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Competence Perceptions, Coping, and Creativity in Children with ADHD

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## Abstract

This study was designed to examine whether children with Attention Deficit Hyperactivity Disorder (ADHD) differ from children without ADHD in terms of their self-perceptions of competence, coping styles, and creativity. Participants were 13 students identified as having ADHD and 13 matched controls. All participants completed measures assessing their self-perceptions of academic and social competence, the degree to which they employ approach versus avoidance coping in response to academic and social failure, and their creativity. Teachers of participants completed a measure assessing their perceptions of the children's academic and social competencies to determine the degree to which children over- or underestimated their skills. Results showed children with ADHD were more likely than children without ADHD to overestimate their competencies in the academic domain. Children with ADHD also reported engaging in more approach coping in the social domain than children without ADHD. It is important for teachers to recognize the tendency for children with ADHD to overestimate their academic and social skills in order to help these children succeed.

### Competence Perceptions, Coping, and Creativity in Children with ADHD

The behavioral problems of children with Attention-Deficit/Hyperactivity Disorder (ADHD) have been extensively documented. In particular, children with ADHD tend to ignore details, be easily distracted, frequently cannot sit still, and have difficulty with quiet leisure activities (DSM – IV, 2000). These characteristics are associated with both academic and social problems. Academically, children with ADHD tend to have low academic achievement and are more likely to be retained than children without ADHD (Milich, 1994). Socially, children with ADHD tend to be less effective in their interactions with peers and less liked by their classmates (Hoza, Waschbusch, Pelman, Molina, & Milich, 2000).

In the process of examining these types of behavioral deficits in children with ADHD, a number of other characteristics have also been recognized. In particular, there is growing evidence that children with ADHD may exhibit high levels of confidence (Hoza et al., 2004), may become less frustrated and show less helplessness in the face of failure (Hoza et al., 2004), and may show high levels of creativity (Cramond, 1994). However, as will be demonstrated below, the research on these characteristics is limited and often yields mixed results. Thus, more research on the competence perceptions, coping styles, and creativity of children with ADHD is needed. If clear differences between children with and without ADHD emerge, it could suggest that these traits should also be included in the diagnostic criteria for children with ADHD.

#### Self-perceptions of Competence

A handful of prior studies have examined the self-perceptions of competence of ADHD children. Results have been inconsistent. On the one hand, several studies

indicate that children with ADHD evaluate themselves more positively than children without ADHD (Hoza et al., 2004, Hoza et al., 2000 & Milich, 1994). On the other hand, some studies find no difference between these two groups of children (e.g., Hoza, Pelham, Dobbs, Owens, & Pillow, 2002). Reasons for the discrepancy might include methodological differences in the assessment of self-perceptions. Hoza and colleagues (2004) have suggested that it is not enough to simply assess children's competence perceptions. Instead, the degree to which these self-perceptions match (or fail to match) those of others must be assessed. To do so, they suggest comparing children's self-perceptions to some external criterion, such as perceived competence as assessed by a mother, father, or teacher. By doing so, it is possible to see whether ADHD children are more likely to *overestimate* their capabilities as rated by an adult compared to children without ADHD. The findings of their study showed that ADHD children are more likely than children without ADHD to overestimate their skills and, moreover, that the criterion rater (e.g., mother versus teacher) did not affect this outcome (Hoza et al., 2004). Because of this finding, the present study employs teachers as the criterion rater. Specifically, we examine discrepancies between child ratings of their competencies and teacher ratings of these competencies in both the academic and social domains. Consistent with prior research, it is expected that children with ADHD will be more likely to overestimate their capabilities than children without ADHD.

### Coping Styles

Little research has been conducted to examine whether children with ADHD differ from those without ADHD in the ways in which they cope with academic and social stressors in their environment. The few studies that have been done have typically

observed children's *actual* responses to failure. These studies have yielded mixed findings. For example, one study suggests that ADHD boys are *less* frustrated and helpless when faced with social failure (Hoza et al., 2000). However, another study found that children with ADHD are *more* likely to display helpless characteristics when confronted with academic failure (Milich, 1994).

