

Prevalence of Aggression and Defiance in Children with ADD/ADHD Tendencies

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ABSTRACT

Attention Deficit Disorder (ADD) and Attention Deficit Hyperactivity Disorder (ADHD) appear to have become more prevalent in the past few years. Many children who display ADD/ADHD tendencies also display behaviors which cause problems in a classroom setting. Considering the fact that these behaviors could be displayed by the student population as a whole, the question becomes whether students with ADD/ADHD tendencies display these characteristics more often than students in the general population. This study addresses whether students with ADD/ADHD tendencies display more aggressive and/or defiant behaviors than students in the general population.

Table of Contents

CHAPTER 1 - Introduction	5
1.1 Introduction	5
1.2 Research Proposal	5
1.3 Background of Study	6
1.4 Hypothesis	6
1.5 Limitations of the Study	7
1.6 Definition of Terms	7
CHAPTER 2 – Review of Literature	8
2.1 Review of Literature	8
CHAPTER 3 - Methodology	10
3.1 Overview of proposed study	10
3.2 Participants	10
3.3 Instruments	10
3.4 Procedure	10
CHAPTER 4 - Results	12
4.1 Results	12
CHAPTER 5 – Summary and Recommendations	13

Prevalence of Aggression and Defiance in Children with ADD/ADHD Tendencies	4
5.1 Summary	13
5.2 Recommendations	13
REFERENCES	14
APPENDICES	16
Appendix A: Raw Data	16
Appendix B: Descriptive Statistics for Column 1	17
Appendix C: Descriptive Statistics for Column 2	18
Appendix D: Hypothesis Test	19
Appendix E: Hypothesis Test Graph.....	20

CHAPTER 1 - Introduction

1.1 Introduction

Over the past ten to fifteen years, the number of children diagnosed with Attention Deficit Disorder (ADD) or Attention Deficit Hyperactive Disorder (ADHD) has increased exponentially. Considering the number of ADD/ADHD students in any particular school setting, teachers must be knowledgeable in this area. As more studies are conducted and more information becomes available, those who work with children must be aware of what can be expected out of ADD/ADHD children and also how to guide these children to the best of their abilities.

1.2 Research Proposal

Certain behaviors appear to be linked closely with ADD/ADHD. Two of these behaviors are defiance and aggression. As a whole, ADD/ADHD children tend to behave more defiantly than other children. In addition, due to the ADD/ADHD child's lack of self control, they are more physical with other children. Although this physical contact may or may not be intentional, the contact may come across as aggression towards others. Through observations and recording of data, the researcher intended to determine if defiance and aggression are indeed more prevalent in children with ADD/ADHD than in children without.

Determining the link between defiance/aggression and ADD/ADHD will enable teachers to be more aware of this behavior. In addition, teachers will be able to get the training necessary in order to deal with these behaviors most effectively. As Sir Francis Bacon once said, "Knowledge is power." Once the knowledge of the link between these behaviors is available, we

will have the power to help change these behaviors. The researcher intended to find the link through research. This will provide the knowledge necessary to make the change. Once the knowledge is available, research can be conducted to determine what causes the behavior and what can be done to change it.

1.3 Background of Study

Classrooms are filled with a variety of children with different behaviors. The more knowledge educators have as to why their students behave in a particular way will assist in classroom management as well as classroom instruction. Students with ADD/ADHD tendencies appear to be more likely to display negative behaviors. Once this is proven, more exploration may be conducted in order to determine the cause for these behaviors. As the cause is determined, answers may be found as to how these behaviors can be improved.

1.4 Hypothesis

Although all children have moments when they are defiant or aggressive, there appears to be a link between ADD/ADHD and the tendency to be more defiant and aggressive than the general population of students. The researcher believed that the imbalance which causes ADD/ADHD also causes these children to display negative characteristics which adults feel are unacceptable. If this is true, these children require more guidance so they may learn how to keep these behaviors under control.

Original Claim: $\mu_1 > \mu_2$

H_0 : $\mu_1 \leq \mu_2$

H_A : $\mu_1 > \mu_2$

1.5 Limitations of the Study

The following were limitations of this study.

1. The sample size was limited to a Christian School environment.
2. Due to time constraints, observation was limited to one week.

1.6 Definition of Terms

Aggression – physical actions towards others (intentional or accidental); verbal unkindness towards others.

Attention Deficit Disorder (ADD) – biologically based condition causing a persistent pattern resulting in one or more of the following behaviors: inattention, hyperactivity, impulsivity.

