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SCHREYER HONORS COLLEGE

DEPARTMENT OF CRIME, LAW AND JUSTICE

THE RELATIONSHIP BETWEEN COMMUNICATION  
DISORDER IMPAIRMENT AND VIOLENT BEHAVIOR

ALEXANDRA S. BEYDA  
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Reviewed and approved\* by the following:

Eric Silver  
Professor of Sociology and Crime, Law and Justice  
Associate Head  
Thesis Supervisor

Jeffrey Ulmer  
Associate Professor of Sociology and Crime, Law and Justice  
Director Undergraduate Program and Crime, Law and Justice  
Honors Adviser

\* Signatures are on file in the Schreyer Honors College.

## ABSTRACT

This study addressed the large gap in the research on the relationship between communication disorder impairment and violent behavior. Specifically, the aim of this research was to discover whether or not a relationship between perceived level of communication disorder impairment and level of violent behavior exists. To investigate this relationship, 27 communication disorder patients were surveyed about their communication disorder impairment, which is the predictor variable and, their violent behavior, which is the outcome variable. The survey also assessed the participants' gender, age, frustration and level of victimization, in order to arrive at a more nuanced understanding of the relationship between communication disorder and violent behavior. The results showed that there is a positive relationship between communication disorder impairment and level of violent behavior. The results also showed that this correlation was stronger for women than men. The final main result of this study was that communication disorder impairment is correlated with victimization. Other notable results of this study were that there is a positive relationship between violence and victimization and an inverse relationship between age and violence in individuals with communication disorders.

*Keywords:* communication disorder, violent behavior, gender, impairment, victimization

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## ACKNOWLEDGEMENTS

*To Dad and Mom*

*May we always be*

*As thick as thieves*

*To Stephanie, Isabelle and Sophia*

*You will forever be*

*My partners in crime*

*To Kurt*

*You have truly*

*Stolen my heart*

## **Chapter 1**

### **Introduction**

Understanding communication disorders is vital to their treatment. While much is known about communication disorder symptoms, diagnosis and causes, there still exists a gap in the research about the relationship between communication disorders and violent behavior. The research question that this study will aim to answer is whether or not the severity of impairment caused by a communication disorder is related to how much violent behavior the affected individual engages in. Finding a positive correlation between impairment and violent behavior would not only enhance the general understanding of communication disorders but it would also have valuable implications for other fields as well. The treatment field could be enhanced because finding a positive relationship between communication disorder impairment and violent behavior would be supportive of special training for medical professionals on how to curb violent actions in their patients with communication disorders. If medical professionals are knowledgeable about and prepared to deal with violent tendencies in their patients, they can better treat those patients. The legal field could also be enhanced. A positive relationship between communication disorder impairment and violent behavior could be supportive of sentencing individuals with communication disorders who have committed a violent crime to behavioral therapy instead of sentencing them to jail time.

The current study examines the relationship between communication disorder impairment and violent behavior. The predictor variable in this study is the level of communication disorder impairment. The moderator variable is gender. The outcome variable is the amount of violent behavior engaged in. The first hypothesis of this study is that there will be a positive correlation

between communication disorder impairment and level of violent behavior. The second hypothesis is that the positive correlation between communication disorder impairment and violent behavior will be stronger for males than for females. The third hypothesis is that there will be a positive correlation between communication disorder impairment and victimization.

## Chapter 2

### Literature Review

While there is little research done specifically on the relationship between communication disorder impairment and violent behavior, much previous research has been done that is suggestive of this relationship. A study by Allen, Evans, Hider, Hawkins, Peckett and Morgan (2008) examined the relationship between Asperger syndrome and criminal behavior. The researchers noted that Asperger syndrome is characterized by impairments in communication, specifically in reciprocal social interactions (Allen, Evans, Hider, Hawkins, Peckett & Morgan, 2008). The study consisted of three parts: a demographics questionnaire, a questionnaire about criminal behavior, and a semi-structured interview about perceptions of impairment and behavior. The participants in this study were twenty-two males who had been diagnosed with Asperger syndrome and engaged in violent crime. Since Asperger syndrome is associated with communication impairment, when the Asperger participant could not answer the questionnaire for himself or herself, an informant answered for him or her. Informants were individuals who knew the Asperger participant extremely well and worked closely with them.

