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**Individual Case Study:  
Verbalizing Emotions to Reduce  
Aggressive Outbursts in an Autistic Adult**

by  
Samantha Levine

A Thesis

Submitted to the  
Department of Psychology  
College of Education  
In partial fulfillment of the requirement  
For the degree of  
Master of Arts  
at  
Rowan University  
Apr 20, 2011

Thesis Chair:      Roberta Dihoff

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### **Dedication**

*I would like to dedicate this thesis to my family and my wonderful finance Ray. Without all of your support I would not have accomplished all that I have and all that I plan to.*

### **Acknowledgments**

I would like to thank Dr. Dihoff and Dr. Klanderma for all of their help and their guidance in helping me create this thesis. I would like to again thank my family and friends for their support throughout my education and I would also like to thank the Klotz family for all of their support over the past five years.

## **Abstract**

Samantha Levine  
Individual Case Study: Verbalizing Emotions to Reduce  
Aggressive Outburst in an Autistic Adult

2011  
Roberta Dihoff  
Master of Arts in School Psychology

The purpose of this individual's case study were to (a) to decrease the maladaptive behaviors displayed by the participant and (b) have the participant verbalize his feelings before they build up to cause the maladaptive behavior. The study used positive reinforcement and rewards to reinforce the positive behaviors displayed by the participant as well as to deter negative behaviors. The participant made vast improvements in expressing their emotions and also showed great improvement in controlling his maladaptive behaviors. Implications of a diagnosis of Autism Spectrum Disorder are discussed as well as an explanation of other studies performed for individuals with this diagnosis.

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## Chapter One Introduction

### NEED

There is a great need for more research on adults who have autism. Most of the current and past studies are done on school age children with this disorder and not the growing adult population. It appears that after twenty one, the age most autistic individuals have completed their education, there is less of a need for behavioral interventions but that is not the case. This study will help individuals with autism and their families to cope with the individual's behavior in a more positive way. This study will also help to provide suggestions to other researchers or caregivers in order to help deal with some of the behaviors that accompany this disorder.

### STATEMENT OF THE PROBLEM/PURPOSE OF THE STUDY

The subject that will be the participant in this intervention research study is a twenty seven year old Autistic male who has been unable to verbalize his feelings. This frustration manifests in grinding of the teeth and verbal/physical outbursts. The grinding of the teeth will happen before the outburst. Thus, it is important to teach the subject how to verbalize his feelings to help control the negative behavior.

The purpose of the study is to decrease the behaviors that are being displayed. It is also important that the subject verbalize his feeling so the behaviors will continue to decline.

### SIGNIFICANCE OF THE STUDY

The study is significant because many autistic individuals have certain behaviors or tics that they exhibit to release the frustration they are experiencing internally. Since part of autism is the inability to verbalize feelings the way most individuals are able to,

this will assist caregivers of autistic individuals to decrease some of the undesired behaviors. This will help alleviate some of the strain the autistic individual is creating for his caregiver. At the same time this can help the autistic individual relieve the stress that is normally just bottled up inside to the surface. This will allow them to deal with their emotions in a healthy and productive manner.

#### RESEARCH QUESTION (HYPOTHESIS)

With appropriate positive reinforcement the subject will decrease the behaviors of grinding his teeth that lead up to his verbal/physical outbursts. The subject will instead verbalize his feelings to avoid the negative outburst.

#### OPERATIONAL DEFINITIONS

*Autism:* It is a complex developmental disability that causes problems with social interaction as well as communication deficits. The symptoms of this disorder usually start before the age of three and are known to cause delays or problems in many different skills that develop throughout their lives. It is more common in males than females and there is no definitive cure for the disorder (Autism Spectrum Disorders, 2010).

*Autistic Spectrum Disorder (ASD):* The disorder is often defined as a spectrum disorder, do to the fact that different individuals with autism can have very different symptoms. The symptoms can vary from mild to severe, but they are all part of the same disorder (Autism Spectrum Disorders, 2010).