The current study takes a different approach to studying children's responses to challenge. Specifically, our goal is to examine children's *self-reported* coping styles to see if ADHD children will differ in their reported use of problem-solving and social support seeking strategies (both are approach styles) or distancing (an avoidance style). These self-reports may or may not reflect children's actual coping strategies, but are important insofar as they give insight into children's self-views. An approach coping strategy "involves seeking information" (Wallace & Goldstein, 1994). The approach coping individual "focuses on the source of stress by learning more about it, changing their appraisal of it, and discussing it with others" (Wallace & Goldstein, 1994). In contrast, the avoidant coping strategy "is one in which people turn their attention away from aspects of the stressor" (Wallace & Goldstein, 1994). Individuals who use this form of coping tend to "deliberately distract themselves or unconsciously deny painful aspects" of a stressor (Wallace & Goldstein, 1994). In situations where individuals have some control over their experiences, an approach style typically leads to better outcomes than an avoidance style (Causey & Dubow, 1992). Consistent with our hypothesis that children with ADHD may be more likely to overestimate their capabilities, it is expected that children with ADHD will be more likely to report a greater use of an approach style

of coping compared to those children without ADHD when prompted to think of academic and social failure.

### Creativity

Differences in creativity between children with and without ADHD will also be compared given that past research has shown that children with ADHD hold many of the same characteristics as creative children (Cramond, 1994). For example, in a study done by Zuckerman (1983), children with ADHD tended to be high in sensation seeking, a quality that also characterizes highly creative people (Cramond, 1994). Psychomotor over-excitability is another similarity of children with ADHD and creative children (Cramond, 1994). Therefore, creative children tend to be more physically active, which is a common trait among ADHD children as well. Cramond (1994) suggests that it may be possible that due to the similarity of characteristics in ADHD children and creative children, creative children are being wrongly diagnosed as ADHD. Due to this finding it is important to look further into this possibility of the similarities between the ADHD children and the creative children. It is expected that children with ADHD will be more creative than children without ADHD.

### Overview

The purpose of this study is to compare children with ADHD and children without ADHD on three characteristics that have not been well researched to date. The three characteristics that will be investigated are: self-perceptions of academic and social competence, coping styles in the academic and social domains, and creativity. It is hypothesized that, compared to children without ADHD, children with ADHD will overestimate their competencies, will report a higher level of an approach coping style,

and will be more creative than children without ADHD. These findings may be important in identifying additional characteristics of ADHD and understanding better the needs of these children.

## Method

### *Participants*

Participants were thirteen elementary students (second through fifth grade) identified as having attention deficit hyperactivity disorder and thirteen “control” participants matched on grade, gender, and general linguistic ability. All participants attended Eggleston Elementary School in Madison, Indiana. Participants ranged in age from 8 to 11 with an average age of 9.58. Participants were 88% Caucasian. Participants were 69% male. The teachers of the participating students were also considered participants. A total of seven teachers were used in the study, all female and Caucasian.

### *Materials*

#### Self-Perception of Competence

To assess participants’ perceived competence in the academic and social domains, they completed a slightly modified version of the Self-Perceptions of Competence Scale developed by Susan Harter (1985) [See Appendix 1]. Children were presented with descriptions of two types of children differing in academic and social competence (e.g., “Some kids feel like they are just as smart as other kids their age; but other kids aren’t so sure and wonder if they are as smart.” and “Some kids find it’s hard to make friends; but other kids find it’s pretty easy to make friends.”) Children decided which they were more like and indicated if the given statement was *really* or *sort of* true for them (range = 1 to 4). Scale scores were calculated by taking the mean of each student’s responses, with

higher numbers indicating greater self-perceptions of academic ( $\alpha = .63$ ) and social ( $\alpha = .69$ ) competence.

To assess teachers' views of children's actual competence in the academic and social domains, the teachers of the participants completed a 10-item modified version of the Self-Perceptions of Competence Scale [See Appendix 2]. Teachers were presented with descriptions of two types of children differing in academic and social competence (e.g., "Some students are just as smart as other students their age; but other students are not as smart as other students their age." and "Some students find it's hard to make friends; but other students find it's pretty easy to make friends."). Teachers decided which statement best fit the specific child and indicated if the given statement was *really* or *sort of* true for the child (range = 1 to 4). Scale scores were calculated by taking the mean of the teacher's responses for each student, with higher numbers indicating greater self-perceptions of academic ( $\alpha = .79$ ) and social ( $\alpha = .93$ ) competence.