The first questionnaire included questions about age, educational history, criminal history, and behavioral difficulties. The second questionnaire consisted of twenty-four questions investigating the criminal behavior, criminal pattern, predisposing factors of crime, and interaction with the law of the Asperger individual. The final part of the study procedure was a semi-structured interview, which aimed to discover the Asperger individual's perception of their criminal behavior and their interactions with the law. The researchers who analyzed the qualitative data collected from the study found many trends, two of which relate directly to the

current study. First, all of the participants had major difficulty engaging in reciprocal social interactions (Allen, Evans, Hider, Hawkins, Peckett & Morgan, 2008). Second, 81% of the participants engaged in violent behavior, 75% of the participants engaged in threatening behavior, and 50% engaged in property destruction (Allen, Evans, Hider, Hawkins, Peckett & Morgan, 2008). The presence of both communication disorder impairment and violent behavior is supportive of a relationship between the two entities, which is the first hypothesis of the current research.

Another previous study that is consistent with the current research's hypothesis that there is a positive correlation between communication disorder impairment and violent behavior was conducted by researchers at Case Western Reserve University in Cleveland, Ohio. The researchers set out to test the hypothesis that traumatic brain injuries are associated with violent crime (Turkstra, Jones & Toler 2003). To examine this hypothesis the researchers recruited forty men, twenty of whom were convicted of domestic violence and twenty of whom were not convicted of any violent crimes. The two groups were matched for age, socioeconomic status, education and location. Each participant was asked to complete a survey that inquired about his life history, health history and demographic information.

The results of the surveys showed that instances of traumatic brain injuries were not only higher in the offender group, but the traumatic brain injuries they sustained were also more severe than those of the control group (Turkstra, Jones & Toler 2003). This relates to the current research in that one of the most affected brain structures in those in the offending group was the frontal lobe. The frontal lobe is highly involved with communication processes such as controlling language-related movement, social behavior, language, situation judgment and impulse control. All of these processes, when impaired by a frontal lobe brain injury, could prevent an individual from communicating effectively. So an inability to communicate effectively (a communication disorder) could be the link between this article's finding that traumatic brain

injuries are associated with violent behavior. This is supportive of the first hypothesis of the current research.

Another study that pertains to the current research was performed by the Federal Bureau of Investigation (2010). Each year, the Federal Bureau of Investigation collects data on crime from across the country and compiles the data into what is referred to as the Uniform Crime Report.<sup>1</sup> Of the twenty-eight categories of crime that data were collected for the UCR, eight of them can be considered violent crimes: murder and non-negligent manslaughter, forcible rape, aggravated assault, robbery, arson, other assaults, vandalism, and weapons (Federal Bureau of Investigation, 2010). An important conclusion of the UCR crime data is that in all of these violent crime categories males were arrested for the crime more than females. The difference between the number of males and the number of females that are arrested for violent crimes is large for each category. For instance, in 2010, 208,367 adult males were arrested for aggravated assault while only 60,145 adult females were arrested for aggravated assault (Federal Bureau of Investigation, 2010). Similarly, in 2010, 89,693 males were arrested for crimes related to weapons, while only 8,374 females were arrested for crimes related to weapons (Federal Bureau of Investigation, 2010). This considerable difference in violent crime arrest rates between males and females

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<sup>1</sup> The participants of the study were 8,760 police agencies. At the end of the calendar year, the participating police agencies were asked to turn in the annual report of how many arrests were made by their individual agency that year. The report includes information about twenty-eight categories of crime and the demographics of the individuals who were arrested for those crimes. The Federal Bureau of Investigation compiled all the collected data to create a comprehensive data set of all the arrests that occurred nationally in 2010. The data were then analyzed by different demographic traits such as location of offender, age of offender and gender of offender.

suggests that males are generally more violent than females. It is because of this conclusion that the current research predicted that the correlation between communication disorder impairment and violent behavior will be stronger for men than it is for women.

