

THE MEASUREMENT OF DEPRESSION, SELF-CONCEPT AND  
LOCUS OF CONTROL AMONG LEARNING DISABLED  
AND TYPICAL CHILDREN

---

A THESIS  
SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS  
FOR THE DEGREE OF MASTER OF ARTS  
IN THE GRADUATE SCHOOL OF THE  
TEXAS WOMAN'S UNIVERSITY

COLLEGE OF EDUCATION

BY  
ELIZABETH DEASON FRY, B.A.

---

DENTON, TEXAS

MAY 1982

### Acknowledgements

I would like to express my appreciation to the staff of the Mesquite Independent School District for their cooperation in my research efforts. Particular thanks go to Dr. Pat Brewster and Mr. Vernon Horsley. Thanks also go to the principals of the Florence Black, Galloway, McWhorter, Porter, Range, and Florence elementary schools in that district. I also appreciate the assistance of the parents who allowed their children to participate in the research.

I am also greatly appreciative of the efforts of Dr. David Marshall of the Mathematics Department of Texas Woman's University. I would like also to thank Dr. Jane Conoley who has been particularly helpful and patient as my thesis chairman. I would also like to thank Dr. Robert Littlefield who gave me moral support when needed.

## Table of Contents

Introduction . . . . .	1
Definition of Terms . . . . .	1
The Use of Psychometrics in Studying Childhood Depression . . . . .	2
The Population--Typical and Learning Disabled Children . . . . .	8
Hypotheses--Rationales . . . . .	13
Method . . . . .	15
Subjects . . . . .	15
Instruments . . . . .	15
Procedure . . . . .	20
Results . . . . .	20
Discussion . . . . .	24
Appendices	
Appendix A . . . . .	31
Appendix B . . . . .	36
Appendix C . . . . .	43
Reference Notes . . . . .	51
References . . . . .	52

## List of Tables

### Table

1	Discriminant Function Analyses Between Learning Disabled and Typical Children . . .	21
2	Discriminant Function Analyses Between Younger and Older Children . . . . .	23

The Measurement of Depression,  
Self Concept, and Locus of Control Among  
Learning Disabled and Typical Children

Definition of Terms

Researchers who study learning disabled children must deal with the confusion over the use of the terms distinguishing learning disabled children and hyperactive children. In this paper, the term learning disabled children refers to children who manifest "minimal brain dysfunction syndrome." Clements defines children with minimal brain dysfunction as

children who are of near average, average or above average general intelligence with certain learning or behavioral disabilities ranging from mild to severe, which are associated with deviations of function of the central nervous system. These deviations may manifest themselves by various combinations of impairment in perception, conceptualization, language, memory, and control of attention, impulse or motor function. (1966), p. 4)

In this paper, the term learning disabled is an umbrella term covering all children with minimal brain dysfunction syndrome. In many of the references cited, the children who have deficits in the control of attention, impulse or motor function are called hyperactive. This paper considers hyperactive children as one type of learning disabled child. In this paper, typical children are

children placed in the standard classrooms in the elementary school.

### The Use of Psychometrics in Studying Childhood Depression

Recent research in the area of childhood depression has focused primarily on defining the phenomena and clarifying its nosology. Defining the phenomena involves distinguishing depression as a symptom characterized by a sad, despondent mood, depression as a syndrome with accompanying cognitive, psychomotor, and vegetative manifestations, and depression as a disorder with a characteristic clinical picture, natural history, and biological correlates (Malmquist, 1975; Schulterbrandt & Raskin, 1977; Gittleman-Klein, in Schulterbrandt & Raskin, 1977). Studying childhood depression as a syndrome involves finding out what percentage of unhappy children are suffering from depression, and what percentage of children who deny depression but manifest problem behaviors are actually suffering from a depressive syndrome (Carlson, 1980).

The research which attempts to define the nosology of childhood depression is considerably hampered by the lack of consensual agreement. Recently, researchers have pursued more pragmatic approaches to examining childhood

depression. Psychiatric interviews using operationally defined diagnostic criteria and rating scales represent attempts to make the research more empirical.

The application of psychometrics is an effort to quantify the clinical phenomenon so that a uniform nosology of childhood depression may be established. The types of scales now available, and the psychometric properties of these scales were recently discussed by Kovacs (Note 2). The scales represent an important step in the scientific inquiry of childhood because they allow the comparison and integration of findings from different studies; they provide a medium of communication for researchers; and, when combined with clinical evaluation and interviews with significant others, they aid in providing a multifaceted impression of the child (Kovacs, Note 2).

Three types of scales have been employed in the effort to quantify the clinical phenomenon of childhood depression: self report scales, clinician-rated scales, and rating scales completed by others. Lang and Tisher (1978) and Kovacs (1978) have prepared the two self report scales. Both of these scales are severity measures, and are designed to be used with school-aged children with at least a second grade reading level (Kovacs, Note 2). From the preliminary research used to

evaluate both of the scales, Kovacs' Children's Depression Inventory (CDI) (Appendix 1) appears to be preferable because it was patterned after Beck's well known adult inventory, and because tentative results indicate that the CDI does discriminate between a depressed, clinical, and a normal group (Kovacs, Note 2). Lang and Tisher have concluded that it is premature to conclude that their Children's Depression Scale clearly discriminates between the various groups of children. There are two clinician-rated scales, Poznanski, Cook and Carroll's 16 item Children's Depression Rating Scale (1979) and Petti's (1978) Bellevue Index of Depression. Both of these scales, while representing attempts to assess childhood depression, rely heavily on interviewer judgment, and their use requires training and sophistication (Becker, 1974).