Discrepancy scores were calculated to reflect the degree to which students' over- or under-estimated their competencies relative to teachers' ratings. Positive scores indicate that a child overestimated his or her competencies. Negative score indicate that a child underestimated his or her competencies.

### Coping

Students' general strategies for coping with academic and social failure were assessed with the Self-Report Coping Scale (Causey & Dubow, 1992) [See Appendix 3 and 4]. Two scales were used; one for coping with academic failure and the other for coping with social failure. Scales were adapted to examine two coping styles: approach and avoidance. Students were presented with a common stem (i.e., "When I get a bad

grade in school, one worse than I normally get, I usually ...” and “When I don’t get along with a friend, I usually ...”) followed by 22 items tapping possible coping responses (e.g., “Tell a family member or friend what happened” “Try to think of different ways to solve it” or “Make believe nothing happened”). Students were asked to rate the degree to which they engage in these strategies on a five point scale ranging from 1 (Never) to 5 (Always). Prior factor analysis of this measure has identified five types of coping responses. However, only items tapping three of the five coping responses are used in this study. That is, scores on the social support seeking and problem solving scales were used to assess approach coping and scores on the distancing scale were used to assess avoidance coping. Higher scores indicate greater usage of the coping strategy. Reliabilities for each subscale were adequate, with alphas ranging from .61 to .80.

### Creativity

Students’ creativity level was assessed using the Unusual Uses Scale [See Appendix 5] consisting of three objects (Styrofoam cup, newspaper, and a shoebox). Students were prompted with “Tell me all the different ways you can use a ...” and then given three minutes to respond. Researchers recorded the responses as the children said them. Responses were assessed in terms of fluency, which is simply the number of uses they report. Next, responses were assessed on flexibility, which is the number of different types of uses. For example, putting water in the Styrofoam cup and putting coke in the Styrofoam cup were considered the same type of use. Whereas putting water in the Styrofoam cup and using the Styrofoam cup as a microphone are two different uses. Last, the responses were assessed on originality, which was uniqueness. A response was considered original or unique if no other participant thought of it. Higher scores in any of

the three measurements indicate a higher creativity level. In order to assess inter-rater reliability, a colleague coded 25% of the creativity tests as well. The colleague's scores were compared to the researchers' scores. Adequate inter-rater reliability was obtained for fluency ( $r = .99$ ), flexibility ( $r = .81$ ), and originality ( $r = .85$ ).

### *Procedure*

A passive parent consent form [See Appendix 6] was sent home to the parents of all students in second through fifth grade at Eggleston Elementary School. When a form was signed and returned from a parent/guardian (indicating that the parent did not wish their child to participate), the child was immediately dropped from the possible participant sample. Based upon parent response, the school psychologist formed a control group based upon gender, age, and verbal language skill to match all ADHD children participating in the study. Specifically, the school psychologist had the list of children with ADHD able to participate in the study and then formed the control group, keeping all names of children and their ADHD status confidential. All participants were given an ID number. Participants signed an Active Child Assent form [See Appendix 7]. Researchers administered the surveys to all participants. The surveys were given to the students to complete during their recess or during the after-school program. One teacher allowed time for survey completion in the afternoon as well. One researcher was present with each participant while completing each survey. Researchers read the questions to the participants. Completion of all three scales took approximately 25 minutes. Teachers of the participants signed an informed consent form [See Appendix 8] and filled out a modified Self-Perceptions of Competence questionnaire for each participant that was in their class. Teachers returned questionnaires to researchers when they were finished.

## Results

To examine our central hypotheses, one-way analyses of variance (ANOVAs) were used. Specifically, these analyses were used to compare ADHD children with matched controls in terms of their self-perceptions of competence, coping styles, and creativity. The results of these analyses, including means and standard deviations for both groups, are summarized in Table 1.

As shown in Table 1, children with ADHD differed significantly from children without ADHD in their self-perceptions of academic competence,  $F(1,25) = 4.03, p = .05$ . Specifically, children with ADHD, relative to comparison children, overestimated their academic competence. Analyses of self-perceptions of social competence revealed no differences between children with and without ADHD,  $p > .05$ .

