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Sex Differences in Depression and Explanatory Style in Children

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We report data from the first two years of a longitudinal study of depression, and explanatory style in children. Measures of these variables have been obtained from a group of elementary school children every six months since they were in the third grade. Results show that the boys consistently reported more depressive symptoms than the girls. This was particularly true for symptoms of anhedonia and behavioral disturbance. The boys also showed much more maladaptive explanatory styles than the girls. These results are discussed in light of previous studies of sex differences in children's attributions. Possible reasons for the expected switch in the sex differences in puberty are also discussed.

INTRODUCTION

Among adults, females are twice as likely as males to show depression (cf. Nolen-Hoeksema, 1987; Weissman and Klerman, 1977). These sex differences obtain for both major depressive disorders and for less severe levels of depression. In contrast, among prepubescent children, there is a slight tendency for males to be more likely to show depression than females (Eme, 1979; Pearce, 1978). It appears that this switch in the direction of the sex differences in depression occurs some time in mid- to late adolescence, although the precise timing is unclear (Nolen-Hoeksema, 1990).

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Although there have been many explanations proposed for women's greater vulnerability to depression in adulthood (cf. Nolen-Hoeksema, 1987), boys' greater vulnerability to depression in childhood has received relatively little attention. The purpose of the study reported here was to see whether boys' greater vulnerability to depression could be explained from the perspective of the reformulated learned helplessness model of depression (Abramson *et al.*, 1978). According to this theory, the explanations individuals typically give for the negative and positive events in their lives influence their emotional and behavioral reactions to those events. Individuals who habitually explain bad events by causes that are internal to them, stable in time, and global in their effect are particularly likely to react to bad events with a helplessness depression. Therefore, we tested the prediction that if boys show a greater level of depression than girls they will also show a more maladaptive style of explaining the events in their lives.

Explanatory Style and Depression

In the last decade, one of the most researched theories of depression has been the reformulated learned helplessness theory (Abramson *et al.*, 1978). According to this theory, individuals have habitual styles of explaining good and bad events, which were labeled "explanatory styles." Abramson and her colleagues described a certain type of maladaptive explanatory style, which is characterized by a tendency to attribute bad events to factors that are stable in time, global in effect, and internal to oneself, while at the same time attributing good events to factors that are unstable in time, specific in effect, and external to oneself. For example, a child with this maladaptive style might say that when he or she fails at school it is due to lack of ability, whereas any successes in school are due to luck or having easy tasks. According to explanatory style theory, individuals who have such an explanatory style tend to expect bad events to recur again in many domains and blame themselves for these bad events, but do not expect good events to recur and do not take credit for the good events that do happen. Abramson and her colleagues argued that the pessimistic expectations and self-derogation resulting from the maladaptive explanatory style put the individual at risk for the motivational, affective, and self-esteem deficits of depression. This hypothesis has been supported in a wide variety of studies with adults (cf. Peterson and Seligman, 1984) and a few studies of children (e.g., Kaslow *et al.*, 1984; Nolen-Hoeksema *et al.*, 1986).

Given the evidence that boys are more likely to show depression than girls, the reformulated learned helplessness theory would predict that boys would show a more maladaptive explanatory style than girls. There have been studies of sex differences in children's attributions, conducted mostly by in-