#### *Examples of Stereotypical Autistic Behaviors:*

- Verbal and nonverbal communication symptoms – (pointing, not making eye contact, smiling at inappropriate circumstances, etc.)

- Social symptoms – (not able to understand how others feel, unable to hold a conversation, unable to share emotions of how they are feeling, etc)
- Repetitive behavioral symptoms – (repeating words, repeating actions, following schedules or routines in an obsessive nature, etc.) (Autism Spectrum Disorders, 2010)

*Applied Behavioral Analysis (ABA)*: It is an intervention theory that uses rewards for behaviors because rewarded behavior is more likely to be repeated, rather than ignored behavior. It is often used for individuals who have developmental disorders, including autism (Webster, 2010).

*Positive Reinforcement*: Occurs when a reward is given for a desired behavior which will overtime increase the positive behavior (Fritscher, 2009).

#### ASSUMPTIONS

There will be no unusual incidents that will cause the behaviors to increase in situations that would normally not cause a negative reaction. The environment will be consistent throughout the experiment.

#### LIMITATIONS

The results of the experiment might be limited because it is a single case study. It might not apply to all individuals with autism or other disorders. Since it is a specific subject that is being tested it might not related to other cases or situations. The data collected will be over four days in the week so it will not be as intensive which could impede the experiments consistency.

## OVERVIEW

In chapter two the researcher will discuss other research that has been conducted in the field of autism as well as in behavioral interventions. This research will be reviewed for its relevance pertaining to this study. It will help to show the gaps in the current research and the need for this single case intervention study to be done.

In chapter three the researcher will review the design as the study. The researcher will also discuss the subject that is being tested as well as the strategies that will be used for this study. The subject's characteristics as well as their level of autism will be discussed. The subject's demographic information will be told and the baselines for their behaviors will be outlined. The researcher will also discuss the interventions used as well as the measures of the experiment and the methods for the collections of data.

## Chapter Two Literature Review

Many articles over the past decade have discussed Autism and how to handle children who are diagnosed with it. Some offer “cures”, others offer support for family as well as coping strategies, and some just attempt to get at the core for helping Autistic individuals live a happy and fulfilled life. It is hard to determine which method will work for each individual because autism is a spectrum disorder, which means that no two children are alike in this disorder. Some have similar qualities, but each expresses themselves through their own set of behaviors and actions.

Autism is also a developmental disability, which means that it causes pronounced symptoms that can affect the individual’s life in the long term, as defined in the DSM IV. Individuals who have been diagnosed with this disorder have pronounced impairments in social and language communication areas as well as ritualistic and sometimes challenging behaviors (Wolery, 2005). They often are unable to make friends or have meaningful relationships because they don’t possess the skills to hold a conversation in an appropriate manner. They also typically engage in behaviors that are not looked upon as socially acceptable by their peers, which makes it more difficult for them to find a place in their society (Marohn, 2002). This chapter will be explaining the different approaches to treating individuals with Autism and their effects on the individual’s life.

Approximately 1 in every 100 children are diagnosed with Autism Spectrum Disorder (Dillenburger, 2009) which makes it important to understand the most effective treatments for these individuals so they can be properly educated in both school life as well as social life. Children with this disorder that are diagnosed early and set on a structured program can be expected to make significant progress (Simpson, 2001). ABA,

applied behavior analysis, is the most widely used intervention for autistic individuals by far. It offers an empirical basis for diagnosis, assessment, and instruction for individuals with autism (Wolfe, 2005). ABA also is the only treatment that is endorsed by the United States Surgeon General and it is defined as science used to improve behavior.