This difference in violent crime rates between men and women was empirically tested by researchers Burton, Cullen, Evans, Alarid and Dunaway (1998). Specifically, the researchers investigated whether or not the gender gap in violent crime still exists when the participants' self-control is controlled for. Hirschi and Gottfredson's General Theory suggests that the less self-control an individual has, the more likely they are to engage in criminal behavior, which is the basis for Burton, Cullen, Evans, Alarid and Dunaway's (1998) research. The predictor variable of this study was the participant's level of self-control. The moderator variable was gender and the outcome variable was level of criminal behavior. The study consisted of mailing out 1,500 surveys to residents of Cincinnati, Ohio. Of the 1,500 surveys mailed out, 555 completed surveys were returned for analysis (Burton, Cullen, Evans, Alarid & Dunaway, 1998). The goal of the survey was to assess each participant's gender, level of self-control and criminal behavior.

After analyzing the results from the returned surveys, Burton, Cullen, Evans, Alarid and Dunaway (1998) discovered a strong negative correlation between self-control and criminal behavior in males, which is supportive of Hirschi and Gottfredson's General Theory. The research also found that, in general, males have less self-control than females. Through the combination of these two conclusions, it can be said that males engage in more violent crime than females. The results of this study as well as the results from the 2010 Uniform Crime report are supportive of the current research's hypothesis that the positive correlation between communication disorder impairment and violent behavior will be stronger for men than it will be for women.

The final hypothesis of the current research states that there will be a positive correlation between communication disorder impairment and victimization. Research done by

Silver (2002) is highly supportive of this hypothesis. The aim of Silver's research was to examine whether or not individuals with mental disorders are more likely to be victimized than those without mental disorders. Additionally, the research examined whether or not an increased risk of violent victimization for individuals with mental disorders is associated with mentally disordered people experiencing more conflicted social relationships with others. In order to examine this, Silver utilized data from the MacArthur Foundation's Violence Risk Assessment Study as well as data from a control group that was comparable in location to the participants of the MacArthur Foundation's Violence Risk Assessment Study. The data collected from both groups assessed each participant's information about recent violent victimization and the quality of their social relationships, among other things (2002).

The results of the data was supportive of the hypotheses that individuals with mental disorders are at a higher risk of victimization and engage in more conflicted social relationships. Specifically, the data showed that 15.2% of the mentally disordered individuals had been violently victimized in the prior ten weeks, while only 6.9% of the control group had been violently victimized in the same time period (Silver 2002). Additionally, the results of the research showed that 37.8% of mentally disordered individuals were involved in conflicted social relationships. On the other hand, only 20.8% of the control group participants were involved in any conflicted social relationships (Silver 2002). Both of these findings of the study are supportive of the current research's hypothesis that there will be a relationship between communication disorder impairment and victimization. It is important to note that in his research, Silver suggested that one of the reasons that conflicted social relationships can contribute to the increased victimization of mentally disordered individuals links to prior research by Agnew (1992). Agnew argued that exposure to stressful events that produce negative emotions, which in Silver's research is conflicted social relationships and in the current research is communication

impairment, leads to negative consequences including violence (1992). This theoretical connection is discussed further below.

### THEORETICAL FRAMEWORK

The possible relationship between communication disorder impairment and violent behavior can be explained by Agnew's general strain theory of delinquency and drug use. The theory suggests that general strain occurs when an individual is unable to achieve valued goals, their valued possessions are removed, or that individual is presented with negative stimuli (Agnew & White, 1992). The theory further suggests that this general strain leads to negative affect, which the individual feels they must correct, often through crime (Agnew & White, 1992). Agnew and White conducted a study to test the validity of this theory. The participants of the study were 1,380 New Jersey residents ranging in age from twelve to eighteen. The first step in the study was to interview the participants over the phone. The participants were asked forty-seven questions that aimed to measure the first two criteria of the general strain theory of delinquency and drug use, which are each participant's ability to achieve their valued goals and whether or not they feel as though their valued possessions have been removed from their life. Additional questions were asked to examine the participant's perception of self-efficacy, relationships with other delinquents, and criminal behavior.