vestigators interested in the relationship between attributions and achievement-related behavior (e.g., Bar-Tal, 1978; Dweck and Repucci, 1973; Nicholls, 1975). Contrary to the prediction of the reformulated helplessness theory, these achievement motivation studies are commonly interpreted as showing that girls tend to give more self-derogatory, pessimistic explanations for their successes and failures at tasks than do boys. In one of the most frequently cited studies of sex differences in performance attributions, Nicholls (1975) asked children to work on a series of difficult tasks, first in a practice session and then in a test session. Half of the children worked on problems that were solvable and half of the children worked on problems that were unsolvable. Following both the practice and the test sessions, Nicholls asked the children whether they thought their successes or failures were due to luck, ability, effort, or task difficulty. The girls in this study were significantly more likely than the boys to attribute failures in the practice session to lack of ability. The boys, however, were significantly more likely than the girls to attribute failures in the practice session to bad luck. No significant sex differences were found in effort or task difficulty attributions for the practice sessions, or in any type of attribution for performance in the test sessions. Interestingly, there were no significant sex differences in the children's persistence at test tasks. That is, despite the differences in attributions boys and girls gave for practice tasks, boys did not persist more at test tasks than girls did. Such mixed evidence for sex differences in performance-related attributions and behaviors has been found in several studies (cf. Frieze *et al.*, 1978; Parsons, 1983).

Even so, the evidence from studies such as Nicholl's (1975) indicating that girls made more self-derogatory attributions than boys, at least some of the time, would appear to refute the reformulated helplessness theory's prediction that boys would show the more maladaptive explanatory style. There are a number of reasons, however, why the studies of attributions for achievement-related tasks do not provide good tests of the reformulated helplessness theory's prediction about sex differences in depression among children. First, most of these studies have examined children's attributions for their performance on laboratory tasks such as anagrams or other puzzles. Children's attributions for their actual performance in school subjects have seldom been investigated; when such naturalistic studies are done, they usually do not find consistent or substantial sex differences in attributions for performance (e.g., Eccles *et al.*, 1984). Second, there are many domains other than the domain of cognitive achievement-related tasks in which children can make attributions for events, such as extracurricular activities, peer relationships, and familial relationships. Children's attributions for outcomes in many domains obviously are of interest when the goal is to understand sex differences in depression. Finally, the existing studies of sex differences in achievement-related attributions do not assess exactly what is defined by

the reformulated helplessness theory as a maladaptive explanatory style. That is, these studies ask children to choose from among a few given attributions for their success or failure, or they compare children who tend to make effort attributions with children who tend to make ability attributions. Although arguments can be made about the relative internality, stability, and globality of effort, ability, and other casues children are asked to choose from, previous studies have not compared directly boys' and girls' tendencies to make internal, stable, and global attributions.

The purpose of this study was to assess sex differences in explanatory style, as described by the reformulated learned helplessness theory. Our prediction was that if boys show more depression than girls, they will also show a more maladaptive explanatory style than girls. The data reported here are from an ongoing longitudinal study of depression and achievement in children. Beginning in the fall of 1985, measures of depression, explanatory style, and a number of other psychosocial variables have been obtained from a large group of elementary school children every six months. We report here the data from the first four testing sessions, the last of which was in the spring of 1987.

METHODS

Subjects

The parents of all children in the third grades of 16 elementary schools in one school district in New Jersey were asked to permit their children to participate in a four-year study of moods and achievement in children. The positive response rate was 51%, yielding a sample of 352 children (178 boys and 174 girls). Approximately 80% of the children are White, 10% are Black, and 10% are of Asian or Indian heritage.

The first testing session was conducted in the fall of 1985. At the spring 1986, fall 1986, and spring 1987 testng sessions, 280, 212, and 197 of the children in the original sample participated, respectively. Nearly all of the children who dropped out of the study had moved out of the school district. Comparisons of the children who dropped out and those who remained in the study revealed no significant differences on any of the variables, as measured at the first testing session.

Measures

The Children's Depression Inventory (CDI; Kovacs, 1980) is a 27-item modification of the Beck Depression Inventory designed for use with

preadolescent children. Each item consists of a list of three statements representing levels of severity of a common symptom of depression. Item choices are assigned a numerical value from 0 to 2. Higher scores on the CDI indicate higher levels of depression. Kazdin (1981) reports a correlation of .54 between subjects' CDI scores and psychiatrists' ratings of the subjects' levels of depression. In this study, the item pertaining to suicidal ideation was dropped, yielding a 26-item questionnaire with a possible range of 0-52.