A very promising approach to the assessment of childhood depression is relying on the judgment of individuals who are part of the child's environment. The Lefkowitz and Tesiny (1980) Peer Nomination Inventory of Depression (PNID), a sociometric instrument which requires that a child be evaluated by his peers, is representative of this approach. This instrument, while still in the experimental stages, has been found to have good psychometric properties. The authors have found that the

test-retest coefficient for the total depression score was +.75. There were significant correlations between high scores on the PNID and high scores on the Modified Zung Self-Rating Depression Scale, the Modified Children's Depression Inventory, and ratings made by teachers indicating depression. Subjects with high PNID scores exhibited depressed intellectual functioning, poor school behavior, and diminished ebullience (Lefkowitz and Tesiny, 1980).

However, researchers who use any of these scales must also be aware of some of the problems they present: 1) the available tools are still to be considered experimental, 2) they are designed to measure along one continuum only (i.e., severity), and 3) additional data are needed in support of their validity and reliability (Kovacs, 1980). Additionally, item selection is problematic because different test designers stress the importance of different symptoms.

Recently, Freidman, Miezitus, and Butler (Note 1) have devised a self-report test battery to assess childhood depression. The use of several tests, each of which tests an important aspect of depression, gives the researcher a more comprehensive view of the disorder.

In addition to higher scores on a depression scale, it is felt that depressed children will also suffer from impairments in self-esteem and locus of control. Several

authors (Glaser, 1968; Bakwin, 1972) believe that low self-esteem is a symptom of depression in children. Beck feels that in the depressed person, "cognition is structured in negative terms." The pervasive negative attitudes are structured in a "cognitive triad," with the person maintaining negative attitudes toward himself, toward the outside world and toward his future (Kovacs and Beck, in Schulterbrandt and Raskin, 1977). The depressed adult, according to Beck, sees himself as deficient, inadequate or unworthy (Kovacs and Beck, in Schulterbrandt and Raskin, 1977). Seligman (1975) feels that low self-esteem is the emotional deficit that people display when they experience learned helplessness, the term used for the concept of creating the symptoms of clinical depression in the laboratory. Therefore, a self-battery of tests would benefit from a test which measures self-esteem.

Another aspect of depression which has been examined by researchers and can be tested at this time is locus of control. Examination of locus of control in children is an attempt to apply the Seligman's Learned Helplessness Theory of Depression to children. The cornerstone of Seligman's theory is that when organisms cannot control the outcome of their responses, they learn that the outcome of their response is independent of their instrumental responses. When animals or humans experience

uncontrollable events, they suffer from three deficits: 1) a motivational deficit in that voluntary responding is retarded, 2) a cognitive deficit, in which the animal or person fails to see that responding is effective, and 3) an emotional deficit, which is expressed in a depressed mood or a negative affect. Individuals who have external locus of control believe that reinforcement follows some action of their own but is not contingent upon their own actions. It is typically perceived to be the result of chance or fate or other external factors. Individuals who have internal locus of control believe that reinforcement is contingent on their own actions. The person who demonstrates external locus of control is likely to become helpless and hopeless (Seligman, 1975). These adjectives, helplessness and hopelessness, are frequently used as descriptors for depression.

Dweck has raised the possibility that learned helplessness is the precursor to adult depression (Dweck in Schulterbrandt and Raskin, 1977). If children become helpless when they experience uncontrollable failure, then children with learning problems are prime candidates for experiencing learned helplessness. There is also evidence that helpless children are in all cases as competent at problem-solving jigsaw problems and block design problems as typical children before failure (Dweck,

1975; Dweck & Reppuci, 1973). Once failure occurs, however, their behavior rapidly disintegrates to the point that they are no longer capable of solving problems effectively.

Thus, this review suggests a justification for a methodological study involving depression. The investigation to be reported used Kovac's Depression Inventory to study depression in children, the Piers-Harris Self-Esteem Scale (Appendix B) to study self-esteem, and the Nowicki-Strickland (N-S) (Appendix C) to study locus of control in children.

#### The Population--"Typical" and Learning Disabled Children

There is a paucity of information about the incidence of depression in the general population of children (Kashani and Simonds, 1979). Kashani and Simonds, in their literature review on the subject, cite several studies with completely different findings on the incidence of depression in children. Albert and Beck (in Kashani and Simonds, 1979) found that 33% of the seventh and eighth graders in a classroom setting of 63 parochial school children were moderately to severely depressed as measured by the shortened Beck Depression Inventory. Using the Bellevue Index of Depression, Petti (in Kashani and Simonds, 1979) diagnosed depression in 59% of 73

children (aged 6-12) admitted to an outpatient clinic. Kashani and Simonds, in their own study (1979), using interviews and diagnosing children according to the DSM-III diagnostic criteria for affective disorders, found an incidence of only 1.9%. The study consisted of 103 randomly selected children divided equally into two samples: half from families who attended a family practice clinic at the University of Missouri Medical Center, and the other half made up of children who had been born at the University of Missouri Medical Center. This research points out both the conflicting evidence regarding the incidence of depression in children, and also the confusion over the assessment of depression in children. Both Beck's Depression Inventory and the Bellevue Index of Depression are designed to be used with adults, and individually administered diagnostic techniques are typically subject to experimenter bias. It would appear that more empirical research would greatly benefit the field.

Three studies have used rating scales in an attempt to clarify the nosology of childhood depression. Albert (in Schulterbrandt, 1977) administered a short version of Beck's Adult Depression Inventory (Beck, 1961) to a sample of 63 children in the 7th and 8th grades of a parochial school in Philadelphia to determine whether the

symptoms demonstrated by the children in the "moderate-severe" range would cluster in a way analogous to adult symptom clusters. The "moderate-severe" range (scores 8 to 16) was determined by comparing the scores with the cut-off ranges established for adults. The "moderate-severe" children demonstrated much higher percentages of items concerning sadness, sense of failure, guilt, self-dislike, self-harm, indecisiveness, self image changes than the children in "no-depression" and "mild-depression" categories.

