affected Their Children Were
by Experienced Life Events

Life Event	Did Not Happen	Very Positive				Very Negative
	0	1	2	3	4	5
1. New home	18	12	5	8	2	0
	(40.0)	(26.7)	(11.1)	(17.8)	(4.4	(0)
2. New sibling	23	9	10	2	1	0
	(51.1)	(20.0)	(22.2)	(4.4)	(2.2	(0)
3. New school	30	5	3	3	4	0
	(66.7)	(11.1)	(6.7)	(6.7)	(8.9	(0)
4. Illness/inj. in family	30	2	5	4	4	0
	(66.7)	(4.4)	(11.1)	(8.9)	(8.9	(0)
5. Parents divorced	39	1	1	2	0	2
	(86.7)	(2.2)	(2.2)	(4.4)	(0)	(4.4)
6. More parent arguing	25	1	1	4	10	4
	(55.6)	(2.2)	(2.2)	(8.9)	(22.2)	(8.9)
7. Parent lost job	41	2	0	1	1	0
	(91.1)	(4.4)	(0)	(2.2)	(2.2)	(0)
8. Death in family	21	2	4	9	9	0
	(46.7)	(4.4)	(8.9)	(20.0)	(20.0	(0)

Life Event	Did Not Happen 0	Very Positive 1	2	3	Very Negative 4	5
9. Parents separated	35 (77.8)	2 (4.4)	0 (0)	1 (2.2)	3 (6.7)	4 (8.9)
10. Death of friend	43 (95.6)	1 (2.2)	0 (0)	0 (0)	1 (2.2)	0 (0)
11. Parent away more	33 (73.3)	2 (4.4)	1 (2.2)	3 (6.7)	4 (8.9)	2 (4.4)
12. Sibling leaves home	40 (88.9)	1 (2.2)	2 (4.4)	0 (0)	1 (2.2)	1 (2.2)
13. Illness/Inj. of friend	43 (95.6)	0 (0)	0 (0)	1 (2.2)	1 (2.2)	0 (0)
14. Parent law trouble	44 (97.8)	0 (0)	0 (0)	0 (0)	0 (0)	1 (2.2)
15. Parent gets new job	24 (53.3)	7 (15.6)	8 (17.8)	1 (2.2)	5 (11.1)	0 (0)
16. New stepparent	39 (86.7)	1 (2.2)	1 (2.2)	2 (4.4)	2 (4.4)	0 (0)
17. Parent going to jail	44 (97.8)	0 (0)	0 (0)	0 (0)	0 (0)	1 (2.2)
18. Change in finances	33 (73.3)	0 (0)	2 (4.4)	8 (17.8)	2 (4.4)	0 (0)

Life Event	Did Not Happen 0	Very Positive 1	2	3	4	Very Negative 5
19. Trouble with sibling	31 (68.9)	1 (2.2)	1 (2.2)	8 (17.8)	2 (4.4)	2 (4.4)
20. Recognized good grades	10 (22.2)	29 (64.4)	6 (13.3)	0 (0)	0 (0)	0 (0)
21. Joining new club	19 (42.2)	13 (28.9)	8 (17.8)	3 (6.7)	1 (2.2)	1 (2.2)
22. Losing close friend	37 (82.2)	0 (0)	1 (2.2)	3 (6.7)	3 (6.7)	1 (2.2)
23. Less parent arguments	32 (71.1)	3 (6.7)	9 (20.0)	0 (0)	1 (2.2)	0 (0)
24. Making honor roll	37 (82.2)	7 (15.6)	1 (2.2)	0 (0)	0 (0)	0 (0)
25. New family car	16 (35.6)	17 (37.8)	8 (17.8)	4 (8.9)	0 (0)	0 (0)
26. New boy/ girlfriend	33 (73.3)	7 (15.6)	2 (4.4)	2 (4.4)	1 (2.2)	0 (0)
27. Repeating a grade	40 (88.9)	1 (2.2)	1 (2.2)	0 (0)	2 (4.4)	1 (2.2)
28. More arguing with parents	31 (68.9)	0 (0)	1 (2.2)	7 (15.6)	2 (4.4)	4 (8.9)

