

Factors That Influence Whether Adolescents Carry A Handgun

By

Chelsey M. Haney

Submitted in Partial Fulfillment of the Requirements

for the Degree of

Master of Science

in the.

Criminal Justice

Program

YOUNGSTOWN STATE UNIVERSITY

May, 2016

Factors That Influence Whether Adolescents Carry a Handgun

Chelsey M. Haney

I hereby release this thesis to the public. I understand that this thesis will be made available from the OhioLINK ETD Center and the Maag Library Circulation Desk for public access. I also authorize the University or other individuals to make copies of this thesis as needed for scholarly research.

Signature:

Chelsey M. Haney, Student

Date

Approvals:

Dr. Christopher M. Bellas, Thesis Advisor

Date

Dr. John Hazy, Committee Member

Date

Ms. Susan Clutter, Committee Member

Date

Dr. Salvatore A. Sanders, Dean of Graduate Studies

Date

Originality of Thesis/Dissertation Verification Form

All theses and dissertations are required to be assessed for originality and proper citation of resources utilized. Effective April 1, 2016, this form must accompany the signature pages submitted to the College of Graduate Studies

Student's First Name Chelsey M.I. M Student's Last Name Haney

Banner ID Y00673745

E-mail

cmhaney@student.ysu.edu

Phone # (724) 777 6892

Degree Master's Program Criminal Justice

Graduation Date May 7th 2016

Thesis/Dissertation Title Factors That Influence Whether Adolescents Carry A Handgun

By signing below, the student and adviser certify that the thesis or dissertation specified is the original work of the student and that other resources utilized in the thesis or dissertation are indicated by proper citations. The authenticity of the specified thesis or dissertation has been verified by the student and advisor. iThenticate was utilized as part of that verification process.

Note: The student and advisor will address any potential issues identified prior to signing the **Originality of Thesis/Dissertation Verification Form** and submitting the thesis or dissertation to the College of Graduate Studies.

Name of Thesis Advisor Dr. Christopher M. Bellas Signature _____

Student Signature _____

Date _____

Abstract

The common perception that gun violence is often related to youth with mental health conditions has been sparsely detailed in the literature. The purpose of this thesis is to explore whether clinically depressed adolescents are statistically more likely to carry a handgun than non-clinically depressed adolescents, and to furthermore examine other factors which might lead a youth to carry a handgun. The data used for this project comes from the 2013 National Survey of Drug Use and Health 2013 (N=17,736). After conducting an Ordinary Least Squared (OLS) regression analysis, there was no evidence that those who suffered a major depressive episode within the past year were more likely to carry a handgun than those without such an episode. However, other factors such as drug usage, prior violent activities, and whether or not an adolescent had someone to talk to were all significant factors effecting whether or not an adolescent carried a handgun. The findings are important for helping to understand the relationship between mental health, the need for social support, and violence in the lives of juveniles. The findings indicate that further research needs to explore the types of social support that adolescents need in order to lessen the possibility that they will carry a handgun.

DEDICATION

I would like to give a special thanks to my family, friends, and colleagues for all their support. If it wasn't for them I wouldn't have completed my thesis. I would also like to thank my committee members for being very encouraging and believing in me.

ACKNOWLEDGEMENTS

I would also like to give a special thanks to:

My mother and father, Susan and Ed Haney- without their support and believing in the effort I put in, I would have never been able to complete my master's degree. You guys have supported me through all of this hard work, and never doubted my ability in school. I love you guys!

My sister, Ashley Haney- I want to give a special thanks to my role model; she has inspired me to challenge myself and always push the limits to see how far I can go. Thanks to that inspiration I completed my master's.

Grandma Haney and Aunt Judy- Thank you for believing in me and all the prayers you guys have given me. Without your faith, I would not be the person I am today. I would also like to acknowledge my number one source of strength and motivation, my Lord and Savior.

Special recognitions to my thesis advisor, Dr. Christopher Bellas- for his hard work, motivation and time. I appreciate everything that he has taught me throughout my educational career. He has motivated me to become the person I am today. He has guided me to the right information and helped me create such substantial piece of work. I cannot express enough how thankful I am for having you as my thesis advisor.

I would also like to thank my thesis committee, Dr. John Hazy for encouraging me to do a thesis, as well as his assistance as a graduate coordinator and mentor. I have had a great experience being a graduate assistant here at Youngstown State University. Thank you for giving me this opportunity. Also Professor Susan Clutter, I appreciate all the hard work and dedication she put in during my experience as her graduate assistant. I have doubted my ability over these last couple semesters and she has taught me to never give up. I appreciate everything she has done for me. Thank you!

Diane Hritz- I thank her for her assistance and motivation. I'm very grateful I was able to experience my time here as your graduate assistant. You pushed me when I felt like giving up; without your guidance I would have never been able to complete my degree.