Carlson and Cantwell (1980) with a psychiatric population, compared the CDI ratings of children with different clinical diagnoses. They found that the children with clinical diagnoses of secondary affective disorder and primary affective disorder have a higher mean CDI than children with a clinical diagnosis of behavior disorder alone or anorexia nervosa alone. They also found that children who meet criteria for depression also meet criteria for other disorders such as hyperactivity, conduct disorders, and anorexia nervosa. They labeled these children as having "masked" depression. The third study, using a population of 875 Canadian school children provided some concurrent validity for the CDI in that Freidman and Butler (Note 1) found that

children earning high CDI scores tend to have low self-esteem.

The studies cited above give researchers information about depression in children with clinical diagnoses. While this research is valuable, studying depression in different groups of non-clinical children would add a new dimension to the literature. Comparing, for instance, the depression of "typical" children with the depression of learning disabled children would give researchers more information about the phenomenon in general. Many authors have been perplexed by the behavioral problems of children with learning disabilities (Weinberg, Note 3; Schachter, 1974; Rie, 1980). Schachter reported that during the year 1973, one-third of all of the cases of children referred to a psychiatric clinic presented a learning disability as the primary symptom. Weinberg (Note 3) suggests that

it is the classroom behavior of many children that accounts for their being referred to an educational evaluation center for evaluation and treatment.  
(p. 1)

Weinberg also reports that between 50% and 78% of the population entering Winston, a school and diagnostic treatment center for children with learning disabilities in Dallas, Texas in 1975-1979 were diagnosed as either hyperactive, depressed, or hyperactive and depressed. Weinberg also believes (Weinberg, Rutman, Sullivan,

Penick, and Dietz, 1973; Brumback, Deitz-Schmidt, and Weinberg, 1977) that childhood depression, independent of learning disabilities, might be a common condition in children who are doing poorly in school. Gross and Wilson (1974) found a larger percentage of depression in minimally brain damaged children than in the regular school population. Wender (1975) points out that increased lability and dysphoria are common behavioral problems in minimally brain damaged children.

The data mentioned above suggests the need for more comparative research in the area of depression in typical and learning disabled children. The current research was an attempt to contribute to the study of childhood depression in several ways. First, it was believed that it would aid in establishing the validity of using a depression battery in assessing childhood depression.

Second, it would replicate studies that have used Kovacs' CDI as a tool for measuring depression in school. There was no research which uses the scale alone on American children. The scale had been used in addition to clinical judgment (Carlson and Cantwell, 1980).

Third, the research would provide additional information on depression in learning disabled children for educators who are concerned with the behavioral problems of children with learning disabilities. It is believed

that determining the extent of depression in learning disabled children would help psychologists and educators in treating and educating these children.

#### Hypotheses--Rationales

The following hypotheses were investigated in this study:

1) Children who were labeled as learning disabled by the current assessment standards will tend to score higher than the normative mean of 9.27 on the CDI, lower than the normative mean of 53.43 on the Piers-Harris and higher than the mean for each grade level on the Nowicki-Strickland test. It is felt that the studies reviewed in this paper have suggested this hypothesis, although there have been no previous studies to test these relationships.

2) Female children, both typical and learning disabled would score higher than the mean on the CDI, lower than the mean on the Piers-Harris Self-Esteem Scale and higher than the mean for each grade level on the Nowicki-Strickland Locus of Control Scale. (The Nowicki-Strickland test is scored with higher scores meaning more external locus of control.) Although sex differences were expected, previous studies revealed conflicting findings concerning these differences. Albert and Beck (1975) found that girls tended to score higher than boys

on the Beck Depression Inventory, although they did not report the score in their study. Kovacs (1980) reports that preliminary analyses of data obtained from administering the CDI to 875 Canadian children indicated no discernable sex differences. Carlson and Cantwell (1980) report differences in the percentages of children manifesting Primary Affective Disorders. The ratio of boys to girls labeled with Primary Affective Disorder was 55 to 45, and the ratio of boys to girls labeled Secondary Affective Disorder as 63 to 37.

3) There will be age differences on the scores obtained on the three tests, some due to increased depression and some to increased age. Older learning disabled children will score higher than the mean on the CDI, lower than the mean on the Piers-Harris and higher than the mean for each grade level on the Nowicki-Strickland. The Dweck (in Schulterbrandt and Raskin, 1977) research pointed out that children who fail, as learning disabled children have, become helpless. Therefore, the longer the child had been labeled learning disabled, the more helpless and depressed he should be. However, maturation may be a mediating variable, according to the authors of the N-S test. They found that older children tend to score more often in the internal locus of control position than younger children.

MethodSubjects

The subjects were 41 learning disabled elementary students and 41 typical students from the Mesquite Independent School District. The learning disabled and typical students were divided into two groups of 41 children. There were 23 learning disabled children from ages 6.00-8.11 (1st, 2nd, and 3rd graders) and 18 students from ages 9.00-12.00 (4th, 5th, and 6th grades). This made a total of four groups: young and old learning disabled children, and young and old typical children.

Students were those whose parents allowed them to participate in the study from selected classrooms in 6 schools. The classes were selected by the principals so that there were 2 classes representing 2 grades from each school. The schools were selected with the advice of school administrators and the Mesquite research consultant so that there was a cross-section of the various socio-economic levels residing in the school district.

