

Aggressive Children with and without ADD/ADHD: A Comparison of Outcomes

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Abstract

Aggressive children with ADD/ADHD (n = 93) were compared to aggressive children with no such diagnosis (n = 81) following group treatment of 12 sessions, conducted by trained teachers. CBCL, TRF, and Buss aggression scale were used to measure outcomes of treatment. No initial differences were observed on any of these scales; reduction of aggression was found for all treatment children on all three measures, with no group differences in outcomes. However, in the clinical categories of CBCL and TRF, both children and teachers scored children diagnosed with ADD/ADHD as more aggressive on pre- and post-measurements. These results show that aggressive children with ADD/ADHD, although categorized by themselves as more clinical, may gain from treatment just as do aggressive children with no such diagnosis. The discussion considers the unique population of children, teachers, and the specific intervention.

Keywords: child aggression, ADD/ADHD, intervention

1. Study Rationale

Children with ADD and ADHD display a variety of dysfunctional behaviors, among which aggression and violence stand out (Molina, Hinshaw, Arnold, Swanson, et al., 2013; Rutherford, DuPaul, & Jitendra, 2008). Because ADD/ADHD, which involves impulsivity and hyperactivity, is attributed to genetic and neurological problems, these children may be less affected positively by treatment. The question that forms the basis of the present study is whether treatment used with aggressive children who do not suffer from ADHD can be as effective in reducing violent behavior among children with ADD/ADHD.

2. Literature Review

A child will be diagnosed with ADD when he/she shows attention disorders, and with ADHD when in addition the child shows symptoms of hyperactivity and impulsivity (SDM-5, 2013). Most children diagnosed with ADHD often reveal comorbidity with other disorders (Barkley, 2006), including oppositional defiant disorder (ODD) and conduct disorder (CD) (Conner, Steeber, & McBurnett, 2010). Children diagnosed with ADD/ADHD are found to demonstrate a variety of cognitive, emotional, social, and behavioral disorders (Barkley, 2006; Ozdemir, 2010): lower learning skills, motivation, and academic achievements (McConaughy, Volpe, Antshel, Gordon, & Eiraldi, 2011); emotional difficulties, including frustration, guilt, anger, anxiety, and depression (Young & Amarsinghe, 2010); more social difficulties, including anti-social and aggressive behavior (Al-Yagon & Margalit, 2013; Lopez et al., 2008); delinquency; and substance abuse (Molina et al., 2013). Overall, they have difficulties in executive function-planning, problem-solving, and controlling self-behavior.

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Furthermore, these problems are more visible not only in such children compared with normative peers but also compared with children with similar problems but without ADHD (Barkley, 2006). The combination of cognitive distortions, high anger, and low self-control put the latter at high risk for aggressive and violent behavior.

Aggressive behavior is defined as the "intentional use of physical force or power, threatened or actual, against oneself, another person, group, or community, that either results in, or has the likelihood to resulting in injury, death, psychological harm, maldevelopment, or deprivation" (WHO: Krug et al., 2002, p. 5). Aggression is a multi-dimensional phenomenon, marked by social, cultural, and family dysfunction, as well as by neurological or biological variables. Aggressive children and youth consequently are in need of rigorous treatment (Dodge, 2011) to relieve such behavior.

Cognitive behavioral theories provide convincing explanations of child aggression, and the therapies emanating from them are the most frequently used to treat aggressive children (Dodge & Godwin, 2013; Kazdin, 2007). Aggressive behavior is perceived as a learned behavior; children develop scripts of reactions to a socially disturbing situation and act upon them automatically (Eron, 1997).

They use distorted social information processing through which they perceive limited cues in a given situation, interpret them as intentionally negative, select an aggressive response because they perceive power as an advantage and believe it will serve them best (Dodge & Swartz, 1997; Dodge, 2011). In actuality, a power response does not serve them well, because its consequences are usually not in their favor. Thus, such children become anxious, angry, and helpless, and, as a result, resistant to change.