The Children's Attributional Style Questionnaire (CASQ; Kaslow *et al.*, 1978) is a 48-item forced-choice measure of attributional style. Each item presents a hypothetical event and two possible explanations for why that event occurred. Respondents are instructed to imagine the event happening to them, then to choose which of the two explanations best describes why the event in question would happen to them. An example of an item from the CASQ is

You get an "A" on a test.

A. I am smart.

B. I am smart in that subject.

The two explanations hold two of the explanatory dimensions constant while varying the third. In the example, the internality and stability dimensions are held constant, while the globality dimension is varied. There are 16 events that pertain to each of the three explanatory dimensions. Half of the events are positive and half are negative. Thus, there are six subscales in the CASQ: the internality, stability, and globality scales for bad events; and the internality, stability, and globality scales for good events. A composite explanatory style score for positive events (labeled CP) is obtained by adding the child's scores on each of the three subscales for positive events. A composite explanatory style score for negative events (labeled CN) is obtained by summing the scores for the subscales for negative events.

Procedures

The questionnaires were administered to small groups of children in a classroom during school time in the fall of 1985, spring 1986, fall 1986, and spring 1987.

RESULTS

Psychometric Properties of the Instruments

The internal consistencies of the CDI and the CASQ were calculated using the data from the first administration of the questionnaires. The coeffi-

cient alpha (Cronbach, 1951) of the CDI was .90. The internal consistencies of the Composite Negative and Composite Positive scales of the CASQ were calculated using the Kuder-Richardson formula for items with binary choices. The internal consistencies for the Composite Negative and Composite Positive scales were .52 and .57, respectively.

Depression Scores

Descriptive statistics on the boys' and girls' scores on the CDI at each of the administrations are presented in Table I. At each administration, the boys had higher CDI scores than the girls, and this sex difference appeared to increase with time. A repeated measures analysis of variance was performed on CDI scores to test for main effects of sex and time and an interaction between sex and time. Results showed a marginally significant main effect for sex ($F[1,166] = 3.13, p = .08$) and a marginally significant main effect of time ($F[3,498] = 2.11, p = .10$), but a nonsignificant interaction ($F[3,498] = 1.74$, ns).

Also presented in Table I are the percentages of boys and girls with scores of 17 or more on the CDI at each of the four administrations. This is the cutoff score for designating a "moderate" level of depression (Smucker, 1982). At each administration, a higher percentage of boys than girls scored in the "moderately depressed" range of the CDI. Across all administrations, 35% of the boys and 21% of the girls fell into this range at one administration or another. A chi-square test was used to test the hypothesis that the percentage of boys failing into the moderately depressed range of the CDI across all administrations was significantly greater than the percentage of girls doing so. The results of this test confirmed this hypothesis ($\chi^2 = 21.32, p \leq .001$).

It is possible that the boys are scoring higher than the girls only on a subgroup of depression symptoms. In particular, since boys are much more likely to show conduct disturbances than girls (cf. Eme, 1979), it may be that boys are scoring higher than girls only on the CDI items that ask about behavioral disturbances (e.g., "I get into trouble all the time."). To test this hypothesis,

Table I. CDI Scores of Boys and Girls at Each Administration

	Boys		Girls	
	Mean score	% Depressed	Mean score	% Depressed
Time 1	10.8	18	9.4	12
Time 2	10.9	18	9.0	13
Time 3	10.6	17	8.7	16
Time 4	11.0	19	7.0	14

we divided CDI items into five categories as described by Smucker (1982). These categories were derived by Smucker through an iterative principal-axis factor analysis (with varimax rotation) of the CDI scores of 2790 children in the third through ninth grades. The first category, labeled "dysphoric mood," included items tapping crying spells, sadness, irritability, loneliness, and self-hate. The second category, labeled "behavioral disturbance," included items tapping misbehavior, disobedience, aggression, schoolwork difficulty, and drop in school performance. The third category, labeled "anhedonia," included items tapping general lack of interest, lack of friendships, social withdrawal, and school dislike. The fourth category, labeled "self-deprecation," included items tapping negative body image, low self-esteem, self-hate, pessimism, and feeling unloved. The final category, labeled "physiological disturbance," included items tapping negative somatic preoccupation, sleep disturbance, indecisiveness, and fatigability.