#### APPLIED BEHAVIOR ANALYSIS

ABA has seven dimensions defined underneath it which include; (a) it is applied because the studies focus on behaviors and issues important to society and the outcomes have a practice significance, (b) it is behavioral because it uses direct measures of the participants behaviors and the behavior itself is of interest, (c) it is analytical because the investigators use experimental designs and functional relationships can be established, (d) it is technological because procedures and variables are defined so the study can be easily replicated, (e) it is conceptually systematic because it is derived from basic theoretical principals, (f) it is effective because the outcomes are socially important and produces change in the participants behavior, and (g) it is generalized because it has a durable effect on the participant and the changes are evident over time and settings (Wolery, 2005 & Wolfe, 2005). ABA is often used along with other interventions and has been proven to yield significant benefits for those diagnosed with autism as well as with their families or caregivers (Simpson, 2001). It is important to note that however effective ABA is, it is not a therapy to cure autism, there is no cure for it (Dillenburger, 2009).

ABA does bring improvements in socially relevant behaviors within the individual's social environment which is extremely important especially for a young child (Dillenburger, 2009). Social skills are extremely important to an individual's own

growth and without it social development is put at a standstill. Friendships and good social relationships are crucial to functionality of a person with or without autism. Friendships and social relationships serve as a natural support system and social learning functions are essential to learning how to behave in social settings. How children interact with each other provides them with the opportunities to practice social skills and promote their self worth. It also provides individuals with a sense of competence, belonging, and support, which are all important for development and can effect development later in life (Strain, 2001). Individuals with autism do not generally develop these essential building blocks for social relationships which can greatly affect their quality of life greatly. It is important to also note that since autistic individuals don't make many, if any, meaningful social relationships, other than their families, they don't know how to act around people and can sometimes be looked upon strangely because they don't possess the proper social skills. This can greatly affect the self esteem of the individual (Esbensen, 2009).

#### AGGRESSIVE BEHAVIORS

Their interaction is of great importance but the aggressive behaviors that are co-morbid with autism are also a large factor in daily life. Individuals with autism often exhibit maladaptive behaviors and these behaviors can cause great problems in the individual's life. The maladaptive behaviors in early childhood are a particular concern because those are the critical years for interventions (Hartley, 2008). Autistic individuals often exhibit serve behaviors such as self inflicted harm or harm to others, which can be reduced with interventions in some but not all cases.

People affected by the disorder have a limited range of coping skills, so they are more susceptible to stress. This can cause emotional problems that lead to emotional and

behavioral manifestations that progress into aggressive outbursts (Focht-New, 2008). Aggression has no single widely accepted definition but it refers to a whole range of behaviors from throwing objects or causing bodily harm to themselves or others (Didden, 2008). Physically hurting people causes challenges for the caregivers of the individual as well as their safety being at risk (Tryrer, 2006). If the autistic individual does not receive some type of behavioral intervention, the behaviors can get worse, remaining an even bigger challenge for caregivers (Matson, 2007).

Anger is thought to be a link to aggressive behaviors that are exhibited in autistic individuals. It is the personal distress that the individual is experiencing, but unable to properly communicate to others because of the social restrictions, that goes along with this disorder that can boil over and result in an aggressive outburst (Novaco, 2004). Little is still known about the manifestation of these maladaptive behaviors in this specific population and most studies have been based on clinical rather than community samples which skew the results (Shattuck, 2006). There are different interventions and “fad” cures to try to reduce the maladaptive behaviors but so far it is based around the stimuli the individual reacts to.

Although aggressive behavior is a major obstacle to overcome to get the right treatment for an individual with autism ABA offers scientifically validated methods to overcome it or reduce it (Foxx, 2007). Applied Behavior Analysis uses a variety of instructional methods to reduce problem behaviors and increase learning for children with autism. ABA also helps describe different specific environmental changes that can influence a change in behaviors among this population (Neidert, 2010).



Aggression is believed to be a learned behavior and can sometimes represent itself in a set of behaviors. It is also thought to be used by autistic individuals to get a desired outcome (Foxx, 2007). Since many autistic individuals are non verbal or suffer significant verbal difficulties the behavior is a way for them to express what they want or to avoid doing something they don't want to do, even though it is not always socially appropriate. There are many techniques that can help caregivers try to reduce these behaviors such as ignoring the behavior or not giving in to the inappropriate behavior, but its effectiveness is dependent on each individual's different level of recognition. Many of these so called "fad" treatments are coming out for treating behavioral problems of autistic individuals, but as far as clinicians are concerned the true and proven method so far is ABA (Schreck, 2008).