To overcome children's angry responses and resistance to therapy, Shechtman (2010) added to such therapy a focus on feelings and an integrative model of treatment as Prochaska (1999) had suggested for the client change process. Shechtman uses the group as the main treatment modality despite concerns among professionals of potential adverse mutual influence in such groups (Dodge, 2006; Dishion et al., 2008). The outcomes of the suggested group intervention have been systematically measured and demonstrated an evidence-base. Earlier studies that compared individual and group treatment indicated a reduction of aggressive behavior in both treatment formats, with no difference between them (Shechtman & Ben-David, 1999; Shechtman, 2003). Other studies compared the intervention to a control non-treatment group (Shechtman, 2000), to a different modality (Shechtman, 2006), and to classroom intervention (Shechtman & Ifarga, 2009). In all these studies, the children treated in the suggested method showed more favorable outcomes.

In a study that compared children with and without ADD/ADHD who had adjustment problems (Leichtentritt & Shechtman, 2009), the children were not characterized as aggressive, and therefore a different content was the focus of intervention. No difference in either outcome or process variables was found between the two groups. In the current study, in contrast, the focus is on aggressive children and so is the intervention.

We hypothesized that aggressive children diagnosed with ADD/ADHD would show less improvement following group treatment in regard to their aggressive behavior compared with aggressive children with no ADD/ADHD.

3. Method

3.1 Participants

Participants were 174 aggressive children from 34 schools, 29 elementary schools and 5 junior high schools. School size ranged from 4-36 classes per school ($M = 17.21$, $SD = 7.71$ classes), and 35-1,155 students per school ($M = 466.59$, $SD = 252.29$ students). The very small schools were special education institutes, but most of the participants were enrolled in regular education.

Schools were located over a wide geographical range, representing the population of Israel. Most of the participants (75.9%) were boys. In terms of age, 138 of the children were in elementary school (79.3%), and 36 (20.7%) in junior high school. Most of these children (72%) lived at home with their two parents families. Of the total, 93 children (53.4%) had been diagnosed with ADD/ADHD.

In addition, 50 teachers participated in the study, 1-4 per school ($M = 1.47$, $SD = 0.93$ teachers). Each teacher had 5-37 children in her class ($M = 24.88$, $SD = 8.69$), and 1-6 children in the intervention group ($M = 3.48$, $SD = 1.09$). The teachers were all enrolled in a graduate program; 90% possessed a Bachelor's degree and 10% already had a graduate degree.

3.2 The Intervention

The aim of the counseling intervention was to help aggressive children become aware of their aggression, understand what triggered it, develop motivation to change their behavior, and learn to control it. At the initial stage of the group, a therapeutic alliance was established in each group through therapeutic activities and the creation of group norms. In the working stage, children discussed issues that were pertinent to aggressive behavior: (1) anger, what triggers it and ways to control it; (2) the need for power and force-coping with threats, putdowns, disrespect, but also letting go and forgiveness; (3) developing empathy toward victims of aggression; and (4) enhancing self-control.

Bibliotherapy (the use of literature in therapy) was used as an adjunct to the treatment to help children express themselves with less resistance.

The stories, poems, songs, and movies employed all pertained to the characteristics of aggressive children: high anger and need for power, and low empathy and self-control. Children identify with the literature figures, recognize situation in which they themselves are involved, and learn alternative coping skills, all of this in an indirect way that reduces defense mechanisms (Shechtman, 2010).

3.3 Instruments

3.3.1 Teacher Instruments

Aggressive children were identified by their homeroom teachers based on the *Peer Nomination Instrument* (Crick, 1996). The original scale includes 21 items relating to verbal, physical, and relational aggression ("the child pushes or hits other children").

Internal consistency ranged from .87 to .95, test-retest reliability after four weeks ranged from .82 to .90. As ethical considerations did not allow the use of peer nomination, the teachers were those who completed a short version of 10 items (1, 3, 5, 7, 9, 13, 15, 18, 20) on each child in her classroom. Those who received the highest scores relating to aggressive behavior were invited to participate in the study.