My fellow graduate assistants, and friends- They have had my back my entire college career. In addition, I want to thank Lindsay Spiker and Josh Hall for their assistance in helping me with stats. I also would like to thank a great friend KateLynn Pisarcik for her assistance in proofreading this document. I wish you the best of luck with the rest of your program! The

Criminal Justice Department as a whole. Thank you for the acquired knowledge and guidance over the past year and a half. It was a great experience.

Table of Contents

Originality of Thesis Verification Form.....	3
Abstract.....	4
Acknowledgements.....	5
I. Introduction.....	9
II. Literature Review.....	14
Mental Illness and the Family.....	14
Mental Illness and the Criminal Justice System.....	14
The Patient Protection and Affordable Care Act.....	16
Mental Disorders.....	16
Adolescents and Depression.....	20
Gun Violence.....	21
III. Methodology.....	25
Data History & Collection.....	25
Variables for Analysis.....	26
Analytic Strategy.....	27
IV. Results.....	28
Descriptive Statistics.....	28
Comparisons.....	31
Correlations.....	33
Regression.....	35

V. Conclusions, and Discussions37

 Summary of Major Findings.....37

 Contributions.....38

 Limitations.....38

 Recommendations for Future Research.....39

 References.....41

Introduction

In September 2015, updated statistics on behavioral health trends in the United States were released from the 2014 National Survey on Drug Use and Health. “The data showed that about 1 in 5 adults aged 18 or older (18.1 percent, or 43.6 million adults) had a mental illness (AMI), and 4.1 percent (9.8 million adults) had a *serious* mental illness (SMI). The survey defined ‘serious mental illness,’ “as any mental, behavioral, or emotional disorder that substantially interfered with or limited one or more major life activities” (National Survey on Drug Use and Health, 2014). The study also found with respect to youth depression; 11.4 percent of youths aged 12-17 (2.8 million adolescents) had a major depressive episode (MDE). Major depressive episodes can be categorized using the following diagnostic criteria with five or more symptoms that have been present during the same two week period. Those symptoms can include the following:

- Depressed mood most of the day
- Diminished interest or pleasure in almost all activities
- Significant weight loss or gain
- Insomnia or hypersomnia nearly every day
- Fatigue
- Recurrent thoughts of death

(Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition, 2013, pp.160-161).

The percentages released in 2015 (based on the 2014 survey results) regarding the number of persons suffering from mental illness were higher than the percentages reported between the years 2004-2012. There were also findings linking those with mental illness to drug activity.

The link between drug usage and those suffering from a major depressive episode revealed that youth aged 12 to 17 who had a major depressive episode (MDE) were more likely to have used illicit drugs in the past year compared to those without a major depressive episode, 33.0% to 15.2% respectively” (National Survey on Drug Use and Health, 2014, p.2). This suggests that adolescents have difficulty dealing with depression, and hence may turn to alcohol and/or drugs in order to cope with their worries.

According to Wu, Hoven, Okezie, Fuller, and Cohen (2007), young males who abuse alcohol are more likely to have depression or other psychiatric disorders compared to those who do not abuse alcohol (p.62). According to the results from the 2014 National Survey of Drug Abuse and Health, “22.8 percent of those below the legal age were regular alcohol users, 13.8 percent binged on alcohol, and 3.4 percent said they were heavy alcohol users” (p.2). The study defined adolescent binge drinking to be five or more drinks on the same occasion on at least 1 day in the past 30 days. Adolescents who drink heavily have 5 or more drinks on the same occasion on 5 or more days in the past month. The survey pointed out that, “these percentages were lower than the percentages from 2002 to 2012, but they were similar to the percentages in 2013” (National Survey on Drug Use and Health, 2014). The study specified that “1.5 million adolescents aged 12-17 binged on alcohol within the past month of taking the survey (p. 20).

The study also sheds some light on adolescent drug abuse. According to the survey results, 21.5 million people had a substance use disorder in 2014, and “1.3 percent of adolescents aged 12 to 17 had abused drugs in 2014” (p.23). Substance abuse usually occurs when adolescents repeat the use of alcohol or other drugs, and it causes a significant increase in health problems, disability, and poor ability at school, work, or even at home. It is well known that excessive substance use and abuse is detrimental to our youth, and costs our government millions

of dollars in health care and treatment (National Survey on Drug Use and Health, 2014, p.22). Moreover, many adolescents have a co-occurring mental illness and substance use disorder. The study estimates that 340,000 adolescents self-medicate using drugs and/or alcohol due to their mental illness. Because of the co-occurrence of these disorders it is important to understand the relationship to mental health.