From the collected data, Agnew and White came to two main conclusions about the effect of general strain on individuals' lives. First, the researchers found that general strain is positively correlated with delinquency and drug use (Agnew & White, 1992). Secondly, Agnew and White (1992) concluded that the strength of the effect that general strain has on an individual's delinquency and drug use depends on that individual's delinquent friends and perception of self-efficacy. These results relate to the current research in many ways. First of all, any of the three criteria of general strain could easily apply to individuals with communication disorders. For example, it would be reasonable to think that individuals with communication

disorders experience an inability to achieve their valued goal of successful social interactions, which would lead to general strain. According to Agnew and White's study, this strain could lead to delinquency in the form of violent crime. Agnew and White's second conclusion relates to the present research in that individuals with increased communication disorder impairment may have a lowered perception of self-efficacy. Agnew and White suggest that this low perception of self-efficacy leads to greater engagement in delinquency, which could account for a relationship between communication disorder impairment and violent behavior (1992).

## **Chapter 3**

### **Methods**

#### **Participants**

The 27 participants of this study were recruited in the waiting rooms of various speech-pathology medical offices. The participants were all over 18 and were either clinically diagnosed with a communication disorder or were the guardian of an individual who is under 18 and has been clinically diagnosed with a communication disorder. The participants were not compensated for their participation.

#### **Design and Apparatus**

Each participant used a paper survey and a pen or pencil to complete this study. The participants picked up the survey from a presentation desk and filled it out with a pen or pencil. A locked drop box was provided for the participants to put their completed surveys in. The survey consisted of thirty questions that aim to evaluate the participant's (or the person he or she is a guardian of) perceived level of impairment, the amount of violent behavior the participant (or the person he or she is a guardian of) has engaged in and their gender. The data collected from the surveys were analyzed using Microsoft Excel and SSPS.

The study is a correlational study. The predictor variable is the participants perceived level of communication disorder impairment. This was operationalized through six survey questions that asked about the participant's general and specific impairment. The first question asked participants to rate their general communication disorder impairment on a scale of 0 (not at all impaired) – 100 (completely impaired). The questions that followed asked the participants about their impairment in the context of the three criteria of the general strain theory – an

inability to achieve valued goals, being stripped of valued possessions, and being presented with negative stimuli (Agnew & White, 1992).

The moderator variable is the participant's gender, which was operationalized through a question on the survey about whether the participant is male or female. The outcome variable is the amount of violent behavior the participant engaged in during the past year. For this study, violent behavior is defined as any violent action that could result in legal ramifications. The participant did not need to be legally convicted of the crime for it to be considered a violent behavior for this study. This outcome variable was operationalized through the final set of questions on the survey, which aimed to assess the amount of violent behavior the participant has engaged in. Examples of the questions that were included in this section of the survey were "How many times in the last year have you been in an physical fight?" and "How many times in the last year have you destructed property that was not yours?" Each participant's answers to the questions in this section were summed to produce a total violent behavior level.

### **Procedure**

An unmanned presentation table was set up in the waiting room of two medical offices. The table was unmanned to ensure that the participants did feel forced or obligated to participate in any way. On the presentation table was a tri-fold board explaining the purpose of the study, the instructions for completing the survey and an explanation of who was eligible for the survey. Copies of the survey and pens were on one end of the table and a locked drop box for the completed surveys was on the other end. In large writing on the tri-fold presentation board were instructions for the participants. First, participants were asked to pick up one of two surveys. One survey was for individuals who are over 18 and have been diagnosed with a communication disorder. The other survey was for individuals who were the guardian of an individual who was under 18 and had a communication disorder. The surveys asked the same questions but worded differently depending on whether the participant is filling it out about themselves or someone

they care for. Participants were instructed to read the informed consent form that was located on the first page of the survey. The informed consent form explained to the participants that by completing the survey they are consenting to participating. Then the participants were instructed to complete the survey at their own pace. The participants were instructed to place the survey in the locked drop box on the presentation table when they were finished. After leaving the presentation up for seven weeks, the table was taken down and the surveys from the drop box were collected. The data was then analyzed using Microsoft Excel and SSPS.