Children with and without ADHD did not differ in their reported styles of coping with academic failure,  $p > .05$ . However, ADHD status did influence children's reported styles of coping with social failure. Specifically, children with ADHD reported a significantly higher rate of problem solving when faced with social failure than did non-ADHD children,  $F(1,25) = 11.25, p < .01$ .

No differences were found between children with and without ADHD in their creativity. That is, the two groups were similar in their levels of fluency, flexibility, and originality, all  $p > .05$ .

## Discussion

Our results show that children with ADHD significantly overestimated their academic capabilities compared to non-ADHD children. Although not significant, our results also showed some tendency for children with ADHD to overestimate their social

capabilities as well. These findings are consistent with those reported in several earlier studies (Hoza et al., 2004, Hoza et al., 2000 & Milich, 1994). Future research will be important in determining the reasons for the discrepancies between student and teacher ratings. One possibility is that teachers' reports are accurate and that ADHD children truly are viewing themselves as more capable than they should. Another possibility is that we are seeing teacher expectancy effects. Teachers may be underestimating the capabilities of ADHD students, perhaps allowing these students' behavioral problems to color their perceptions of their academic and social skills (Jussim, 1989). Distinguishing between these possibilities will be important in determining whether overestimation of competencies should be included as a diagnostic element in the DSM.

Our results show that children with ADHD report a significantly greater use of approach coping when faced with social failure. Although not significant, our findings also show some tendency for children with ADHD to report a higher use of approach coping in the academic area as well. However, this does not necessarily mean that ADHD children actually use an approach style of coping. Because children with ADHD overestimate their capabilities, it would be likely that they would also overestimate their likelihood of using a socially desirable, approach style of coping. Since we only asked the children to report how often they would use the two different types of coping, we cannot state what type of coping they would indeed use in a given situation. If they actually use less approach coping than they report, this finding could provide more support for the idea that ADHD children do overestimate their competencies.

The finding that children with and without ADHD show no significant difference on levels of creativity is also important. The mean scores for all variables – fluency,

flexibility, and originality – were extremely close for both groups of children. Past research has found that high levels of creativity are common among children with ADHD and, in fact that in some cases creative children are being wrongly diagnosed (Cramond, 1994). Our findings suggest that creativity may not be a solid basis for determining ADHD status because, at least in our study, there are ultimately no differences in the levels of creativity among children with and without ADHD.

This study had certain limitations that may have affected results that can be avoided. The first limitation was the limited time available to collect data from participants. More than half of the participants (54%) were only available for fifteen minutes a day. This allowed for a maximum of two questionnaires to be completed in one day. Most students were only able to finish one questionnaire a day. This limited time resulted in students rushing through the process of completing questionnaires. Participants were made aware of the time limit and encouraged to keep a steady pace throughout the time. This may have resulted in the children feeling rushed, causing them to respond quickly without thinking fully through their answer.

The second limitation was that almost all of our participants (84%) filled out their questionnaires during their recess time. This was because teachers would not allot any other time in the day for participants to participate in the study. This was a limitation because most participants did not want to miss their recess. Most would rush through the questionnaires or ask to only do one a day in order for them to not miss all of recess. Some participants chose not to participate on certain days due to not wanting to miss recess. This may have been a result of the non-significant findings for creativity. A large number of the participants would give up during the three minutes they had with an

object claiming they could not think of anything else. This may have been because they wanted to finish the questionnaires in order to get out to recess. Due to this they did not take all the time allotted to them and did not think as much as they may have if they knew they would not be missing recess. Because ADHD children are likely to be especially distractible, this problem may have been particularly true among this group.

The last limitation of this study was that teachers knew they were comparing children with ADHD and children without ADHD while filling out the questionnaires. This may have influenced the results that were found in the area of self-perceptions of competence. Without consciously realizing it, teachers could have polarized their responses. Specifically, teachers may have viewed the non-ADHD children as more competent than they actually are by comparing them to the ADHD children. Similarly, the teachers may have rated the ADHD children lower in their competencies by comparing them to the non-ADHD children. Table 1 shows that non-ADHD children under-estimated their competencies compared to the teachers' perceptions in both social and academic areas. Rather than actually under-estimating their competencies, it is likely that the teachers inflated the competencies of the non-ADHD children when comparing them to the corresponding ADHD children, therefore polarizing their ratings.