According to the 2014 National Survey on Drug Use and Health, the number of adolescents that use marijuana is rising. “In 2014, 667,000 adolescents aged 12 to 17 had a marijuana use disorder” (p.25). Almost 2 million adolescents used marijuana within the past month of taking the survey. In 2012, Washington and Colorado became the first two states to legalize marijuana. According to the Drug Policy Alliance (2015), legalizing marijuana has decreased arrests and convictions, decreased violent crime rates, and increased tax revenues. “Washington collected nearly \$83 million in marijuana tax revenues in (2015). These revenues are funding substance abuse prevention and treatment programs (<http://www.drugpolicy.org/news/2015/07/marijuana-legalization-washington-state-one-year-status-report>).

Is marijuana a gateway drug? According to Morral, McCaffrey and Paddock (2002), alcohol, tobacco and marijuana are widely regarded as ‘gateway’ drugs. ‘Gateway’ drugs allegedly cause youths to have an increased risk of progressing to other drugs (p.1493). In this case, this means adolescents can eventually become addicted to more serious drugs such as cocaine and heroin. Morral et al. (2002) claim the evidence supporting gateway effects with marijuana use is not proven and has no effect on later use of stronger drugs. Despite this conclusion, drug use by youths is still rampant; according to the 2014 National Survey on Drug

Use and Health, 9.4 percent of adolescents aged 12 to 17 admitted to the use of illicit drugs, which means that an estimated 2.3 million adolescents use illegal drugs nationwide.

One of the key differences in the 2013 survey compared to the previous year was the addition of a question about adolescents gun carrying. Unfortunately, the United States has an exorbitant rate of deaths due to handguns: there are approximately 32,000 gun deaths per year. The U.S. has the world's largest private arsenal, and is also the world leader in rates of violent crime and total number of gun deaths each year. More specifically every day in the United States alone 289 people get shot and of those 289, 86 of them die (Fox, 2015). Statistics show children and young adults (24 years of age and under) constitute 38% of all firearm deaths and non-fatal injuries. (<http://smartgunlaws.org/youth-gun-violence-gun-access-statistics>). Parents do contribute to children's gun violence by not taking adequate care to make sure their weapons are safely stored in that, "73% of children aged nine and under reported knowing the location of their parents' firearms and 36% admitted that they had handled these weapons, (including many whose parents had reported their children did not know the location of their firearm" (<http://smartgunlaws.org/youth-gun-violence-gun-access-statistics/>). Although there is no intentional misconduct on the part of the parents, the results are still just as lethal given the fact that eighty-nine percent of the children who killed someone in their own home did so accidentally because they were playing with unsecured loaded firearms." http://www.slate.com/articles/news_and_politics/jurisprudence/2015/10/gun_accidents_why_are_parents_who_leave_loaded_weapons_lying_around_never.html

Some gun deaths are attributed to premeditated homicide. According to Schwartzberg (2016), there have been 170 school shootings in America since 2013. Many people in the United States, particularly in poor and/or urban areas, fear for their lives because of gun violence. There

have been way too many shootings committed by adolescents over the last few years. Some recent high profile cases include: a case dealing with a Western Pennsylvania boy, Jordan Brown, who committed murder at the age of eleven. He was charged as an adult, after shooting his father's pregnant fiancée (Schwartz, 2010). When something like this happens, one of the first questions that should be asked is, where did the gun come from? How does an eleven year old know where to find a gun? Too many people that own guns are not very responsible with them. People do not take the responsibility for gun ownership as seriously as they should, and the consequences can be fatal. More important for this study is the exploration of whether juveniles who have access to guns have a prior history of mental illness. For example, the Sandy Hook Elementary school shooting in Newtown, Connecticut, where a 20 year old boy shot and killed twenty children and six adults, opened the dialogue once again on gun control as it relates to mentally ill persons.

The ultimate purpose of this study is to determine if there is a statistically significant difference among psychologically healthy adolescents who carry guns, versus adolescents who experience a major depressive episode and carry a handgun.

Chapter 2 Literature Review

Mental Illness and the Family

We may wonder whether and/or to what extent mental illness affects the family.

Adolescents may be influenced, biologically as well as socially, by family members who suffer from mental illness. Van Loon, Van de Ven, Van Doesum, Witteman, and Hosman (2013), researched whether or not there is a correlation between parents and their children who both suffer from mental illness. The study concluded that having a mentally ill parent does have a negative effect on adolescents, but specifically for those who *already* possess emotional and behavioral problems. While the study does not genetically link parents to children with mental illness, the fact that both may suffer from emotional problems does in fact intensify the family dynamics. Even more precisely, as it relates to the interplay between parents and children, Demidenko, Manion and Lee (2014) found that girls with depression are less likely to have parental support, and, more specifically, to have a father who suffers from psychopathic tendencies and a mother who is more prone to mood disorders. Adolescents need parental support and involvement to cope with their own development and to deal with their own social and psychological well-being. This is even truer when mental illness is readily apparent in the home (Mason, Haggerty, Fleming, & Goldstein, 2011). “Mental health problems are a pervasive aspect of American society, and impact the lives of children and adolescents in a significant fashion” (Gavazzi, et al., 2008, p. 1072).