Child aggression based on adjustment symptoms was measured through the *Teacher Report Factors* (TRF; Achenbach & Edelson, 1991a). A short version was used that contained 19 items pertaining to aggressive behavior ("he tends to get into fights frequently"); these were rated on a 2-point scale. Validity was based on a comparison with Conner's revised Teacher Rating Scale (Conner, 1990) and showed a correlation of .80. Agreement between raters (family, friends) ranged from .40 to .60. Reported reliability was .96, test-retest reliability was .92 after 15 days (Achenbach et al., 1995). In a previous study in Israel (Shechtman & Ifargan, 2009), internal consistency was .83. In the current study, it was $\alpha = .94$.

3.3.2 Children's Reports

Children completed a short version of the *Child Behavior Checklist* (CBCL; Achenbach & Edelbrock, 1991b). The 19 items on this list parallel the TRF, with responses ranging from 0 to 2. A higher score represents higher aggression. Validity and reliability are reported by the authors (Achenbach et al., 1995).

The Hebrew version is commonly used in Israel (e.g., Shechtman & Ifargan, 2009). Internal consistency in the current study was $\alpha=.89$.

Child aggression was also traced through the *Aggression Questionnaire* (Buss & Perry, 1992), completed after each session. The instrument consists of 29 items that measure physical aggression (1-9), verbal aggression (10-14), anger (15-21), and hate (22-29) on a 7-point scale, from 1 (not characteristic of me) to 7 (very characteristic of me); the higher the score, the higher the aggression that is represented. Validity was based on comparison with other related tests (for example, Gladue's Aggression Inventory: $r = .30$ to $r = .62$). Reported internal consistency was .75-.82, test-retest reliability after 7 weeks ranged from $r = .47$ to $r = .82$ (Harris, 1997). In Israel, a short version of 12 items from this Inventory was used that correlated highly ($r = .82$) with the full scale in a previous study (Shechtman & Ifargan, 2009). Internal consistency in the present study was $\alpha = .84$. For the analysis of outcomes, the average score on the first two sessions was compared to the average score of the last two sessions.

Perceived teacher empathy was measured through the *Empathy Scale* (Persons & Burns, 1985). The scale includes 10 items ("my teacher understands me well") on a scale of 0-3, with a higher score representing high empathy. The reported validity and reliability were good, and internal consistency in the current study was $\alpha=.85$.

3.4 Procedure

As mentioned earlier, the participating children were identified by their homeroom teachers as highly aggressive. Because the Israel Ministry of Education blocks the use of peer nomination, viewing it non-ethical, their teachers nominated the children based on the scale of the Child Nomination Questionnaire. After the children were so identified, the consent of their parents for participation was obtained for each child. It was explained to parents that treatment would involve small groups, stories, and games. No objection was raised, as most parents were happy that their problem child would receive extra attention in the school. After the children were identified as highly aggressive, it was found that over 50% of them had a diagnosis of ADD/ADHD. These diagnoses had been made by child psychiatrists, as requested in the country.

The intervention was carried out in small groups of 4-6 children from the same class. Some non-aggressive children were included in each group to avoid labeling, to help lead the discussion in a constructive way, and to model constructive behavior ($n = 48$), they were excluded from the analyses. The intervention comprised 12 sessions, each lasting one hour and conducted within the school schedule. Children completed two questionnaires at three points in time: pre, post, and follow-up three months later.

The Buss and Perry questionnaire was completed at the end of each session. For the pre-post analysis, the average score of the first two sessions was compared the average score of the last two sessions.

The teachers also completed the TRF at the same three points in time: pre, post, and follow-up. The teachers conducted the groups as part of their graduate course requirements and received group supervision throughout the course. They each submitted a written protocol of every session that was used to secure fidelity to the program intervention.

3.5 Data Analysis

Data analysis was conducted with the SPSS (ver.22). Because of the nested design (students within small groups and schools), the data was analyzed with mixed hierarchical models to account for the dependency of observations. Analyses of change were conducted at four levels: time within the individual, the individual level, class, and school. Change was examined by ADD/ADHD group (2) and time - pre, post, follow-up (3). Change in outcomes was examined with two separate sets of analyses: one for pre-post differences, and the other for post-follow-up differences.

This strategy was applied because of the dropout ($n = 52$) from post to follow-up measurements. All analyses were conducted while controlling for gender and age level and the interactions of these two variables with time. Differences in the clinical categories of CBCL and TRF were examined with χ^2 and Z tests.