Future research should focus on the tendency of children with ADHD to overestimate their capabilities. This is an important finding to continue pursuing due to the fact that it has been found in a considerable amount of research that children with ADHD do tend to overestimate their academic and social capabilities (Hoza et al., 2004, Hoza et al., 2000 & Milich, 1994). This could be interpreted as a benefit or a weakness for these children. It could be beneficial in that these children will not give up easily and

try harder when faced with failure because they are positive about their capabilities. However, it could also be detrimental for these children because they may think highly of themselves and not think they need to alter a behavior when faced with failure. To further investigate this finding, it would be helpful to examine both actual and reported coping styles in one study. Looking at actual and reported coping styles would help to identify if ADHD children are over-estimating their coping abilities as well. Such a finding would further support the overall idea that children with ADHD tend to over-estimate their abilities.

In closing, it should be reiterated that children with ADHD were compared on self-perception of competence, coping style, and creativity, relative to comparison peers. Given the results found that children with ADHD tended to overestimate their academic capabilities and tended to report more of an approach style of coping it is important to consider the possibility that these may be important characteristics of children with ADHD.

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*Table 1.* Comparisons between ADHD and Control participants on self-perceptions of competence, coping, and creativity measures.

Variable	ADHD Mean (SD)	Control Mean (SD)	F
Self-Perception Discrepancies			
Academic	0.12 (.73)	0.46 (.75)	4.03*
Social	0.42 (.80)	0.04 (.84)	2.13
Coping Strategies			
Social support seeking, social	3.37 (.86)	3.00 (.90)	1.05
Problem solving, social	4.20 (.63)	3.18 (.89)	11.25*
Distancing, social	2.42 (1.00)	2.62 (1.02)	0.234
Social support seeking, academic	3.25 (.84)	3.23 (.83)	0.003
Problem solving, academic	3.88 (.54)	3.5 (.63)	2.64
Distancing, academic	2.68 (1.00)	2.28 (.55)	1.51
Creativity			
Fluency	10.4 (4.90)	9.59 (4.61)	0.191
Flexibility	5.54 (3.20)	5.62 (2.20)	0.005
Originality	1.23 (1.30)	1.08 (1.06)	0.109

\*  $p < .05$

APPENDIX 1

WHAT I AM LIKE

	Really True for me	Sort of True for me				Sort of True for me	Really True for me
1.	<input type="checkbox"/>	<input type="checkbox"/>	Some students feel like they are <i>just as smart</i> as other students their age	<b>BUT</b>	Other students aren't so sure and <i>wonder</i> if they are as smart	<input type="checkbox"/>	<input type="checkbox"/>
2.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids find it's <i>hard</i> to make friends	<b>BUT</b>	Other kids find it's pretty <i>easy</i> to make friends	<input type="checkbox"/>	<input type="checkbox"/>
3.	<input type="checkbox"/>	<input type="checkbox"/>	Some students have <i>trouble</i> figuring out the answers in school	<b>BUT</b>	Other students can almost <i>always</i> figure out the answers	<input type="checkbox"/>	<input type="checkbox"/>
4.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids have <i>a lot of</i> friends	<b>BUT</b>	Other kids do <i>not</i> have very many friends	<input type="checkbox"/>	<input type="checkbox"/>
5.	<input type="checkbox"/>	<input type="checkbox"/>	Some students often <i>forget</i> what they learn	<b>BUT</b>	Other students can remember things <i>easily</i>	<input type="checkbox"/>	<input type="checkbox"/>
6.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids <i>wish</i> that more kids liked them	<b>BUT</b>	Other kids feel that enough kids <i>do</i> like them	<input type="checkbox"/>	<input type="checkbox"/>
7.	<input type="checkbox"/>	<input type="checkbox"/>	Some students are pretty <i>slow</i> in finishing their schoolwork	<b>BUT</b>	Other students can do their schoolwork <i>quickly</i>	<input type="checkbox"/>	<input type="checkbox"/>
8.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids would like have a lot <i>more</i> friends	<b>BUT</b>	Other kids have <i>as many</i> friends as they want	<input type="checkbox"/>	<input type="checkbox"/>
9.	<input type="checkbox"/>	<input type="checkbox"/>	Some students do <i>very well</i> at their class work	<b>BUT</b>	Other students <i>don't</i> do very well at their class work	<input type="checkbox"/>	<input type="checkbox"/>
10.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids find it <i>hard</i> to get along with other kids their age	<b>BUT</b>	Other kids find it's <i>pretty easy</i> to get along with other kids their age	<input type="checkbox"/>	<input type="checkbox"/>