## Chapter 4

### Results

Pearson correlations were performed to examine the relationships among the variables. The relationship between communication disorder impairment and violent behavior was found to be significant, *Pearson R* = .478,  $p < .05$ . Two Pearson correlation tests, one using the male participants and one using the female participants, were run to examine the relationship between communication disorder impairment and violent behavior controlling for gender. It was found that the positive correlation between communication disorder impairment and violent crime was stronger for women, *Pearson R* = .706,  $p < .05$  than it was for men, *Pearson R* = .582,  $p < .05$ . There was also a positive correlation between victimization and impairment, *Pearson R* = .306,  $p < .05$ . The research also showed a strong positive correlation between violent behavior and victimization, *Pearson R* = .872,  $p < .05$ , with a significance level of  $p < .001$ . Other noteworthy trends that were discovered were that there is an inverse relationship between age and violence, *Pearson R* = .278,  $p < .05$ , and there was a positive correlation between communication disorder impairment and frustration, *Pearson R* = .585,  $p < .05$ .

## **Chapter 5**

### **Discussion**

The results of the study confirm the first hypothesis that there is a positive relationship between communication disorder impairment and violent behavior (Figure 1). It was theorized that this relationship stems from individuals with communication disorder impairment having increased frustration because of their inability to communicate, which then leads to using violence as a form of expression or as an outlet. When taking into account the finding that frustration was also positively correlated with impairment, this theoretical framework becomes empirically supported. Essentially, frustration serves as the bridge between having difficulty communicating and acting out violently.

The results of the study also showed that age and gender played a role in the relationship between communication disorder impairment and violent behavior. It was discovered that as individuals get older in age, their level of violent actions decrease. This notion is not new to the criminology field but it is important to know that this trend exists even in those with communication disorders. The second hypothesis of the study was that the correlation between communication disorder impairment and violent behavior would be stronger for men than for women. The opposite of this was actually shown in the results – the data showed that the relationship between communication disorder impairment and violent behavior was stronger for women than it was for men. It is important to note however that the male participants had a much wider range of violence levels than the women. The male participants had violence levels ranging from extremely low to extremely high, while the female participants were all concentrated in the lower violence levels. Thus, while women with greater communication disorder impairment were more likely to be violent, their violence was less severe than that committed by their male counterparts.

The third hypothesis of the study was that there would be a positive correlation between victimization and impairment, which was confirmed by the results of the study. A possible explanation for this connection between victimization, conflicted social relationships, was discussed earlier. This study, however, poses another possible explanation, which was discovered when the results showed that there was also a strong positive correlation between violence and victimization (Figure 2). The data of this study shows that there is a positive correlation between impairment and violence, violence and victimization, and impairment and victimization. Using these three results, one might speculate that the reason individuals with impairments are more prone to victimization is because they are more prone to violence since violence and victimization are so strongly related.

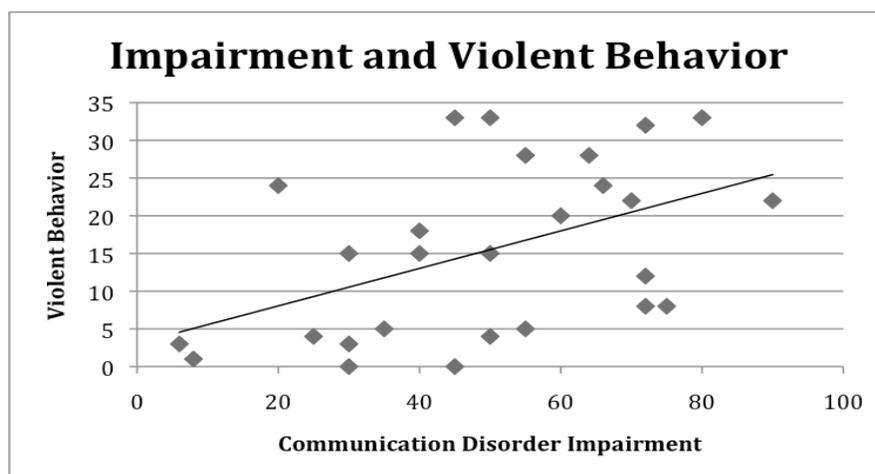
The current study, while yielding many interesting results, has some flaws. The participant sample size was very small which certainly affected the data and correlations discovered. It would be interesting to see if the trends discovered in this research hold true when examining a larger sample size. Additionally, there may have been a participant bias present. The survey was advertised as being about communication disorder impairment and violent behavior. Since all the participants were completely voluntary and not compensated or heavily recruited, it may be that participants who were more violent were more likely to participate.