4. Results

4.1 Preliminary Results

As most of the participants were boys ($n = 132$, 75.9%) and most were in elementary school ($n = 138$, 79.3%), gender and age level were controlled throughout the analyses and did not serve as independent variables. Preliminary results pertain to pre-study differences in the outcome variables according to LD, ADD/ADHD, dropout (from post to follow-up), controlling for gender and age levels, and their interactions with ADD/ADHD. No pre-study differences were found in these variables (CBCL aggression, TRF aggression, Buss aggression, child's perception of teacher's empathy) by LD, ADD/ADHD, or dropout.

4.2 Main Results

Differences in the outcome variables were examined with two sets of mixed model analyses because of the dropout from post-measurement to follow-up ($n = 52$): (a) pre-post differences by ADD/ADHD, (b) post-follow-up differences by ADD/ADHD. All analyses were conducted while controlling for gender and age level, and their interactions with time and with ADD/ADHD.

Pre-post change of the children's outcome variables was examined with mixed model analyses by time (2) and by ADD/ADHD (2), controlling for gender and age level and their interactions with the two variables. Table 1 presents means, standard deviations, and F values for these differences in outcome variables. The table shows that all time differences are significant, yet time by ADD/ADHD interactions are non-significant. A child's aggression, in other words, significantly decreased in therapy and his/her perception of the teacher's empathy significantly increased, yet with no difference by ADD/ADHD diagnosis. Figure 1 presents the gradual decrease in social aggression in both groups, but with no difference between the groups.

Table 2 presents post-to-follow-up differences in the outcome variables. As may be seen, all time and time by ADD/ADHD differences are not significant. These results point to the stability of the achievements gained during therapy, regardless of an ADD/ADHD diagnosis.

Changes in children's aggression based on clinical categories and ADD/ADHD are presented in Tables 3 and 4. Both tables show significant pre-post changes for both children with and children without an ADD/ADHD diagnosis. Post to follow-up changes are non-significant. That is, the percentage of children categorized as aggressive, in both the marginal and clinical ranges, decreased meaningfully, and the percentage of children categorized as normative increased. A comparison of the pre-post change between children with an ADD/ADHD diagnosis and children without it showed that it was non-significant for CBCL ($\chi^2(2) = 3.19, p = .406$), but significant for TRF ($\chi^2(2) = 7.88, p = .038$). Thus, when the children's own perception of aggression was considered, the pre-post change for children with and without an ADD/ADHD diagnosis was similar. However, in the teachers' perspective, fewer children with an ADD/ADHD diagnosis improved than did children without the diagnosis.

Several additional interesting points may be observed in Tables 3 and 4:

- a) About 72% of the children with no ADD/ADHD diagnosis have categorized themselves (CBCL) as normative at pretest, compared with about 63% of the children with ADD/ADHD ($Z = 1.15, p = .252$). Both groups showed a significant decrease in aggression, so at post-test about 96% of the children with no ADD/ADHD diagnosis have categorized themselves as normative, compared with about 86% of the children with ADD/ADHD ($Z = 2.34, p = .019$). The initial (non-significant) difference between the two groups was maintained and found to be significant at post-test.
- b) About 25% of the children with ADD/ADHD categorized themselves (CBCL) as clinically aggressive at pre-test, compared with about 12% of the children with no ADD/ADHD diagnosis ($Z = 2.08, p = .038$). At post-test, about 13% of the children with ADD/ADHD categorized themselves as clinically aggressive, compared with about 2% of the children with no ADD/ADHD diagnosis ($Z = 2.75, p = .006$). The initial difference between the two groups was maintained. Note, though, that in the clinical category of highly aggressive both children with ADD/ADHD and their teachers considered them clinically as worse.
- c) Similar observations may be made regarding the teachers' evaluations (TRF).

About 28% of the children with ADD/ADHD were categorized by their teachers (TRF) as clinically aggressive at pre-test, compared with about 15% of the children with no ADD/ADHD diagnosis ($Z = 2.09, p = .036$).