APPENDIX 2

WHAT THE STUDENT IS LIKE

	Really True	Sort of True				Sort of True	Really True
1.	<input type="checkbox"/>	<input type="checkbox"/>	Some students are <i>just as smart</i> as other students their age	<b>BUT</b>	Other students are <i>not as smart</i> as other students their age	<input type="checkbox"/>	<input type="checkbox"/>
2.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids find it's <i>hard</i> to make friends	<b>BUT</b>	Other kids find it's pretty <i>easy</i> to make friends	<input type="checkbox"/>	<input type="checkbox"/>
3.	<input type="checkbox"/>	<input type="checkbox"/>	Some students have <i>trouble</i> figuring out the answers in school	<b>BUT</b>	Other students can almost <i>always</i> figure out the answers	<input type="checkbox"/>	<input type="checkbox"/>
4.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids have <i>a lot of</i> friends	<b>BUT</b>	Other kids do <i>not</i> have very many friends	<input type="checkbox"/>	<input type="checkbox"/>
5.	<input type="checkbox"/>	<input type="checkbox"/>	Some students often <i>forget</i> what they learn	<b>BUT</b>	Other students can remember things <i>easily</i>	<input type="checkbox"/>	<input type="checkbox"/>
6.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids <i>wish</i> that more kids liked them	<b>BUT</b>	Other kids feel that enough kids <i>do</i> like them	<input type="checkbox"/>	<input type="checkbox"/>
7.	<input type="checkbox"/>	<input type="checkbox"/>	Some students are pretty <i>slow</i> in finishing their schoolwork	<b>BUT</b>	Other students can do their schoolwork <i>quickly</i>	<input type="checkbox"/>	<input type="checkbox"/>
8.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids would like to have a lot <i>more</i> friends	<b>BUT</b>	Other kids have <i>as many</i> friends as they want	<input type="checkbox"/>	<input type="checkbox"/>
9.	<input type="checkbox"/>	<input type="checkbox"/>	Some students do <i>very well</i> at their class work	<b>BUT</b>	Other students <i>don't</i> do very well at their class work	<input type="checkbox"/>	<input type="checkbox"/>
10.	<input type="checkbox"/>	<input type="checkbox"/>	Some kids find it <i>hard</i> to get along with other kids their age	<b>BUT</b>	Other kids find it's <i>pretty easy</i> to get along with other kids their age	<input type="checkbox"/>	<input type="checkbox"/>

## APPENDIX 3

## SELF-REPORT COPING SCALE

When I get a bad grade in school – one worse than I normally get – I usually . . .

1. Tell a friend or family member what happened.  
**1 – Never    2 – Not very often    3 – Sometimes    4 – Quite often    5 – Always**
2. Try to think of different ways to solve it.  
**1 – Never    2 – Not very often    3 – Sometimes    4 – Quite often    5 – Always**
3. Make believe nothing happened.  
**1 – Never    2 – Not very often    3 – Sometimes    4 – Quite often    5 – Always**
4. Talk to somebody about how it made me feel.  
**1 – Never    2 – Not very often    3 – Sometimes    4 – Quite often    5 – Always**
5. Change something so things will work out.  
**1 – Never    2 – Not very often    3 – Sometimes    4 – Quite often    5 – Always**
6. Forget the whole thing.  
**1 – Never    2 – Not very often    3 – Sometimes    4 – Quite often    5 – Always**
7. Get help from a friend.  
**1 – Never    2 – Not very often    3 – Sometimes    4 – Quite often    5 – Always**
8. Decide on one way to deal with the problem and do it.  
**1 – Never    2 – Not very often    3 – Sometimes    4 – Quite often    5 – Always**
9. Tell myself it doesn't matter.  
**1 – Never    2 – Not very often    3 – Sometimes    4 – Quite often    5 – Always**
10. Ask a friend for advice.  
**1 – Never    2 – Not very often    3 – Sometimes    4 – Quite often    5 – Always**
11. Do something to make up for it.  
**1 – Never    2 – Not very often    3 – Sometimes    4 – Quite often    5 – Always**
12. Refuse to think about it.  
**1 – Never    2 – Not very often    3 – Sometimes    4 – Quite often    5 – Always**
13. Ask a family member for advice.  
**1 – Never    2 – Not very often    3 – Sometimes    4 – Quite often    5 – Always**
14. Know there are things I can do to make it better.