Instruments

- 1) Kovacs' CDI consists of 27 multiple choice items which are designed to assess depressive symptoms in children. Each CDI item assesses one symptom by presenting three choices rated zero, one, or two in the direction

of increasing psychopathology. Thus, the CDI total scores range from zero to 54. A score of 19 denotes moderate depression based on a sample of 875 Toronto school children (Kovacs, 1980). The mean score of the normative sample, obtained by self-report method, was 9.27.

Kovacs' CDI is a test designed to measure the severity of depression in children who have at least a second grade reading level (Kovacs, 1980). Modeled after Beck's well known adult inventory, the CDI appears to discriminate between a depressed, clinical, and a normal group (Kovacs, 1980). The current research version of the CDI was administered to 875 Canadian children, aged 10-17 years, enrolled in grades 4-8 in several Toronto schools (Friedman, Butler, 1980). The CDI scores ranged from 0 to 54. According to the preliminary analyses of the data, this version of the inventory demonstrates favorable psychometric properties. Its internal consistency is respectable (coefficient alpha=.86) and the item-total score correlations are all statistically significant (.31 to .54) (Kovacs, 1980). The scores on the Toronto children represent what one would expect from a "typical" population, the bulk of the children having very low scores, a mean of 9.7, a standard deviation of 7.9, and a mode of 7 (Friedman and Butler, 1980). The CDI appears

to be a reasonably stable index of the symptoms assessed over a one-month interval ( $r=.72$ ,  $n=28$ ). The CDI investigates a number of overt symptoms of childhood depression such as sadness, anhedonia, suicidal ideation, and sleep and appetite disturbance (Kovacs, Note 2).

Kovac's CDI is a brand new test in experimental phases. Despite the lack of appropriate age norms for some of the children in this study to be reported, this study is seen as contributing information on the psychometric qualities of the test. The youngest age reflected in the CDI norms is 10 years old. The current study utilized first and second grade children (7-9 years old). The scores these children generated were compared to existing normative means to determine the feasibility of using the test for younger children. However, the major purpose of the study was to compare the learning disabled with the typical group.

2) The Piers-Harris Self Concept Scale is a pencil and paper measure consisting of 80 questions that are answered yes or no by placing a circle around the answer next to the question. It was designed to be readable on the 3rd grade level, but may be administered on an individual basis below that level. The items are scored in the direction of high (adequate) self concept. The mean of the normative sample is 51.84, the standard deviation is

13.87 and the median is 53.43. Significant differences between grades can be shown to exist; however, Piers and Harris point out in their manual that these differences may not mean practical significance because of the differences in samples. No significant sex differences were found for the normative sample (Piers & Harris, 1969).

The Piers-Harris Children's Self Concept Scale was designed for research on the development of children's self attitudes. It has been used to identify cases of children who are deviant as well as establishing norms for typical children. The test measures children's attitudes on their own behavior, their intellectual and school status, physical appearance and attributes, anxiety, popularity, and happiness and satisfaction. The internal consistency coefficients of the test ranged from .78 to .93, depending on the ages of the children and the length of time between the test and retest. The validity of the scale determined by correlating it with the Lipsett's Children's Self-Concept Scale, was .68 (1969).

3) The Nowicki-Strickland Locus of Control Scale is a pencil and paper measure consisting of 40 questions that are answered yes or no by placing a mark next to the question. The test was designed for 5th grade level readability, although the test makers believe that the

test is also appropriate for 1st and 2nd graders if administered individually. The total number of yes answers the child marks is his score on the test. Means for this test, based on a normative sample of 151 students, range from 19.1 for 3rd graders to a score of 11.65 for the 9th grade. The age differences indicate that the children may become more internal with increasing age.

Test items describe reinforcement situations across interpersonal and motivational areas such as affiliation, achievement and dependency (Nowicki-Strickland, 1973). Internal consistency of the N-S, measured by the split-half method was  $r=.63$  (for grades 3, 4, 5),  $r=.68$  (for grades 6, 7, 8), and  $r=.68$  (for grades 9, 10, 11). Test-retest reliabilities sampled at three grade levels, six weeks apart were .63 for the third grade, .66 for the seventh grade, and .71 for the tenth grade.

Norms are available on the N-S from 3rd to 9th grades. As stated above, the test developers suggested in their article (Nowicki-Strickland, 1973) that the test was appropriate for 1st and 2nd graders but their study emphasized somewhat older students. The children for whom norms are not available will be compared to existing norms.

### Procedure

All of the tests were administered orally in small groups of 5 in order to avoid contamination by reading differences. The students in the groups took all three tests in one sitting. It took approximately 40 minutes for each group of 5 children to complete the battery. The researcher administered the tests to one school a day, taking 6 days.

Due to improper administration which was undetected until after the data analysis, the results of the Nowicki-Strickland have been omitted from the results.

### Results

Multivariate analyses of variance with two levels of Learner (disabled vs. typical), two levels of Age (young vs. old), and two levels of Sex resulted in significant main effects for Learner ( $F(3,82)=5.06$ ,  $p=.01$ ) and for Age ( $F(3,82)=6.58$ ,  $p=.001$ ). Sex and all interactions of main effects were not significant.

Discriminant analyses were performed between young versus old subjects in order to identify variables contributing to the significant main effects. (Table I)

Learning disabled versus typical. A dimension of Depression-Self-concept emerged in analyses of learner types. Learning disabled children tend to be more

**Table I**

**Discriminant Function Analyses Between  
Learning Disabled and Typical  
Children**

Variable	Function I	Wilks Lambda	F	Sig.
Kovacs-Test 1	-0.41164	0.91543	0.7391D+01	0.0080
Piers-Harris Test 3	.66427	.89972	0.8916D+01	0.0037
Group Means				
	Test 1	Test 3	Function	
1 LD	11.26829	51.29268	-.34712	
2 (Typical)	6.9761	59.51220	0.34712	
	9.12195	55.40244		

depressed and have lower self-concepts, while typical children tend to be less depressed with higher self-concepts.