We pooled the children's scores across the four administrations of the CDI Inventory for each of these categories of symptoms, then divided the sum for each category by the number of items in that category. These mean category scores appear in Table II. The possible range of scores on these means is from 0 to 2 points. The higher the mean category score, the higher the child's average score across all items in that category. A multivariate analysis of variance was used to test the hypothesis that there would be a significant effect of sex across all categories of symptoms. As would be expected, the results of this analysis revealed a significant main effect of sex ($F[5,163] = 12.97, p < .0001$). Analyses of variance were then performed to test for an effect of sex on each category of depressive symptoms separately. The main effect of sex was significant for Behavioral Disturbance symptoms ($F[1,167] = 18.01, 18.01, p < .0001$) and for Anhedonia ($F[1,167] = 4.38$, $p = .04$), but not for the Self-Deprecation symptoms ($F[1,167] = 0.42$, ns), Mood symptoms ($F[1,167] = 0.10$, ns), or for Physiological symptoms ($F[1,167] = 0.05$, ns). These results indicate that the boys and girls reported equal numbers of self-deprecation, mood, and physiological symptoms of

Table II. Sex Differences in Mean Scores on Subcategories of Depression Items

	Boys	Girls
Dysphoric mood	.29	.27
Behavioral disturbance	.48	.25[a]
Anhedonia	.49	.38[a]
Self-deprecation	.38	.34
Physiological disturbance	.48	.49

[a]Difference between boys' and girls' scores significant at $p \leq .05$.

depression, but the boys reported more behavioral disturbance symptoms and anhedonia than the girls. It is interesting that many of the anhedonia symptoms endorsed more by the boys than the girls were concerned with social relationships (e.g., "I don't have fun anymore," "I don't have as many friends as I want"). This would suggest that more boys than girls perceive significant problems in their social conduct and interpersonal relationships.

Explanatory Style Scores

Table III presents the descriptive statistics for the boys' and girls' explanatory style scores for positive and negative events. Repeated measures analysis of variance in Composite Negative scores revealed a significant main effect of sex ($F[1,160] = 27.48, p = .0001$), with boys showing higher scores than the girls at all four administrations. There was no significant main effect of time ($F[3,480] = 1.61$, ns) or Time × Sex interaction ($F[3,480] = 1.59$, ns). Repeated measures analysis of variance in Composite Positive scores revealed a significant main effect of time ($F[3,480] = 4.39, p = .005$), with scores decreasing across time, but there was no main effect of sex ($F[1,160] = 0.01$, ns) or interaction ($F[3,480] = 0.90$, ns).

Are the boys showing a more pessimistic explanatory style than the girls in their explanations for a variety of types of events? We divided the items on the CASQ into those that referred to academic events (e.g., "You got an A on a test"), interactions (e.g., "Some kids that you know say they do not like you"), family interactions (e.g., "Your parents praise something you make"), and extracurricular and other events (e.g., "You twist your ankle in gym class"). Then we compared the boys' and girls' Time 1 explanatory style scores for positive events and negative events in each of these domains. Boys endorsed significantly more pessimistic explanations for negative events

Table II. CASQ Scores for Boys and Girls at Each Administration

	Boys	Girls
Negative events		
Time 1	8.0	6.7
Time 2	8.2	6.7
Time 3	8.7	6.8
Time 4	9.1	7.0
Positive events		
Time 1	13.8	14.2
Time 2	13.7	13.9
Time 3	13.9	13.4
Time 4	13.1	12.9

in peer interactions ($t[351] = 1.92, p = .06$), family interactions ($t[351] = 2.34, p = .02$), and extracurricular/other activities ($t[351] = 4.12, p < .0001$), and for positive events in family interactions ($t[351] = 2.34, p = .02$). These results indicate that in every domain except academic events, boys evidence a more pessimistic explanatory style for negative events. Only in the domain of family interactions did boys show a more pessimistic style for positive events than girls.