Despite its flaws, the general findings of this study can be very useful to many fields. The medical and psychology fields can use this discovered relationship between communication disorder impairment and violent behavior to improve their treatments for communication disorder patients. Additionally, a doctor's or psychologist's knowledge of this relationship may help in intervening before the violence becomes a serious problem. Furthermore, doctors and psychologists can use the data from this research to target which of their patients with communication disorders are most prone to violence by gender and age. This same knowledge can be helpful for parents of children with communication disorders who can learn about this

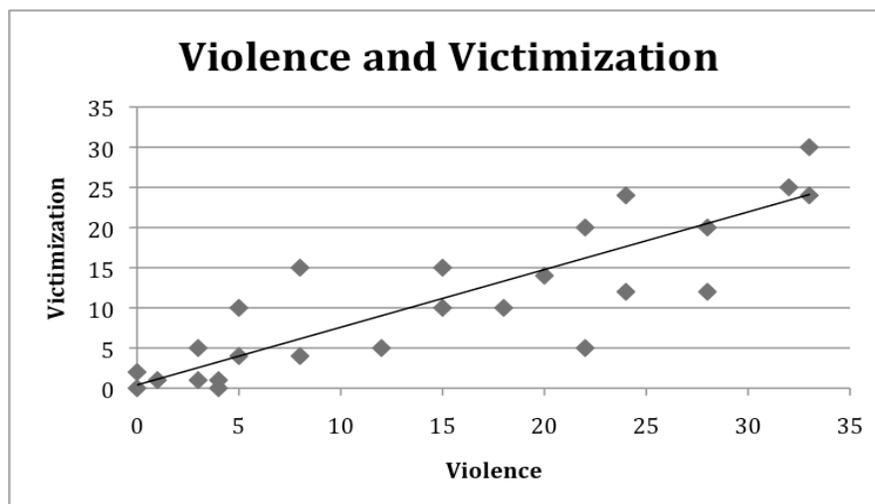
relationship between communication disorder impairment and violence and use it to be aware of violent tendencies and react properly to them. Another field that could greatly benefit from the discovery of this relationship between communication disorder impairment and violent behavior is the legal field. The relationship between communication disorder impairment and violent behavior suggests that if an individual with a communication disorder is convicted of a violent crime, he or she might be better served with a treatment-based sentence versus a jail or prison-based sentence. The hope is that this research will serve not only as an asset to multiple fields but also as a building block for further research on this important topic.

## Appendix A

### Figures



*Figure 1.* Scatter plot and regression line for the relationship between communication disorder impairment and violent behavior.



*Figure 2.* Scatter plot and regression line for the relationship between violent behavior and victimization.

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# ACADEMIC VITA

Alexandra Beyda

1445 Catlin Way, Dresher, PA 19025

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## Education

B.S., Criminology, 2013, Schreyer Honors College at The Pennsylvania State University, State College, PA

B.S., Psychology, 2013, Schreyer Honors College at The Pennsylvania State University, State College, PA

## Honors and Awards

- Paterno Fellow, Schreyer Honors College at The Pennsylvania University
- Dean's List (Fall 2009, Spring 2010, Fall 2010, Spring 2011, Summer 2011, Fall 2011, Spring 2012, Fall 2012, Spring 2013), The Pennsylvania University
- Excellence in Communication Certificate, College of Liberal Arts, The Pennsylvania State University

## Association Memberships/Activities

- National Society of Collegiate Scholars, Member
- Golden Key International Honour Society, Member
- Alpha Phi Sigma: The National Criminal Justice Honor Society, Member
- Phi Beta Kappa: National Academic Honor Society, Member