Attention Deficit Disorder Tendencies – children who have displayed at least six (6) of the following characteristics for at least six (6) months: makes careless mistakes, difficulty sustaining attention, does not seem to listen, fails to finish tasks, loses things, unorganized, easily distracted, forgetful, interrupts others, blurts out answers, difficulty taking turns.

Attention Deficit Hyperactivity Disorder (ADHD) – biologically based condition that displays a hyperactivity component to an individual with Attention Deficit Disorder (ADD).

Defiance – refusal to obey; pretends not to hear others; responds as if they understand but does not follow through with what they should be doing.

CHAPTER 2 – Review of Literature

2.1 Review of Literature

Determining whether or not a child has Attention Deficit Disorder (ADD) and Attention Deficit Hyperactivity Disorder (ADHD) is not cut and dry to diagnose. There are a variety of symptoms that are linked to ADD/ADHD. In order to ensure an accurate diagnosis, there are various ways of gathering information regarding the child who is displaying ADD/ADHD tendencies.

One of the effective means to diagnose ADD/ADHD is through direct behavioral observation (Brock and Clinton 2007). Direct behavioral observation entails mental health or educational professionals observing the child in their natural setting. Through these observations, the professional is able to determine whether the child displays ADD/ADHD tendencies or exhibits typical behaviors for the child's age.

Currently, observations of behavior lead to diagnosis. There are clear indications that ADD/ADHD affects several functions of the brain. Unfortunately, pinpointing the exact location of the imbalances proves to be beyond our grasp (Cameron 2011). Through further studies, one day the actual cause of ADD/ADHD may be found. Until then, behavioral symptoms are what we rely on for a diagnosis.

Considering that the underlying cause is unknown, the behaviors must be addressed and treated. There are many ways in which these behaviors can be addressed. Management of these symptoms is essential to the success of the child (Hoang 2006). Management of these behaviors can be done through a variety of means. Communication, interventions, and medication are all

options to increase attentiveness in children. The benefits of medication must be weighed against the side effects that go along with them (Simon 2010).

Aside from medication; there is education. Teachers need to educate themselves as to what ADD/ADHD is and also what can be done about it (Bausch 2005). Children who possess ADD/ADHD tendencies require more guidance when it comes to self-control. Many times, they will require multiple exposures to stimuli to develop their self-control (Bloh 2009). Self-control is an indicator of potential success inside the classroom. Those who lack self-control tend to have more issues inside the classroom setting (Hoerger & Mace 2006).

Along with self-control, children who exhibit ADD/ADHD tendencies have a propensity to be more explosive than their normal-developing counterparts. Along with explosiveness comes unpredictability and defiance (Ozdemir 2010). These behaviors prove to be disruptive in a classroom setting. Studies show that 3-5% of children have ADD/ADHD and many of these children cause disruption in the classroom (McGoey et al., 2007).

With such a high percentage of students displaying ADD/ADHD tendencies, teachers should be educated regarding this disorder. However, the majority of teachers receive little training on how to recognize ADD/ADHD and how to cope with it in the classroom (Stormont & Stebbins 2005). A study of teachers found that they needed a larger budget and more support staff if inclusion consisted of ADD/ADHD students (Gal, Schreur et al. 2010).

Considering the majority of schools do not have the finances or the support staff, teachers must find other resources to help ADD/ADHD children succeed. Self-monitoring of attention offers a way for students to remain aware of their successes and struggles (Harris et al., 2005). Self-monitoring allows the child to take responsibility for their attention in the classroom.

CHAPTER 3 - Methodology

3.1 Overview of proposed study

The purpose of this study was to determine if children with ADD/ADHD tendencies were more inclined to display aggressive or defiant behaviors. This study observed Preschool through Eighth Grade students over a week-long period. Throughout the study, the number of aggressive or defiant behaviors was recorded. These instances were further broken down into whether the child possessed ADD/ADHD tendencies or not.

3.2 Participants

The selection of students was taken from Clovis Christian School classrooms in Clovis, NM. Included in the sample was a Preschool, First Grade, and Eighth Grade class. The sample consisted of entire student populations in each class. These classes had children who displayed ADD/ADHD tendencies as well as those children who did not show any outward signs of these tendencies.

3.3 Instruments

Data was collected through the observations of the Preschool, First, and Eighth Grade teachers. The researcher then used Statdisk to interpret the data.

3.4 Procedure

Teachers of various grade levels at Clovis Christian School were given a tally sheet with instructions. Any time aggressive and/or defiant behavior was observed, the teacher would put a

mark on their tally sheet. There were two columns: students who displayed ADD/ADHD tendencies and students who did not display ADD/ADHD tendencies. These behaviors were recorded over a five-day period.