With all of these social deficiencies in autistic individuals it is no surprise that they have problems communicating what is bothering them or what they need. That is why it is theorized that autistic individuals use disruptive behavior to get across how they are feeling or what they need. This problem with expressing themselves makes it difficult for them to be understood because more concentration is on the bad behavior rather than the problem the individual is experiencing (Chiang, 2008). It is important to note that non autistic individuals have mastered most socially appropriate behaviors, in most cases, so it is important to give the autistic individuals positive reinforcement for all appropriate behaviors that they perform to help them understand that with good behavior come rewards (Whalen, 2009).

## PARENTING STYLE

It has also been suggested that mindful parenting plays a part in behavioral control. Parents of children with autism are often taught to try to increase verbal and nonverbal communication skills to help their child express what their needs are in a productive manner, but not all parents have the tools to do this on a daily basis. Being mindful is described as having a calm and clear mind in situations as well as dealing with the present moment in a nonjudgmental way. It is looking for the solution to the problem with the child so they can learn the lesson and find alternative ways of dealing with different problems in everyday life (Singh, 2006). This is shown to help children as well as parents glide through situations more easily and make it through the day with a little less stress.

The family environment is an important factor to the autistic individual's piece of mind and his/her behavior. If the family environment is positive and the relationships are positive the autistic individual's developmental course can be different. Less is known about the relationship association between the individual's family dynamics and the developmental outcomes for the child, but it has been shown that a positive family process influences good mental health. Having a calm and encouraging family life is linked to greater life satisfaction and can relate to the child's behaviors as well as their mental health throughout their lives (Smith, 2008).

## BEHAVIORAL INTERVENTIONS

Remarkable improvements in behavior and aggression have been found in children who receive intensive behavioral treatments during preschool (Sigman, 1997). These interventions have raised the optimism for children with this disorder and have

shown to improve even more if the intervention is done as young as possible (Sherer, 2005). The interventions and the treatment procedures that go along with them are effective in decreasing maladaptive behaviors while helping to increase the child's communication and social skills, which is extremely important in children with autism (Neidert, 2005). As they get older and enter high school, being part of community based programs and work training will also help to structure the life of the child. It will also teach important behavioral skills and appropriate social reactions (McClannahan, 2002).

Functional analysis is one of the methods that can be used to design treatment methods to extinguish problem behaviors. It is a method that's primary goal is to match the appropriate treatment to the specific problem behavior to help eliminate the problem. To use this method the experimenter must first determine which environmental events most likely are related to the behavior. This helps get the most specific and personalized treatment plan for the specific individual and their behavior (LaBelle, 2002).

The presence of these maladaptive behaviors may still progress and usually they are part of the individual's daily repetitive routine, so it is important to stop the behaviors as young as possible or as they reach the surface. Response blocking, which is the process of physically or mechanically disrupting the behavior before it happens, has been effective in some individuals in reducing the maladaptive behaviors of the child. The blocking may cause some extra aggression because the child will not like when the behavior is blocked, but stopping the behavior at the start is the best way to extinguish it (Kuhn, 2009). The level of adaptability the individual is capable of is also a factor in helping to extinguish or lessen the maladaptive behavior. The adaptive behavior

assessment provides information about the actual behaviors that are being displayed, as opposed to IQ tests which only refer to behaviors that might happen (Kraijer, 2000).

## ANXIETY

Another obstacle is deciding whether or not to use medication along or in place of behavior modification plans. In children with severe behavioral problems it may be the combination of both that help the child remain under control and this has been the case for most autistic individuals over the past decade (Scahill, 2008). No single drug has been proven for treating the behaviors that go along with autism, but in some extreme cases it can greatly help control the child (West, 2009). Other interventions have been used and some successfully to help manage behavior without medication, for instance using reinforcements such as food or rewards to help control the behaviors has been found effective (Adelinis, 2001). Since aggression, as well as anxiety is co-morbid with autism it is important to find a medication regimen that works for the individual while still using the behavioral modifications to help through daily life.