Younger versus older. A dimension of both of the tests emerged, with the strongest discrimination due to self-concept. Older subjects tend to be slightly more depressed, and have lower self-concepts, while younger subjects tend to be slightly less depressed and have higher self-concepts. (Table 2)

Comparison of Sample and Population Means. One sample T tests were performed on each test using means obtained from the normative sample of the Kovacs and Piers-Harris tests and the means for the learning disabled, typical, older and younger groups of the sample population. All t values were nonsignificant except the t value for the younger group on the Piers-Harris ( $t=4.93$ ,  $DF=3,39$ ,  $sig=.001$ ). However, the mean for this group is 51.84 which is within one standard deviation of the population mean of 59.59 ( $SD=13.87$ ).

The norms of the Piers-Harris were based on 1183 public school children ranging from Grade 4 to Grade 12 in one school district in Pennsylvania. The developers of the test did not specify what proportion of these students were learning disabled.

Table 2

Discriminant Function Analyses Between  
Younger and Older Children

Variable	Function I	Wilks Lambda	F	Sig.
Kovacs-Test 1	0.47425	0.99997	0.2701D-02	.9587
Piers-Harris Test 3	.90211	0.97424	0.2115D+01	0.1497
<hr/>				
Group Means				
		Test 1	Test 3	Function
1 Young	9.07692	57.58974		.52
2 Old	9.16279	53.41860		-.47
	9.12195	55.40244		
<hr/>				

### Discussion

The statistical evidence supported the hypotheses in the main area of research. The finding that the levels of groups (learning disabled vs. typical) resulted in a significant main effect in the multivariate analyses of variance between groups supports the previous literature, and also Hypothesis 1. The previous research in which the researchers found depression to be a factor in learning disabled children was gained from mostly clinical observations. This research, using psychometric methods, supports those previous findings.

The emergence of a dimension of Depression-Self-Concept found in the discriminant analyses also supports the previous literature. The clinical observation of Lievans (1974) and Paternite, Loney, and Langhorne (1976) identified unsatisfactory self-esteem as a pervasive problem in minimally brain-damaged populations. The current research lends empirical data to this clinical observation.

The absence of any significant interactions is contrary to the research hypothesis. Hypothesis 3 predicted that older learning disabled children would be more depressed and have poorer self-concepts. According to this research, continued failure in school does not increase the amount of depression in children. As a

whole, learning disabled children are more depressed and have lower self-concepts, but their depression does not exacerbate as they grow older, and their self-concepts do not get worse. One explanation for this may be that the school and mental health professionals are, to some extent, addressing the emotional problems of learning disabled children.

The finding of two levels of Age (young vs. old) which resulted in main effects in the multivariate analyses of variance was not predicted and was a puzzlement to the researchers. There are three possible explanations as to why these older children seemed more depressed: 1) there are psychological and environmental factors that create conditions for the development of depression and poor concepts as children grow older, 2) the tests are subject to maturational factors which make the children look more depressed, or 3) the problem of defining depression in children. It is possible that what was measured on this test is not depression. The fact that the norms of the experimental sample were within one standard deviation of the normative sample in both the Kovacs and Piers-Harris indicates that the difference is not due to poor test construction. The Piers-Harris has been tested for differences in grade levels 4, 5, 8, 10, and 12 and there

were no consistent differences between these grades (Piers, 1969).

Since the difference in the levels of depression does not seem to be due to poor test construction, the explanation for the research finding is either that psychological and environmental factors create higher depression levels in older children, or the tests are not actually measuring depression in children, merely what some researchers believe depression is in children. Two factors make this research and previous research valuable in defining depression in children: 1) the Kovacs test has been used effectively to demonstrate differences between typical children and clinically diagnosed children, and 2) the present research has demonstrated that there are differences in different types of non-clinical children. Perhaps researchers can now define a child as being depressed when he scores significantly higher than the mean of the normative samples on the Kovacs and Piers-Harris tests.

Since it is possible that the tests do seem to measure depression in children, there is only one explanation left for the difference in age groups: the explanation that children do become more depressed as they grow older. There is no previous research comparing levels of depression between different age groups in children.

Therefore, the reasons for the finding are subject to speculation. It is possible, however, that as children develop, they are subject to more and more pressures which create the phenomenon of depression, a phenomenon not found as often in younger children. This belief, that younger children are not subject to clinical depression, was the predominant one for many years before current researchers began believing that children's depression is indeed like adult clinical depression. It is also possible that older children are more aware of their feelings and can better express their feelings on types of tests.

The fact that sex was not a significant predictor of test results gives more support to the validity of the tests. If sex differences had been found, one would suspect errors in test construction which would have made the tests less valuable. The data generated in this study throws suspicion on previous research findings that girls are more apt to become depressed than boys. If the type of depression measured by these tests is like primary affective disorder, there is conflict between this research and past research, a problem that should be addressed by future researchers. Another interesting research project would be the difference between the children male-female depression ratio and the adult male-female ratio.

The statistical evidence that t tests resulted in no values past one standard deviation from the normative sample is an indication that the tests, if administered as in this research, may be used for younger groups of children. This is important because it makes the test usable for a larger range of ages in children and can lead to further research as to the differences in depression levels and the maturational influences on depression in children.

There are several suggestions as to how the research findings may be useful. Researchers, clinicians, and educators can benefit from the findings by using the Kovacs and Piers-Harris tests together as a screening device for detecting depression in learning disabled and also typical children.