When the observations were complete, the researcher collected all the data. The researcher then quantified the number of times that aggressive and/or defiant behavior was exhibited. The data was entered into Statdisk in order to determine whether the researcher's hypothesis was correct.

Using the data collected through Statdisk, the researcher determined whether or not children with ADD/ADHD tendencies are more likely to be aggressive and/or defiant. The researcher predicted that those who show evidence of these tendencies were more likely to be aggressive and/or defiant.

CHAPTER 4 - Results

4.1 Results

The sample size for this study was 43 students in Preschool, First, and Eighth Grade. All data analysis was performed at a significance error of .05, which means that there was a five percent chance of committing a Type 1 error: the probability of rejecting a true null hypothesis. This hypothesis test was completed using the Statdisk software. Statdisk is a free on-line program that uses a statistical formula to calculate the correlation from data that the researcher inputs into the computer. Statdisk completed the hypothesis testing with a confidence interval of ninety percent. The sample provided enough evidence to support the claim and reject the null hypothesis. The test results confirmed a correlation between aggressive or defiant behavior and ADD/ADHD tendencies.

CHAPTER 5 – Summary and Recommendations

5.1 Summary

This research showed a correlation between aggressive and/or defiant behaviors and students who display ADD/ADHD tendencies. The researcher believes that those children who display ADD/ADHD tendencies are more likely to act out in an aggressive or defiant manner. Through further research, the link between these behaviors and disorders will hopefully be found. Once the link is discovered, the researcher believes that the amount of aggressive and/or defiant behaviors may be diminished.

5.2 Recommendations

The researcher believes that educators need to be aware of this correlation and understand that it is not unusual to observe aggressive and/or defiant behavior in children who display ADD/ADHD tendencies. In addition, the researcher believes there needs to be more studies on the correlation of these behaviors and disorders. Through further studies, the researcher is hopeful that the link will be found so that educators will observe fewer instances of aggressive and defiant behavior.

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APPENDICES**Appendix A: Raw Data**

Statdisk – Raw Data
Input by: Janelle Hill

Row	Column 1	Column 2
1	0	4
2	0	4
3	0	5
4	0	1
5	0	2
6	13	3
7	8	2
8	4	1
9	7	2
10	6	1
11	4	1
12	5	3
13	7	2
14	4	1
15	4	0

Column 1 – Number of times per day aggression or defiance was observed in children displaying ADD/ADHD tendencies

Column 2 – Number of times per day aggression or defiance was observed in children who do not display ADD/ADHD tendencies

Appendix B: Descriptive Statistics for Column 1

Statdisk - Descriptive Statistics

Input by: Janella Hill

Descriptive Statistics for Column 1

Sample Size, n:	15
Mean:	4.133333
Median:	4
Midrange:	6.5
RMS:	5.51362
Variance, s ² :	14.26667
St Dev, s:	3.777124
Mean Abs Dev:	2.826667
Range:	13
Coeff. Of Var.	91.38%

Minimum:	0
1st Quartile:	0
2nd Quartile:	4
3rd Quartile:	7
Maximum:	13

Sum:	62
Sum Sq:	456

Column 1 – Number of times per day aggression or defiance was observed in children displaying ADD/ADHD tendencies

Appendix C: Descriptive Statistics for Column 2

Statdisk - Descriptive Statistics

Input by: Janella Hill

Descriptive Statistics for Column 2

Sample Size, n:	15
Mean:	2.133333
Median:	2
Midrange:	2.5
RMS:	2.529822
Variance, s ² :	1.980952
St Dev, s:	1.407463
Mean Abs Dev:	1.111111
Range:	5
Coeff. Of Var.	65.97%

Minimum:	0
1st Quartile:	1
2nd Quartile:	2
3rd Quartile:	3
Maximum:	5

Sum:	32
Sum Sq:	96

Column 2 – Number of times per day aggression or defiance was observed in children who do not display ADD/ADHD tendencies

Appendix D: Hypothesis Test

Statdisk – Hypothesis Test for the Mean of Two Independent Samples

Input by: Janella Hill

Not eq. vars: No Pool (and df calculated with Formula 9-1)

Claim: $\mu_1 > \mu_2$

Test Statistic, t: 1.9217

Critical t: 1.735042

P-Value: 0.0354

Degrees of freedom: 17.8143

90% Confidence interval:

$0.1942436 < \mu_1 - \mu_2 < 3.805756$

Reject the Null Hypothesis

Sample provides evidence to support the claim

Appendix E: Hypothesis Test Graph

Statdisk – Hypothesis Test, Two Independent Means

Student t Distribution

Reject the Null Hypothesis