Anxiety disorders quiet often go along with autism as well as many other disorders such as attention, mood, conduct, and development. Individuals with developmental disabilities such as autism are at a greater risk for developing a variety of anxiety symptoms because of the behaviors that they exhibit on a daily basis. The ritualistic schedules that the individuals often obsess over is a symptom of anxiety because without doing those actions the individual's entire day could be thrown off, leaving them extremely anxious and unable to concentrate on anything else (Lopata, 2010).

The anxiety and aggressive behaviors are seen more in males than females (Brodkin, 2008). The maladaptive behaviors that go along with the disorder can greatly hinder daily living for the autistic individual as well as their caregivers causing a low quality of life for the individual (Guttmann-Steinmetz, 2010). Some of the symptoms of anxiety that autistic individuals face are fearful responses to objects or events, excessive avoidance of situations or people, persistent distressing thoughts, concentration deficits, restlessness, fatigue, irritability, sleep disturbance, and many more. These symptoms can greatly affect daily living including family functioning, peer relationships, work, and school (Reaven, 2009). Despite the increased risk for anxiety disorders there is little research on the topic when it is related to autism (Hagopain, 2008).

#### SOCIAL DEFICITS

The social deficits that are related to autism are also of a concern for the individual. Since they lack the social awareness of a person without the disorder they are unable to understand social cues or appropriate times to do or say certain things. It has been found that children as well as adults with autism have difficulty understanding even the facial expressions of others. They are unable to understand or relate the facial expression with the specific situation causing them to also have inappropriate facial expressions when dealing with a problem (Baker, 2010). Previous research has indicated that normal emotional processing is not functional in autistic individuals and because of this it is harder for them to learn these appropriate behaviors, but depending on the individuals spectrum level with work it can be taught to some (Bölte, 2008).

Social expression and social behaviors allow people to share in experiences together in verbal and nonverbal ways. They also involve gestures, which also are not

understood by autistic individuals. It is also true that autistic individuals don't show much interest in other people which is why to them they don't necessarily care if they don't show the correct social behaviors (Heerey, 2003). It is important however for them to learn even in the smallest sense to understand them because without the understanding of them it is almost impossible for them to get along in social settings (Charlop, 2010). They also don't understand sympathy so it is hard for them to deal with a death in the family or of a pet because they don't understand the feeling which can lead to inappropriate comments about it (Clark, 2008). In class and in home supports are used along with interventions to help with social problems. In school supports are used to teach the students appropriate in school behaviors and they can practice their social skills with their classmates which is very helpful (Spencer, 2008).

The majority of adults continue to face difficulties due to aggression, anxiety, and social difficulties which impact their employment, social relationships, and their residential independence (Esbensen, 2010). This can cause their life satisfaction to be at a low, but with interventions and positive family outlooks the future can be bright for any individual with autism.

## Chapter Three Methodology

### INTRODUCTION

The following study is going to test the hypothesis that with the appropriate positive reinforcement the subject will decrease the behaviors of grinding his teeth that lead up to his verbal/physical outbursts. The ultimate result will be that the subject will instead verbalize his feelings to avoid the negative outburst. The hypothesis will be tested by the researcher working with the subject four days a week for four hours each day. The researcher will use positive reinforcement to help the subject to verbalize their feelings instead of allowing it to build up to prevent negative outbursts by the subject.

### PARTICIPANT/SUBJECT

The participant in this study was diagnosed with Autism at a young age, around the age of five. Autism is a developmental brain disorder known as a pervasive developmental disorder. It is marked by the presence of impaired social interaction and communication as well as a restricted repertoire of activities and interests. Every child that is diagnosed with Autism is unique in their specific deficits or skills so it is very difficult to have a universal treatment plan for these children. Autism is a severe, chronic developmental disorder that is lifelong and affects the entire family of an individual with this diagnosis. The goals of treatment for individuals with this diagnosis are to promote their social and language development and minimize behaviors that interfere with the individuals functioning and learning at an early age.