**1 – Never    2 – Not very often    3 – Sometimes    4 – Quite often    5 – Always**

15. Do something to take my mind off it.

**1 – Never    2 – Not very often    3 – Sometimes    4 – Quite often    5 – Always**

16. Ask someone who has had this problem what he or she would do.

**1 – Never    2 – Not very often    3 – Sometimes    4 – Quite often    5 – Always**

17. Go over in my mind what to do or say.

**1 – Never    2 – Not very often    3 – Sometimes    4 – Quite often    5 – Always**

18. Say I don't care.

**1 – Never    2 – Not very often    3 – Sometimes    4 – Quite often    5 – Always**

19. Get help from a family member.

**1 – Never    2 – Not very often    3 – Sometimes    4 – Quite often    5 – Always**

20. Try to understand why this happened to me.

**1 – Never    2 – Not very often    3 – Sometimes    4 – Quite often    5 – Always**

21. Talk to the teacher about it.

**1 – Never    2 – Not very often    3 – Sometimes    4 – Quite often    5 – Always**

22. Try extra hard to keep this from happening again.

**1 – Never    2 – Not very often    3 – Sometimes    4 – Quite often    5 – Always**

## APPENDIX 4

## SELF-REPORT COPING SCALE

When I don't get along with a friend, I usually . . .

1. Tell a friend or family member what happened.  
1 – Never    2 – Not very often    3 – Sometimes    4 – Quite often    5 – Always
2. Try to think of different ways to solve it.  
1 – Never    2 – Not very often    3 – Sometimes    4 – Quite often    5 – Always
3. Make believe nothing happened.  
1 – Never    2 – Not very often    3 – Sometimes    4 – Quite often    5 – Always
4. Talk to somebody about how it made me feel.  
1 – Never    2 – Not very often    3 – Sometimes    4 – Quite often    5 – Always
5. Change something so things will work out.  
1 – Never    2 – Not very often    3 – Sometimes    4 – Quite often    5 – Always
6. Forget the whole thing.  
1 – Never    2 – Not very often    3 – Sometimes    4 – Quite often    5 – Always
7. Get help from a friend.  
1 – Never    2 – Not very often    3 – Sometimes    4 – Quite often    5 – Always
8. Decide on one way to deal with the problem and do it.  
1 – Never    2 – Not very often    3 – Sometimes    4 – Quite often    5 – Always
9. Tell myself it doesn't matter.  
1 – Never    2 – Not very often    3 – Sometimes    4 – Quite often    5 – Always
10. Ask a friend for advice.  
1 – Never    2 – Not very often    3 – Sometimes    4 – Quite often    5 – Always
11. Do something to make up for it.  
1 – Never    2 – Not very often    3 – Sometimes    4 – Quite often    5 – Always
12. Refuse to think about it.  
1 – Never    2 – Not very often    3 – Sometimes    4 – Quite often    5 – Always
13. Ask a family member for advice.  
1 – Never    2 – Not very often    3 – Sometimes    4 – Quite often    5 – Always
14. Know there are things I can do to make it better.