At post-test, about 12% of the children with ADD/ADHD were categorized by their teachers as clinically aggressive, compared with about 1% of the other children ($Z = 2.75, p = .006$). The initial difference between the two groups was maintained.

- d) At pre-test, teachers tended to evaluate the children as less normative and more marginally aggressive than did the children themselves, regardless of ADD/ADHD status. Percentages for the clinical aggression category are similar for teachers and children: whereas about 72% of the children with no ADD/ADHD diagnosis and about 63% of those with ADD/ADHD categorized themselves (CBCL) as normative at pre-test, the respective teachers' evaluations were 38% and 45% ($Z = 4.26, p < .001$, and $Z = 2.76, p = .006$, respectively); Whereas about 16% of the children with no ADD/ADHD diagnosis and about 12% of those with ADD/ADHD categorized themselves as marginally aggressive at pre-test, the respective teachers' evaluations were 47% and 27% ($Z = 4.23, p < .001$, and $Z = 2.65, p = .008$, respectively).

In sum, change in aggression was significant in each group when both the continuous scores and the clinical categories were considered. Change did not differ between children with and without ADD/ADHD in terms of their own perception of aggression. However, children placed themselves in the clinical category more often when they were among the ADD/ADHD group (see point b above). Teachers were more likely to perceive children with ADD/ADHD than children without ADD/ADHD as aggressive and as less conducive to change (when the clinical categories are considered, but not the continuous scores). Overall, teachers perceived the children to be more aggressive than did the children themselves.

5. Discussion

The study focused on child aggression, comparing outcomes of treatment of children diagnosed with ADD/ADHD and children with no such diagnosis. We hypothesized that children diagnosed with ADD/ADHD would be slower to reduce their level of aggression. Results indicated that there was no difference in the initial scores of aggression and that, based on self and teacher reports, both groups showed progress, with no difference between the two groups of children. However, in the clinical categories of CBCL and TRF, differences between the groups were observed.

On both measures, children appear higher on the aggression scale on the initial scores and on the post-test scores, yet no difference in progress was observed; that is, both groups improved similarly in the clinical categories, but ADD/ADHD children appear to reveal more aggression.

Our hypothesis suggesting that children with ADD/ADHD would be less positively affected by the intervention was based on the vast literature suggesting that children with ADD/ADHD are more at risk for aggressive responses. Their cognitive distortions (McConugley et al., 2011), emotional (Young & Amarasinghe, 2010), social (Lopez et al., 2008), and behavioral disorders (Molina et al., 2013) all lead to exhibiting violence. Their lower executive skills and low self-control make children in this category more fragile in conflict situations. For that reason, too, they are difficult clients in a group setting. Barkely (2006) stipulated that children diagnosed with ADD/ADHD showed more problem behavior compared not only to normative peers but also to children with behavior problems. Thus, it was logical to expect higher aggression initially and lower progress following treatment.

The good news is that our hypothesis was largely rejected, as no initial or post differences were found on the outcomes. That is, children with ADD/ADHD can be treated with the same treatment as other aggressive children and gain from it. The bad news is that both children and their teachers consider children with ADD/ADHD as clinically more aggressive. Clinical categories are important because beyond showing progress on a scale, they tell us whether a child has improved; in this respect, children with ADD/ADHD are in a worse position than children not diagnosed with ADD/ADHD. Thus, our hypothesis was only partly rejected.

The progress that children with ADD/ADHD make despite their high risk for aggression may be attributed to several factors. First, most of the children in this study were enrolled in regular classrooms; thus, although such children are perceived as aggressive, their level of aggression may be considered mild. Second, the heterogeneity of the groups may account for some of the progress: children with ADD/ADHD were placed in groups with non-ADD/ADHD children with behavior problems and also with normative children, a composition that is necessary to prevent mutually adverse influence in small groups (Dishion et al., 2008; Dodge, 2006).

Third, the intervention program using employs bibliotherapy in conjunction with the therapy process; that is, stories, poems, and films engage the children in the therapy process. Previous research indicated that this modality was more effective in reducing child aggression than was talk therapy based on the same theory but without bibliotherapy (Shechtman, 2006). The modality of treatment, it was found, met with less resistance in therapy. Children with ADHD and ADD particularly need helpful strategies to stay engaged in the therapy process, and this multi-approach seems to work well with them.