The participant in this study will be a twenty seven year old male who lives at home with his parents. The subject has been diagnosed with Autism since early childhood and is an only child. On the spectrum the participant is described as having a mental age

of an eight year old and the emotional age of a ten year old. This was described in his Individualized Education Plan when he was twenty one years old and was again described in an assessment form for getting government assistance.

## VARIABLES

The variables are the baseline data that has been collected over two months, 52 days, which will be compared to the after intervention data, which was also collected over a 52 day period. The baseline data will be compared to the after intervention data to determine the results of the research.

## PROCEDURES

The procedure consists of measuring how the use of positive reinforcement and rewards effects how many times the participant grinds his teeth or has a negative behavioral outburst. This was accomplished by informing the participant that they are to express their feelings when they are feeling them and by doing so they will receive a reward, every hour a bag of candy and every fourth day a soda. When the participant does express their feelings in a positive way, i.e. telling the researcher, they will receive the item that they would like and the researcher will also say a positive phrase to the subject, i.e. great job or I'm proud of you for sharing, to help instill in the subject that they did a good thing.

To collect the baseline data, the before intervention data, the researcher first made a chart consisting of 52 days. Each day had four rows in it representing each hour the data was being collected, four hours a day for four days a week. The researcher then monitored the participants behavior for each hour and if the participant had an outburst or grinded their teeth. If a behavior was presented the researcher made a mark in that hours



slot and if the participant did not have a negative behavior or told the researcher about his feelings the researcher made no mark. When each day is done the researcher adds up the number of behaviors presented and totaled them for each day. At the end of the 52 days the researcher totaled all the days to create the baseline.

The same chart and collection method were used for the after intervention data. The exception is that before the research was started the researcher informed the participant that every hour they would be receiving a bag of candy for informing the researcher of their feelings. The participant was also informed that at the end of the week, every fourth day, he would receive a soda, but the flavor depends on his behavior. Soda is a treat for the participant that he is always trying to get, so using it as positive reinforcement will be effective. Good behavior, which is telling the researcher about his feelings would equal getting a Pepsi, the participant's favorite drink. Bad behavior, which is not informing the researcher of his feelings and having a negative behavioral outburst, would equal the participant getting a Sprite, his second favorite drink. It had to be explained to the participant as good and bad behavior because that is how the participant understands his actions. His parents have explained it to him that way his entire life so the researcher had to keep the same direct, simple language so the participant could understand. It also had to be set up so the participant received a soda either way so it did not feel like a punishment to the participant if he did not receive one.

After the data was collected for the full 104 days the data was input into Excel. The chart that was created to display the data shows that the data was collected over 104 days and 416 hours as seen in Table 1. The baseline data was put in the first column and

the after intervention data was put in the second. The data was compared and displayed in a line graph to show the difference and the conclusion of the study.

#### TYPES OF ANALYSIS

The researcher will compare the baseline data to the newly collected data to determine if there has been a change in the subject's behavior. It will be done in Excel and input into a graph to show the progression over the 104 days.

The data will be collected for each of the variables and then the data will be input into Excel to create a graph to display the data. After the data is collected, input into a graph, and compared the researcher will be able to determine if the hypothesis was correct.

#### SUMMARY

The data is collected for the baseline and the after intervention trials for a total of 104 days. After the data is collected it is compared by using baseline data as a comparison to the after intervention data in the form of a line graph. The researcher will be able to determine after the graph is constructed if the hypothesis was correct.