The finding of the significant main effect of the learner factor can be a great benefit to teachers since it is the classroom behavior of the learning disabled child that first alerts teachers to their problems. They can be aware that these children may indeed be suffering from childhood depression as well as specific organic malfunctioning. Teachers of learning disabled children and teachers of typical children need to look at emotional as well as remedial learning therapy for children who are not doing well in school. All teachers should make the

classroom more success-oriented. Teachers, in doing this, will face a "chicken or the egg" problem: Do children who are depressed exhibit their depression in low grades, or does failure in school induce depression?

Areas for future research, as mentioned above, are the differences in the amount of depression in younger and older children, the comparision of depression as operationally defined in this study and clinical depression in children, the effect of failure in school on the incidence of depression in children, and the male-female ratio of depression at different age levels. Additional research is suggested in the areas of the effects of socio-economic status on depression and self-concept in depression in children, the effects of history (parental factors such as divorce, emotional distress) on depression in children, and the effect of IQ on depression and self-concept in children.

It is believed that this research could have benefited from the addition of interviews with the parents and the family history. Additional data from the Nowicki-Strickland test would also be of interest in this study.

In summary, a test battery made up of two tests related to childhood depression was administered to learning disabled and typical children. Multivariate analyses of variance revealed main effects of Learner

(typical versus learning disabled) and Age (older versus younger). Discriminant analyses revealed a dimension of depression-self-concept which discriminated the groups suggesting that learning disabled children and older typical children are more depressed and have lower self-concepts than do typical and younger children.

## **Appendix A**

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 KILLING MYSELF  
 I THINK ABOUT KILLING MYSELF BUT I WOULD NOT DO IT  
 I WANT TO KILL 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
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 AT SCHOOL  
 I HAVE FUN AT SCHOOL ONLY ONCE IN A WHILE  
 I HAVE FUN AT 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 SCHOOL WORK 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 THAT SOMEBODY LOVES ME
26.  I USUALLY DO WHAT I AM TOLD  
 I DO NOT DO WHAT I AM TOLD MOST 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

---

SUM: \_\_\_\_\_

ADMINISTRATION: O. INDIVIDUAL  
I. GROUP

## **Appendix B**

# **THE PIERS - HARRIS CHILDREN'S SELF CONCEPT SCALE**

**(*The Way I Feel About Myself*)**

*by*

ELLEN V. PIERS, Ph.D.

and

DALE B. HARRIS, Ph.D.

*Published by*

Counselor Recordings and Tests

BOX 6184 ACKLEN STATION

NASHVILLE, TENNESSEE 37212

## THE WAY I FEEL ABOUT MYSELF

NAME .....

AGE ..... GIRL OR BOY.....

GRADE ..... SCHOOL.....

DATE .....

Here are a set of statements. Some of them are true of you and so you will circle the yes. Some are not true of you and so you will circle the no. Answer every question even if some are hard to decide, but do *not* circle both yes and no. Remember, circle the yes if the statement is generally like you, or circle the no if the statement is generally not like you. There are no right or wrong answers. Only you can tell us how you feel about yourself, so we hope you will mark the way you really feel inside.

1. My classmates make fun of me.....yes no
2. I am a happy person.....yes no
3. It is hard for me to make friends.....yes no
4. I am often sad.....yes no
5. I am smart.....yes no
6. I am shy.....yes no
7. I get nervous when the teacher calls on me .....yes no
8. My looks bother me .....yes no
9. When I grow up, I will be an important person .....yes no
10. I get worried when we have tests in school.....yes no
11. I am unpopular.....yes no
12. I am well behaved in school.....yes no
13. It is usually my fault when something goes wrong .....yes no
14. I cause trouble to my family.....yes no
15. I am strong .....yes no
16. I have good ideas .....yes no
17. I am an important member of my family .....yes no
18. I usually want my own way.....yes no
19. I am good at making things with my hands .....yes no
20. I give up easily.....yes no

21. I am good in my school work ..... yes no
22. I do many bad things ..... yes no
23. I can draw well ..... yes no
24. I am good in music ..... yes no
25. I behave badly at home ..... yes no
26. I am slow in finishing my school work ..... yes no
27. I am an important member of my class ..... yes no
28. I am nervous ..... yes no
29. I have pretty eyes ..... yes no
30. I can give a good report in front of the class ..... yes no
31. In school I am a dreamer ..... yes no
32. I pick on my brother(s) and sister(s) ..... yes no
33. My friends like my ideas ..... yes no
34. I often get into trouble ..... yes no
35. I am obedient at home ..... yes no
36. I am lucky ..... yes no
37. I worry a lot ..... yes no
38. My parents expect too much of me ..... yes no
39. I like being the way I am ..... yes no
40. I feel left out of things ..... yes no

41. I have nice hair.....yes no
42. I often volunteer in school .....yes no
43. I wish I were different .....yes no
44. I sleep well at night.....yes no
45. I hate school.....yes no
46. I am among the last to be chosen for games.....yes no
47. I am sick a lot .....yes no
48. I am often mean to other people.....yes no
49. My classmates in school think I have good ideas .....yes no
50. I am unhappy .....yes no
51. I have many friends .....yes no
52. I am cheerful .....yes no
53. I am dumb about most things .....yes no
54. I am good looking .....yes no
55. I have lots of pep.....yes no
56. I get into a lot of fights.....yes no
57. I am popular with boys.....yes no
58. People pick on me .....yes no
59. My family is disappointed in me.....yes no
60. I have a pleasant face .....yes no