Taken together, these results indicate that the boys had significantly more maladaptive explanatory styles for negative events than the girls. In addition, the children's explanatory styles for positive events were becoming more maladaptive with time.

DISCUSSION

The boys in this study consistently reported more depressive symptoms than the girls. Inspection of the sex differences in scores in each of five types of depressive symptoms revealed that boys and girls were equally likely to report sad mood, self-derogation, and physiological complaints, but boys were more likely than girls to report behavior disturbance symptoms and anhedonia. We noted that many of the anhedonia symptoms represented on the CDI tapped perceived problems with social relationships. Thus, it appears that controlling conduct and enjoying relationships with other children are more often problems that boys perceive in themselves than girls.

Why were more of the boys than the girls depressed? Perhaps it was because more boys than girls had a maladaptive explanatory style. At all four testing periods in this study the boys were more likely to choose internal, stable, and global explanations for negative events than the girls. This tendency for boys to have more maladaptive explanatory styles than girls supports the reformulated helplessness theory, given the fact that the boys also were more depressed than the girls. But it also contradicts the well-known findings in the achievement motivation literature that girls choose more self-derogatory attributions than boys for their performance at tasks (Dweck and Repucci, 1973; Nicholls, 1975). What might account for this contradiction in results?

First, the methods of assessing explanatory tendencies in this study and methods in previous achievement motivation studies were very different. In the achievement motivation studies, children were asked for their explanations for their performance on a fairly narrow range of cognitive-spatial tasks (such as anagrams and puzzles). In this study, however, children were asked explanations of events in a number of different domains, including schoolwork, peer relationships, family relationships, and extracurricular activities.

We found no sex differences in attributions for schoolwork, but the boys' explanations for bad events in all other domains were *much* more pessimistic than girls'. This suggests that the sex differences in attributions found in earlier achievement motivation studies may be confined to that narrow range of tasks the children were asked to do in the studies.

Another difference between previous studies and this study is that in previous studies, children usually were asked to voice their attributions for their performance to an experimenter, whereas in this study, we used a questionnaire to assess attributions. Perhaps girls are more modest and boys are more self-aggrandizing in the attributions they voice to an adult, but on a more anonymous questionnaire, boys reveal that they harbor more pessimistic explanatory tendencies than girls. That is, girls may be more self-confident and boys may be less self-confident than they put forward in a public disclosure setting such as a lab study.

Finally, in most previous achievement motivation studies, children are asked whether their success or failure at a task is due to task difficulty/ease, effort, luck, or ability. Frieze and Snyder (1980) have shown that when children are given the opportunity to voice attributions for their performance spontaneously, they almost never use luck, and often give attributions other than the typical four, such as "wanting to do well." This suggests that forcing children to choose from among the traditional four attributions for their performance leads to a distorted picture of children's true attributional tendencies. In this study, although the children had to choose between only two attributions for each event, across all items these attributions reflect many more possible causes of events than luck, effort, ability, and task difficulty. Our results indicate that when given more opportunity to exercise their attributional biases, boys reveal a more pessimistic bias than girls.