Table 1

*This table shows the data collection chart that was created to display the data for the before and after intervention data. The date would be input into the day slot then as the hours passed if there was a negative behavior it was documented in the behavior column. A check would be input into the candy column every hour depending on the behavior and the # column represents the number of behaviors that were witnessed in the day.*

Data Collection Chart

Negative Behaviors:	Yelling	Screaming	Grinding teeth	Stimming	Hitting	Crying	Using hurtful talk
Date	Time	Behavior	Handful of candy every 1 hour	End of Day Sprite (negative behavior) / Pepsi (good behavior)			#
Day 1	11:00am						0
	12:00pm						
	1:00pm						
	2:00pm						
Day 2	11:00am						0
	12:00pm						
	1:00pm						
	2:00pm						

## Chapter Four Findings

### RESULTS

The baseline data showed that out of 52 days there were 68 incidents per hour and the after intervention data showed that out of 52 days there were 40 incidents per hour which is represented in a graph, Table 2. There was a significant change in behaviors and the participant was more vocal in his declarations of feelings after the first week of the intervention. The data shows that they hypothesis was correct, that using positive reinforcement did reduce negative outbursts and caused more voluntary explanations of emotions from the participant.

Subsequent findings were that on Tuesdays and Fridays the participant was more emotional and on edge, as shown in shown in Table 3. Before the intervention out of 13 Fridays, 5 of the days had incidents, resulting in a .38% incident rate and out of the 13 Tuesdays, 9 of the days had incidents, resulting in a .69% incident rate. After the intervention out of 12 Fridays, 6 of the days had incidents, resulting in a .5% incident rate and out of the 12 Tuesdays, 3 of the days had incidents, resulting in a .25% incident rate. This can be explained by the participant's anxieties about the unknown or change in schedules. The beginning and end of the week are especially hard for the participant because they are unsure of what they are going to do, which causes anxiety, which causes behavioral issues.

Table 2

*This table represents the comparison between the baseline, before intervention, data and the after intervention data.*

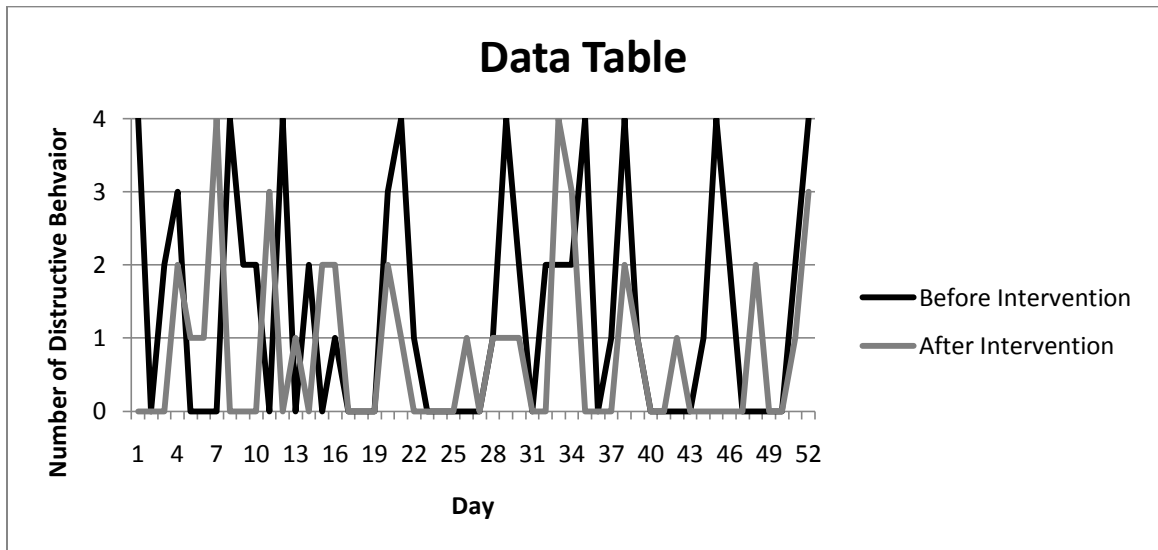


Table 3

*This table represents the number of Tuesdays and the number of Fridays that were involved in the data collection. The table shows the number of days with incidents and shows the representation of the anxiety that the participant feels on the beginning and the end of the week.*