Life Event	Did Not Happen	Very Positive				Very Negative
	0	1	2	3	4	5
29. Getting own job	38 (84.4)	2 (4.4)	4 (8.9)	1 (2.2)	0 (0)	0 (0)
30. Illness/inj. of the child	37 (82.2)	2 (4.4)	1 (2.2)	2 (4.4)	3 (6.7)	0 (0)
31. Trouble with police	43 (95.6)	0 (0)	1 (2.2)	0 (0)	1 (2.2)	0 (0)
32. Breakup with boy/girlfr.	43 (95.6)	0 (0)	1 (2.2)	0 (0)	1 (2.2)	0 (0)
33. Trouble with teacher	36 (80.0)	0 (0)	1 (2.2)	3 (6.7)	4 (8.9)	1 (2.2)
34. Fails to make a team	43 (95.6)	0 (0)	0 (0)	1 (2.2)	1 (2.2)	0 (0)
35. Suspended from school	45 (100)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
36. Failing grades	39 (86.7)	0 (0)	0 (0)	1 (2.2)	2 (4.4)	3 (6.7)
37. Making an athlet. team	32 (71.1)	10 (22.2)	2 (4.4)	1 (2.2)	0 (0)	0 (0)
38. Trouble with classmates	31 (68.9)	1 (2.2)	2 (4.4)	3 (6.7)	6 (13.3)	2 (4.4)

Life Event	Did Not Happen	Very Positive				Very Negative
	0	1	2	3	4	5
39. Getting new pet	12 (26.7)	23 (51.1)	6 (13.3)	3 (6.7)	1 (2.2)	0 (0)
40. Athletics recognition	29 (64.4)	12 (26.7)	4 (8.9)	0 (0)	0 (0)	0 (0)
41. Death of pet	23 (51.1)	1 (2.2)	2 (4.4)	3 (6.7)	10 (22.2)	6 (13.3)
42. Fire in child's home	41 (91.1)	1 (2.2)	0 (0)	0 (0)	3 (6.7)	0 (0)

Appendix I

Experienced Events Rank-ordered by

Mean Parent Ratings

Rankings of How Positively or Negatively Children Were

Affected by Life Events According to Mothers' Ratings

(1 = Very Positively Affected; 5 = Very Negatively

Affected)

Event	N	Mean
1. Making the honor roll	8	1.13
2. Recognition for good grades	35	1.17
3. Recognition for athletics	16	1.25
4. Making an athletic team	13	1.31
5. Getting a new pet	33	1.45
6. New family car	29	1.55
7. New boy/girlfriend	12	1.75
8. New brother or sister	22	1.77
9. Joining a new club	26	1.80
10. Getting own job	7	1.86
11. Less parent arguments	13	1.92
12. Moving to a new home	27	2.00
13. Parent gets new job	21	2.19
14. Parent lost job	4	2.25
15. New school	15	2.40
16. Death of a friend	2	2.50
17. Illness/injury in the family	15	2.67
18. Illness/injury of the child	8	2.75
19. New stepparent	6	2.83
20. Sibling leaves home	5	3.00

Event	N	Mean
21. Changes in finances	12	3.00
22. Break-up with boy/girlfriend	2	3.00
23. Trouble with police	2	3.00
24. Death in the family	24	3.04
25. Repeating a grade	5	3.20
26. Trouble with sibling	14	3.21
27. Parent away more	12	3.25
28. Fire in child's home	3	3.25
29. Parents divorced	6	3.33
30. Trouble with classmates	14	3.43
31. Failing to make a team	2	3.50
32. Losing a close friend	8	3.50
33. Illness/injury of friend	2	3.50
34. Trouble with teacher	9	3.56
35. More arguing with parents	14	3.67
36. Parents separated	10	3.70
37. More parent arguing	20	3.75
38. Death of a pet	22	3.82
39. Failing grades	6	4.33

Note: Three events were not included in the above ranking: "Parent in trouble with the law" and "Parent

going to jail" (only experienced by one child, both

rated "5") and "suspended from school" (no children).

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