61. When I try to make something, everything seems to go wrong. yes no
62. I am picked on at home ..... yes no
63. I am a leader in games and sports ..... yes no
64. I am clumsy..... yes no
65. In games and sports, I watch instead of play ..... yes no
66. I forget what I learn..... yes no
67. I am easy to get along with..... yes no
68. I lose my temper easily..... yes no
69. I am popular with girls..... yes no
70. I am a good reader ..... yes no
71. I would rather work alone than with a group ..... yes no
72. I like my brother (sister) ..... yes no
73. I have a good figure ..... yes no
74. I am often afraid..... yes no
75. I am always dropping or breaking things ..... yes no
76. I can be trusted ..... yes no
77. I am different from other people..... yes no
78. I think bad thoughts ..... yes no
79. I cry easily..... yes no
80. I am a good person..... yes no

## **Appendix C**

The Nowicki-Strickland Test

1. Do you believe that most problems will solve themselves if you just don't fool with them?
2. Do you believe that you can stop yourself from catching a cold?
3. Are some kids just born lucky?
4. Most of the time do you feel that getting good grades means a great deal to you?
5. Are you blamed for things that just aren't your fault?
6. Do you feel that if somebody studies hard enough he or she can pass any subject?
7. Do you feel that most of the time it doesn't pay to try hard because things never turn out right anyway?
8. Do you feel that if things start out well in the morning that it's going to be a good day no matter what you do?
9. Do you feel that most of the time parents listen to what their children have to say?
10. Do you believe that wishing can make good things happen?

11. When you get punished does it usually seem it's for no good reason at all?
12. Most of the time do you find it hard to change a friend's (mind) opinion?
13. Do you think that cheering more than luck helps a team to win?
14. Do you feel it's nearly impossible to change your parents' mind about anything?
15. Do you believe that your parents should allow you to make most of your own decision?
16. Do you believe that when you do something wrong there's very little you can do about it?
17. Do you believe that most kids are just born good at sports?
18. Are most of the kids your age stronger than you are?
19. Do you feel that one of the best ways to handle most problems is just not to think about them?
20. Do you feel that you have a lot of choice in deciding who your friends are?
21. If you find a four leaf clover do you believe that it might bring you good luck?
22. Do you often feel that whether you do your homework has much to do with what kind of grades you get?
23. Do you feel that when a kid your age decides to hit you, there's little you can do to stop him or her?

24. Have you ever had a good luck charm?
25. Do you feel that whether or not people like you depends on how you act?
26. Will your parents usually help you if you ask them to?
27. Have you felt that when people were mean to you it was usually for no reason at all?
28. Most of the time, do you feel that you can change what might happen tomorrow by what you do today?
29. Do you believe that when bad things are going to happen they are going to happen no matter what you try to do to stop them?
30. Do you think that kids can get their own way if they just keep trying?
31. Most of the time do you find it useless to try to get your own way at home?

**M**ESQUITE INDEPENDENT SCHOOL DISTRICT  
405 East Davis, Mesquite, Texas 75149

RALPH H. POTEET, Ph.D.  
Superintendent of Schools



Dear Parents:

Beth Fry has been approved to conduct research in the district. She is completing her Master's Degree in Psychology at Texas Woman's University.

As part of her work, she will be administering several tests as described on the attached sheet to your child. Please complete the attached form and return it to your child's school in order that he or she may participate in the research.

Sincerely,

A handwritten signature in cursive script that reads "Patricia Brewster".

Patricia Brewster, Ed.D.  
Director,  
Research and Evaluation

PB/dj

Consent Form  
TEXAS WOMAN'S UNIVERSITY  
HUMAN RESEARCH COMMITTEE

Consent to Act as a Subject for Research and Investigation

1. I hereby authorize Beth Fry to administer the tests:
  - a. The Piers-Harris Self Esteem Test
  - b. The Nowicki-Strickland Locus of Control test
  - c. The Kovac's Children's Depression Inventory
2. a. I understand that the above procedure may involve the possible risk of confidentiality.  
b. I also understand that the investigation will give the researcher more knowledge about depression in learning disabled and "typical" children.  
c. I understand that No medical service or compensation is provided to subjects by the university as a result of injury from participation in research.
3. An offer to answer all of my questions regarding this study has been made. If alternative procedures are more advantageous to me, they have been explained. I understand that I may terminate my participation in the study at any time.

\_\_\_\_\_  
Subject's Signature

\_\_\_\_\_  
Date

Subject is a minor. Age \_\_\_\_

Signatures

\_\_\_\_\_  
Father or Mother or Guardian

\_\_\_\_\_  
Date

\_\_\_\_\_  
Witness

\_\_\_\_\_  
DAte

TEXAS WOMAN'S UNIVERSITY  
Box 23717 TWU Station  
Denton, Texas 76204

HUMAN SUBJECTS REVIEW COMMITTEE

Name of Investigator: Beth Fry Center: Denton  
Address: 2505 Monticello Date: June 24, 1981  
Mesquite, Texas 75149

Dear Ms. Fry:

Your study entitled The Measurement of Depression, Self Concept and Focus of Control Among Learning Disabled and "Typical" Children has been reviewed by a committee of the Human Subjects Review Committee and it appears to meet our requirements in regard to protection of the individual's rights.

Please be reminded that both the University and the Department of Health, Education, and Welfare regulations typically require that signatures indicating informed consent be obtained from all human subjects in your studies. These are to be filed with the Human Subjects Review Committee. Any exception to this requirement is noted below. Furthermore, according to DHEW regulations, another review by the Committee is required if your project changes.