An interesting finding was that teachers perceived ADD/ADHD problem children to be more aggressive than the youngsters' own perceptions. This finding may not be so surprising, as clients are less aware of their problems than are therapists (Prochaska, 1999). In previous research with aggressive youth, Shechtman indicated that at the initial stages of treatment, about 80% of the children were unaware that they had a problem (Shechtman, 2003). This lack of awareness suggests implications for treatment; working with children on self-awareness is important, as it may lead to a change in behavior. The fact that teachers are harsh evaluators, however, may be problematic insofar as their expectations and relationships with these children.

Consequently, it is also important to work with teachers to develop their understanding of the problem. In this particular study, the teachers were the ones who were trained to implement the intervention, a fact that helped to improve their relationship with the students.

5.2 Limitations

The teachers in this study identified the aggressive children because peer nomination was not allowed. This fact led to three problems; first, teachers were not blind to the diagnosis of ADD/ADHD, which could affect initial scores. Second, teachers are not the best evaluators of child aggression, as most aggressive acts are undertaken out of the classroom. Third, teacher involvement in the intervention might have affected outcome scores on the TRF. Fourth, although trained and supervised, teachers are para-professionals in counseling and novices in methods of treatment. Finally, the study population comprised elementary school children with mild aggression, and therefore we cannot generalize the outcomes to harsher aggression.

Regardless of these limitations, the study adds to the discussion of differences between children with and without ADD/ADHD by pointing to the fact that differences between the two groups may not be that obvious. Moreover, it suggests that all children with problems can be treated equally for their aggression despite their unique difficulties. Clinically, the study provides a treatment method - a modality involving bibliotherapy - that may be effective with such children, and one, despite the foregoing misgivings, that can be carried out by teachers. Empirically it adds to previous research supporting this method. It also adds to our confidence in treating aggression in groups despite the reservations mentioned in the literature. Finally, the relatively large sample and number of groups in this study allowed a nested procedure, which takes in account the impact of the small group on outcomes. This aspect was important because of the dependency of outcomes on the dynamics of the small group.

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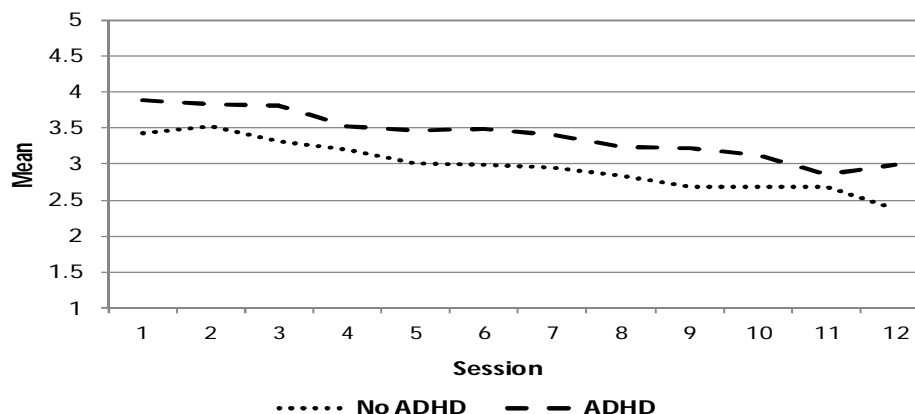


Figure 1: Social Aggression, by ADHD Group and Time

Table 1: Means, Standard Deviations, and F- Values for Pre-Post Differences in the Outcome Variables, by ADHD (N = 174)