	Tuesday	Friday
Baseline (Before Intervention)	13 Total Tuesdays	13 Total Fridays
	5 Days with Incidents	9 Days with Incidents
After Intervention	12 Total Tuesdays	12 Total Fridays
	6 Days with Incidents	3 Days with Incidents

## Chapter Five Summary, Conclusions, and Recommendation

### SUMMARY

The study was an individual case study involving an Autistic Adult who displayed maladaptive behaviors due to their inability to express emotions and allowing them to build up until they develop into maladaptive or undesirable behaviors. The data for the study was collected over 104 days, 52 being the baseline data and 52 being the after intervention data, and in the end were compared to find the results. The data was collected by working with the participant four days a week for four hours a day. The baseline data was collected without using any reinforcers and just documenting the behaviors displayed over the four days per week for the four hours per day. The after intervention data was collected in the same way but the researcher told the participant that they would be receiving a small bag of candy every hour and would receive their favorite drink at the end of the week for positive behavior as well as expressing their emotions to the researcher.

The results found that using positive reinforcements caused the participant to have less maladaptive behaviors and also gave the participant incentives to express their emotions more openly. Other results that were found were that the data showed that on Tuesdays and Fridays the participant expressed more maladaptive behaviors than the other days in between. This can be explained by change in schedule and anxiety over the unknown which is part of the symptoms of being diagnosed with Autism Spectrum Disorder. Individuals with this disorder are more comfortable and less anxious when their schedules are maintained so change in their routine or not knowing what they will be doing ahead of time can cause negative reactions, such as maladaptive behaviors.

## CONCLUSIONS

It is concluded from this study that positive reinforcements can help immensely when teaching individuals with Autism how to control their behaviors. Also that teaching the individuals to verbalize their behaviors will help them to feel less anxious, which will in turn help them deal with their emotions in a positive manner rather than expressing them in a maladaptive form of behavior. Being able to express these emotions that they are feeling not only can help the individual with Autism, but the support system that is around them to help the individual reduce their anxieties.

It is also concluded that keeping the schedules of these individuals as much as possible is extremely important in helping them manage their anxiety. Changes in schedules are bound to happen in the individual's life, but trying to keep them as regular as possible is important to helping them manage their behaviors associated with their anxieties.

## RECOMMENDATION

The researcher recommends that more research be done for adults with Autism since there is a lack of it in the field. Many studies are done for children or adolescents with this disorder, but the adult population is often forgotten about when they leave school. There are more services available in the community for these individuals, but there is still a need for more and also more supports for the families of these individuals. If more research is done for adults with Autism the families and supports in the community could be better prepared for them as well as offer them a better chance in adulthood.



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Appendix A  
Consent Form

Rowan University

I agree to participate in a study entitled "Individual Case Study: Verbalizing Emotions to Reduce Aggressive Outbursts in an Autistic Adult," which is being conducted by Samantha Levine of the Psychology Department, Rowan University.

The purpose of this study is to learn to verbalize feeling so aggressive outbursts do not occur as frequently. The data collected in this study will be combined with data from previous studies and will be submitted for publication in a research journal.

I understand that I will be required to attempt to learn how to verbalize my feeling, and I will be rewarded with snacks for verbalizing my feelings so my aggressive outbursts decrease. My participation in the study will be conducted for four hours a day, for four days a week, for a month.

I understand that my responses will be anonymous and that all the data gathered will be confidential. I agree that any information obtained from this study may be used in any way thought best for publication or education provided that I am in no way identified and my name is not used.

I understand that there are no physical or psychological risks involved in this study, and that I am free to withdraw my participation at any time without penalty.

I understand that my participation does not imply employment with the state of New Jersey, Rowan University, the principal investigator, or any other project facilitator.

If I have any questions or problems concerning my participation in this study, I may contact Dr. Dihoff  
at (856) 256-4500 ext. 3783 or Samantha Levine (609) 338-8246.

\_\_\_\_\_  
(Signature of Participant) (Date)

\_\_\_\_\_  
(Signature of Parent/Guardian) (Date)

\_\_\_\_\_  
(Signature of Investigator) (Date)