Any special provisions pertaining to your study are noted below:

- Add to informed consent form: No medical service or compensation is provided to subjects by the University as a result of injury from participation in research.
- Add to informed consent form: I UNDERSTAND THAT THE RETURN OF MY QUESTIONNAIRE CONSTITUTES MY INFORMED CONSENT TO ACT AS A SUBJECT IN THIS RESEARCH.
- The filing of signatures of subjects with the Human Subjects Review Committee is not required.
- xx Other: State purpose of the research in item 1 of Form A. Assure that the process of subject selection is also confidential.
- No special provisions apply.

cc: Graduate School  
Project Director  
Director of School or  
Chairman of Department

Sincerely,

*Marilyn Johnson*

Chairman, Human Subjects  
Review Committee

at Denton

### Reference Notes

1. Freidman, R. J., Butler, L. F. and Miezites, S. A Self-Report Test Battery to Assess Childhood Depression. Unpublished manuscript, 1980). (Available from author's address).
2. Kovas, M. Rating Scales to Assess Depression in School-Aged Children. Manuscript submitted for publication, 1980. (Available from author's address).
3. Weinberg, W. A. Depression in Childhood. Manuscript submitted for publication, 1980. (Available from author's address).

References

- Bakwin, H. Depression--A mood disorder in children and adolescents. Maryland State Medical Journal, 1972, 55-61.
- Beck, A. T., Ward, C. H., Mendelsohn, M., Mock, J., & Eubach, J. An inventory for measuring depression. Archives of General Psychiatry, 1961, 4, 561-566.
- Becker, J. Depression: Theory and research. Washington, D.C.: V. H. Winston and Sons, 1974.
- Brumback, R., Dietz-Schmidt, S., & Weinberg, W. A. Depression in children referred to an educational diagnostic center: Diagnosis and treatment II. Analysis of criteria and literature review. Diseases of the Nervous System, 1977, 38, 529-535.
- Carlson, G. A., & Cantwell, D. P. Unmasking masked depression in children and adolescents. American Journal of Psychiatry, 1980, 137(4), 445-449.
- Clements, S. D. Minimal brain dysfunction in children--terminology and identification. U. S. Public Health Service Publication, No. 1415. Washington, D. C., 1966.

Dweck, C. S., & Repucci, N. D. Learned helplessness and reinforcement responsibility in children. Journal of Personality and Social Psychology, 1973, 25, 109-116.

Dweck, C. Learned helplessness: A developmental approach. In J. G. Schulterbrandt & A. Raskin (Eds.) Depression in childhood: Diagnosis, treatment, and conceptual models. New York: Raven Press, 1977.

Dweck, C. S. The role of expectations and attributions in the alleviation of learned helplessness. Journal of Personality and Social Psychology, 1975, 31, 674-685.

Dweck, C. S., & Repucci, N. C. Learned helplessness and reinforcement responsibility in children. Journal of Personality and Social Psychology, 1973, 25(1), 104-116.

Gittelman-Klein, R. Definitional and methodological issues concerning depression in children. In J. G. Schulterbrandt & A. Raskin (Eds.) Depression in childhood: Diagnosis, treatment, and conceptual models. New York: Raven Press, 1977.

Glaser, K. Masked depression in children and adolescents. Annual Progress Child Psychiatry Child Development, 1968, 1, 345-355.

Gross, M. B., & Wilson, W. C. Minimal brain dysfunction.

New York: Brunner/Mazel, 1974.

Kashani, J., & Simonds, J. The incidence of depression in children. American Journal of Psychiatry, 1979, 136(9), 781-784.

Kovacs, M., & Beck, A. T. Empirical-clinical approach toward a definition of childhood depression. In J. G. Schulterbrandt & A. Raskin (Eds.) Depression in childhood: Diagnosis, treatment, and conceptual models. New York: Raven Press, 1977.

Lang, M., & Tisher, M. Children's depression score.

Hawthorn, Victoria, Australia: The Australian Council for Educational Research Limited, 1978.

Lefkowitz, M. M., & Tesiny, E. P. Assessment of childhood depression. Journal of Consulting and Clinical Psychology, 1980, 48(1), 43-50.

Lievans, P. The organic psychosyndrome of early childhood and its effects on learning. Journal of Learning Disabilities, 1974, 1, 626-631.

Malmquist, C. P. The nature and treatment of depression.

New York: John Wiley and Sons, 1975.

Miezitis, S., Butler, L. F., & Friedman, R. J. Teacher-mediated intervention with depressive school children: A pilot study. Ontario Psychologist, 1977, 9(4), 45-56.

- Nowicki, S., & Strickland, B. R. A locus of control scale for children. Journal of Consulting and Clinical Psychology, 1973, 41(1), 143-154.
- Paternite, C. E., Loney, J. L., & Langhorne, J. E. Relationships between symptomatology and SES-related factors in hyperkinetic MBD boys. American Journal of Orthopsychiatry, 1976, 46, 291-301.
- Petti, T. A. Depression in hospitalized child psychiatry patients. Journal of the American Academy of Child Psychiatry, 1978, 17, 49-59.
- Piers, E. Manual for the Piers-Harris children's self concept scale. Nashville, TN: Counselor Records and Tests, 1969.
- Poznanski, E. O., Cook, S. C., & Carroll, B. J. A depression rating scale for children. Pediatrics, 1975, 64, 442-450.
- Schachter, M. Psychiatric aspects of learning disabilities. Child Psychiatry and Human Development, 1974, 5(2), 67-75.
- Seligman, M. Helplessness on depression, development, and death. San Francisco: W. H. Freeman and Company, 1975.

- Weinberg, W., Rutman, J., Sullivan, L., Penick, E., & Dietz, S. Depression in children referred to an educational diagnostic center: Diagnosis and treatment. Journal of Pediatrics, 1973, 83, 1065-1073.
- Wender, P. H. The minimal brain dysfunction syndrome. Annual Review of Medicine, 1975, 26, 45-62.