Time:	No ADD/ADHD M (SD) (n = 81)		ADD/ADHD M (SD) (n = 93)		F_{time} (η^2)	F_{ADHD} (η^2)	$F_{time \times ADHD}$ (η^2)
	pre	post	pre	post			
CBCL aggression	60.47 (7.99)	53.00 (5.03)	61.88 (10.14)	55.82 (7.84)	$F(1, 264.35) =$ 5.15* (.052)	$F(1, 316.14) =$ 0.86 (.009)	$F(1, 264.35) =$ 2.40 (.018)
TRF aggression	65.48 (5.01)	60.15 (4.55)	66.18 (7.46)	61.18 (6.75)	$F(1, 283.38) =$ 8.96** (.082)	$F(1, 331.03) =$ 1.26 (.014)	$F(1, 283.38) =$ 0.47 (.005)
Social aggression	3.42 (0.93)	2.58 (1.03)	3.84 (1.10)	2.91 (1.26)	$F(1,$ 188.40) = 15.76*** (.123)	$F(1, 271.91) =$ 0.38 (.001)	$F(1, 200.04) =$ 0.43 (.001)
Child's perception of teacher's empathy (0-3)	2.37 (0.57)	2.62 (0.44)	2.35 (0.51)	2.63 (0.43)	$F(1, 269.72) =$ 7.53** (.054)	$F(1, 320.13) =$ 0.83 (.002)	$F(1, 269.72) =$ 0.26 (.001)

* $p < .05$, ** $p < .01$, *** $p < .001$.

Table 2: Means, Standard Deviations, and F- Values for Post to follow-up Differences in the Outcome Variables, by ADD/ADHD (N = 122)

Time:	No ADD/ADHD M (SD) (n = 55)		ADD/ADHD M (SD) (n = 67)		F_{time} (η^2)	F_{ADHD} (η^2)	$F_{time \times ADHD}$ (η^2)
	post	follow- up	post	follow- up			
CBCL aggression	53.00 (4.97)	52.62 (5.44)	56.75 (8.52)	55.90 (9.51)	$F(1, 196.28) =$ 0.70 (.004)	$F(1, 227.18) =$ 3.25 (.018)	$F(1, 196.28) =$ 0.22 (.004)
TRF aggression	59.84 (4.69)	58.75 (5.00)	61.72 (7.16)	60.96 (8.11)	$F(1, 195.09) =$ 0.54 (.005)	$F(1, 222.87) =$ 1.44 (.013)	$F(1, 195.09) =$ 0.02 (.001)
Child's perception of teacher's empathy (0-3)	2.58 (0.47)	2.58 (0.46)	2.58 (0.47)	2.62 (0.48)	$F(1, 200.05) =$ 0.12 (.001)	$F(1, 228.53) =$ 0.49 (.002)	$F(1, 200.05) =$ 0.02 (.001)

Table 3: Time Differences in the Children's CBCL Aggression Levels, According to Clinical Category, by ADD/ADHD (N = 174)

	No ADD/ADHD			ADD/ADHD		
	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)
	pre	post	follow- up	pre	Post	follow- up
Normative	58 (71.6)	78 (96.3)	52 (94.5)	59 (63.4)	80 (86.0)	54 (80.6)
Marginal	13 (16.0)	2 (2.5)	2 (3.6)	11 (11.8)	2 (2.2)	4 (6.0)
Clinical	10 (12.3)	1 (1.2)	1 (1.8)	23 (24.7)	11 (11.8)	9 (13.4)
pre-post:	$\chi^2(2) = 37.90^{***}$			$\chi^2(2) = 21.09^{***}$		
post-follow- up:	$\chi^2(2) = 1.02$			$\chi^2(2) = 4.70$		

*** $p < .001$.

Table 4: Time Differences in the Children's TRF Aggression Levels, According to Clinical Category, by ADD/ADHD (N = 174)

	No ADD/ADHD			ADD/ADHD		
	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)
	pre	post	Follow- up	pre	post	Follow-up
Normative	31 (38.3)	70 (86.4)	47 (85.5)	42 (45.2)	72 (77.4)	50 (74.6)
Marginal	38 (46.9)	10 (12.3)	7 (12.7)	25 (26.9)	10 (10.8)	8 (11.9)
Clinical	12 (14.8)	1 (1.2)	1 (1.8)	26 (28.0)	11 (11.8)	9 (13.4)
pre-post:	$\chi^2(2) = 79.77^{***}$			$\chi^2(2) = 39.08^{***}$		
post-follow- up:	$\chi^2(2) = 1.13$			$\chi^2(2) = 1.31$		

*** $p < .001$.