Boys chose more pessimistic explanations than girls for negative events only, however. There were no sex differences in explanations for positive events. There was a significant trend across both sexes for explanatory styles for positive events to become more pessimistic or maladaptive over the two years of this study (during which the children went from third to fourth grade). This trend probably is not due to a general effect of cognitive development on children's use of internal, stable, and global attributions, since the same trend was not apparent in attributions for negative events. Perhaps children's increasing use of external, unstable, and specific attributions for positive events reflects an increase in doubt that they will be able to gain all the positive outcomes they desire, which arises as children are given increasing feedback about what they might possibly achieve given their abilities, background, etc. That is, perhaps early in elementary school, most children are extremely optimistic about their futures and the probability that they will be able to do and learn anything they desire. With increasing years

of schooling, during which children receive more and more feedback about their abilities and limitations, at least some children may substantially downgrade their hopes for the future. It was interesting that the trend toward more pessimistic attributions for positive events was *not* associated with an increase over time in depression scores. Perhaps we should characterize the changes in the children's attributional style for positive events as a trend toward more *realistic* attributions, rather than a trend toward more pessimistic attributions. In these children, then, it would appear that realism is not associated with increased depression.

Switches in Sex Differences in Depression at Puberty

Based on the overwhelming evidence that by early adulthood females are twice as likely as males to be depreseed, we should expect that over the course of this study the girls will eventually begin to show more depression than the boys. Just when to expect this trend to become apparent is not clear. Several studies find that girls show more depression than boys by the early teenage years (e.g., Albert and Beck, 1975; Kandel and Davies, 1986; Kashani *et al.*, 1987; Simmons and Blyth, 1987). For example, Kandel and Davies (1986) found that 23% of the girls in a sample of 762 children 15–16 years old reported levels of depression in the moderate to severe range on their depression questionnaire, compared to only 10% of the boys. In a study of major depressive disorder and dysthymic disorder in 150 adolescents 14–16 years old, Kashani and his colleagues (Kashani *et al.*, 1987) found that 13% of the girls and 3% of the boys met the criteria for one of these disorders. These data suggest that the switch in sex differences in depression occurs sometime around the age of 14, but precisely when is not clear.

What might account for the switch in sex differences in depression in early adolescence? Perhaps girls develop a more maladaptive explanatory style than boys during early adolescence, and it is this switch in the sex differences in explantory style that causes the switch in sex differences in depression. There are no studies that have directly tested this hypothesis. The few existing studies of the transition from childhood into adolescence have found some evidence that the self-image of some girls becomes increasingly negative across adolescence, whereas the self-image of boys remains positive. For example, in a longitudinal study of children from the sixth to the tenth grade, Simmons and Blyth (1987) found that, compared to boys, girls showed greater concern with popularity, a more negative attitude toward being their own gender, less satisfaction with their appearance, more self-consciousness, and more concern about their weight. Other studies find that across adolescence, girls perceive increasing pressure from others to conform to the feminine sex

role and report increasing concern with the social consequences of violating their sex role. For example, Rosen and Aneshensel (1976) surveyed 3049 children in the seventh through twelfth grades, asking about the children's expectations for the consequences of sex role violations. The girls were more likely than the boys to say they would be liked less by a member of the opposite sex if they were assertive, pursued their own interests, or beat a boy in a competition. Girls were also more likely than boys to say they try to conceal their competence, behave in dependent and compliant ways, and worry about the reactions of others to their appearance and behavior.

Perhaps such pressure for females to be nonassertive and to conceal their competence may lead at least some females to feel helpless about their ability to bring about the outcomes they desire and thus to develop a maladaptive explanatory style. This maladaptive explanatory style would then make these women more vulnerable to depression. Again, there are no existing studies providing data relevant to this hypothesis. Our longitudinal study of depression and explanatory style will provide the first available data on the changes in children's explanatory styles and vulnerability to depression across early adolescence.

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REFERENCES

Abramson, L. Y., Seligman, M. E. P., Teasdale, J. (1978). Learned helplessness in humans: Critique and reformulation. *J. Abnorm. Psychol.* 87: 49-74.

Albert, N., and Beck, A. T. (1975). Incidence of depression in early adolescence: A preliminary study. *J. Youth Adolesc.* 4: 301-307.

Bar-Tal, D. (1978). Attributional analysis of achievement-related behavior. *Rev. Educat. Res.* 48: 259-271.

Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika* 16: 205-213.