**1 – Never    2 – Not very often    3 – Sometimes    4 – Quite often    5 – Always**

15. Do something to take my mind off it.

**1 – Never    2 – Not very often    3 – Sometimes    4 – Quite often    5 – Always**

16. Ask someone who has had this problem what he or she would do.

**1 – Never    2 – Not very often    3 – Sometimes    4 – Quite often    5 – Always**

17. Go over in my mind what to do or say.

**1 – Never    2 – Not very often    3 – Sometimes    4 – Quite often    5 – Always**

18. Say I don't care.

**1 – Never    2 – Not very often    3 – Sometimes    4 – Quite often    5 – Always**

19. Get help from a family member.

**1 – Never    2 – Not very often    3 – Sometimes    4 – Quite often    5 – Always**

20. Try to understand why this happened to me.

**1 – Never    2 – Not very often    3 – Sometimes    4 – Quite often    5 – Always**

21. Talk to the teacher about it.

**1 – Never    2 – Not very often    3 – Sometimes    4 – Quite often    5 – Always**

22. Try extra hard to keep this from happening again.

**1 – Never    2 – Not very often    3 – Sometimes    4 – Quite often    5 – Always**

**APPENDIX 5**

**CREATIVITY CODING**

Fluency: number of different uses listed

Flexibility: number of different kinds of uses

Originality: statistical infrequency of uses

## APPENDIX 6

Dear Parents or Guardians,

I am writing to let you know of a research project that will be conducted at Eggleston Elementary School. Two students at Hanover College, Meghan Delaney and Angela DiGeronimo, are conducting the research. Meghan has been a student teacher in Mrs. XXXX's first-grade classroom since August and will be graduating from Hanover College with a psychology major and teacher certification in May. Angela DiGeronimo is also a psychology major who will be graduating in May. The goal of the project is to learn more about how children, with and without ADHD, perceive their self-competence, cope with challenges, and express their creativity.

If your child participates in the study, he or she will be asked to complete a demographic questionnaire and three surveys. These surveys will be completed before and after school or during recess, between January and March. The surveys will assess how children perceive themselves in social and academic domains, their strategies for coping with academic and social problems, and their creativity. Each survey will take no longer than 15 minutes to complete. Teachers of participating students will also be asked to complete a survey assessing students' skills in the academic and social domains. Participation is strictly voluntary. Your child does not have to answer any question that he or she does not want to answer. In addition, he or she may stop participating in the study at any time. Your child's responses will be confidential. To ensure maximum privacy, your child will be assigned an identification number and this number (rather than your child's name) will be associated with both his or her ADHD status and any information he or she provides.

If you would prefer that your child not participate in this study, please fill out the form on the back of this page and return it to your child's teacher. If you have any questions about this study, please contact Meghan Delaney at 812-866-7977 or Angela DiGeronimo at 812-866-7979. You may also contact Ellen Altermatt, the supervisor for this project, at 812-866-7317.

Sincerely,

(Here will be principle and school psychologist signature)

## APPENDIX 7

### Active Consent Form

The goal of this project is to learn more about how children, with and without ADHD, view their own abilities, cope with challenges, and express their creativity.

We are asking you to complete four activities that will help us understand your skills in the academic and social domains. Participation is strictly voluntary. You do not have to answer any questions that you do not want to answer. You may stop participating in the study at any time. Your responses will be confidential. Any information you provide will be strictly confidential.

I understand that I am participating in this study by my own free will and realize that I can stop participation at any time. If I wish, I will be given a copy of this consent form.

---

Signature

---

Date

## APPENDIX 8

### Informed Consent Form

This goal of this independent study is to learn more about how children, with and without ADHD, perceive their self-competence, cope with challenges, and express their creativity.

We are asking you to complete a survey assessing students' skills in the academic and social domains. Participation is strictly voluntary. You do not have to answer any questions that you do not want to answer. In addition, you may stop participating in the study at any time. Your responses will be confidential. To ensure maximum privacy, the child will be assigned an identification number and this number (rather than the child's name) will be associated with both his or her ADHD status and any information you provide.

If you have any questions about this study, please contact Meghan Delaney at 812-866-7977 or Angela DiGeronimo at 812-866-7979. You may also contact Ellen Altermatt, the supervisor for this project, at 812-866-7317.

I acknowledge that I am participating in this study by my own free will and realize that I can stop participation at any time. If I wish, I will be given a copy of this consent form.

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Signature

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Date