Dweck, C. S., and Repucci, D. (1973). Learned helplessness and reinforcement responsibility in children. *J. Personal. Social Psychol.* 25: 109-116.

Eccles (Parsons), J., Adler, T., and Meece, J. L. (1984). Sex differences in achievement: A test of alternate theories. *J. Personal. Social Psychol.* 46: 26-43.

Eme, R. F. (1979). Sex differences in childhood psychopathology: A review. *Psychol. Bull.* 86: 574-595.

Frieze, I. H., Fisher, J., Hanusa, B., McHugh, M. C., and Valle, V. A. (1978). Attributions of the causes of success and failure as internal and external barriers to achievement in women. In Sherman, J., and Denmark, F. (eds.), *Psychology for Women: Future Directions of Research.* Psychological Dimensions, New York.

Frieze, I. H., and Snyder, H. N. (1980). Children's beliefs about the causes of success and failure in school settings. *J. Educat. Psychol.* 72: 186-196.

Kandel, D. B., and Davies, M. (1986). Adult sequelae of adolescent depressive symptoms. *Arch. Gen. Psychiatr.* 43: 255-262.

Kashani, J. H., Beck, N. C., Hoeper, E. W., Fallahi, C., Corcoran, C. M., McAllister, J. A., Rosenberg, T. K., and Reid, J. C. (1987). Psychiatric disorders in a community sample of adolescents. *Am. J. Psychiatr.* 144: 584-589.

Kaslow, N. J., Rehm, L. P., and Siegel, A. W. (1984). Social-cognitive and cognitive correlates of depression in children. *J. Abnorm. Psychol.* 12: 605-620.

Kaslow, N. J., Tanenbaum, R. L., and Seligman, M. E. P. (1978). *The KASTAN: A children's attributional styles questionnaire.* Unpublished manuscript, University of Pennsylvania.

Kazdin, A. E. (1981). Assessment techniques for childhood depression. *J. Am. Acad. Child Psychiatr.* 20: 358-375.

Kovacs, M. (1980). Rating scales to assess depression in school-age children. *Acta Paedopsych.* 46: 305-315.

Nicholls, J. G. (1975). Causal attributions and other achievement-related cognitions: Effects of task outcome, attainment value, and sex. *J. Personal. Social Psychol.* 31: 379-389.

Nolen-Hoeksema, S. (1987). Sex differences in unipolar depression: Evidence and theory. *Psychol. Bull.* 101: 259-282.

Nolen-Hoeksema, S. (1990). *Sex Differences in Depression.* Stanford University Press, Stanford, CA.

Nolen-Hoeksema, S., Girgus, J. S., and Seligman, M. E. P. (1986). learned helplessness in children: A longitudinal study of depression, achievement, and explantory style. *J. Personal. Social Psychol.* 51: 435-442.

Parsons, J. E. (1983). Attributions, learned helplessness, and sex differences in achievement. *J. Educat. Equity Leader.* 3: 19-27.

Pearce, J. (1978). The recognition of depressive disorder in children. *J. Roy. Soc. Med.* 71: 494-500.

Peterson, C., and Seligman, M. E. P. (1984). Causal explanations as a risk factor for depression: Theory and evidence. *Psychol. Rev.* 91: 347-374.

Rosen, B. C., & Aneshensel, C. S. (1976). The cahemleon syndrome: A social psycholgoical dimension of the female sex role. *Journal of Marriage and the Family.* 38: 605-617.

Simmons, R. G., and Blyth, D. A. (1981). *Moving into Adolescence: The Impact of Pubertal Change and School Context.* Aldine DeGruyter, New York.

Smucker, M. (1982). *The Children's Depression Inventory: Norms and psychometric analysis.* Unpublished doctoral dissertation, Pennsylvania State University.

Weissman, M. M., and Klerman, G. L. (1977). Sex differences in the epidemiology of depression. *Arch. Gen. Psychiatr.* 34: 98-111.