Mental Illness and the Criminal Justice System

Mental illness among offenders within the criminal justice system is a significant problem. Grisso (2008), suggests adolescents with mental disorders make up the vast majority of the juvenile justice population. Research shows that almost, “two-thirds of youth in juvenile

detention centers meet the criteria for one or more mental disorders” (Grisso, 2008, p. 143).

Personal and biological traits demonstrate an overlap in adolescent behavior when looking at youth with mental health issues who suffer from: increased hostility, irritability, anger, as well as their susceptibility to being violent.

There is a lack of psychological services for the mentally ill within correctional institutions. Templin et al. (1990), found that within a correctional setting, “6.4 percent of males met the diagnostic criteria for schizophrenia, mania and depression (pp.663-669). In a gender study six years later Templin also found that 15 percent of females had a severe psychiatric disorder within the previous six months; 1.8 percent had schizophrenia, 2.2 percent were manic, and 13.7 percent had major depression (Templin, 1996, pp.505-512).

We are now realizing the connection between mental illness and offending, with so many people now requiring (at a minimum), that mentally ill offenders should have 24- hour care within the institution (Lamb & Weinberger, 1998). Of course, it would be more prudent to take action and assist those with mental illness before they become the subject of a criminal justice investigation; however politics has often blocked funding for adequate preventative care (Lurigio & Swartz, 2000).

Adolescents who suffer from mental illness rarely get the treatment they need. “Only about one in five youth with a significant mental illness receives any treatment” (Waxman, 2006, p.300). Oftentimes money is a motivating factor as to why treatment is unavailable, because limited access to healthcare plays a major role. Families with adolescents who have a serious mental illness can’t get the care they need because they do not receive the necessary financial support. Waxman comments, “The political reality of children’s mental health care is that momentum for reform can fade quickly” meaning a budget cut in health care can happen at any

given time (Waxman, 2006, p.301). There is however some consolation for parents because of the recent passage of health care legislation at the national level, the Affordable Care Act of 2011 (42 U.S.C. § 18001 (2010)). A brief overview of the law and how it may influence health care coverage for adolescents will now be discussed.

The Patient Protection and Affordable Care Act

According to The Affordable Care Act (2011) health insurance coverage has expanded for children and young adults (42 U.S.C. § 18001 (2010)). There has been an increase to comprehensive benefits, and employers are now putting more emphasis on prevention and wellness programs to decrease long term health care costs. This Act provides adolescents with insurance coverage based on preexisting conditions, something the Affordable Care Act initiated. Prior to the law applicants could be excluded from health care coverage for medical conditions already diagnosed. The legislation also called for an expansion of Medicaid “to cover all people who have income which falls below 133 percent of federal poverty guidelines, which will include not only adolescents in families with incomes below this threshold, but also independent young adults who previously would not have been eligible for the program” (42 U.S.C. § 18001 (2010)). Medicaid also allows newly eligible adolescents and young adults under the age of 21 to have full Medicaid benefits as part of their coverage (42 U.S.C. § 18001 (2010)). Although this legislation does not go far enough in tackling the issue of mental health care for adolescents, it is a first step in the right direction.

Mental Disorders

Mental illness is a disorder that affects one’s thinking, feeling or mood as well as the ability to relate to others and to function daily. Because this thesis focuses on youth and mental disorders, three of the better known and more widely studied mental illnesses will be briefly

examined here: bipolar disorder, schizophrenia, and most significant for the present research being addressed in this study, depression.

Bipolar Disorder

According to Black, et al., (2002) "... bipolar disorder is a serious mental illness that is often associated with periods of substantial impairment" (p. 13). According to Sutton (2013) there are three different types of bipolar disorders. Bipolar I sufferers experience mood swings, typically manic and hypomanic episodes. Bipolar II is often related to adults who experience mood swings and hypomanic episodes, and are often irritable and depressed. This type of bipolar does not experience mania. Bipolar III is a mixture of both mania and depression (p.30). Bipolar disorder in adolescents has grown rapidly in the United States over the last decade. As noted in Dobbs' 2012 study, "there was a 4,000% increase in the diagnosis of bipolar disorder in U. S. children since 2001" (p.31).

Bipolar disorder causes dramatic highs and lows in a person's mood, energy and ability to think clearly <https://www.nami.org/Learn-More/Mental-Health-Conditions#sthash.Gr0FT9e8.dpuf>. Previous studies that examine bipolar disorder in adolescents stated, "bipolar disorder in children often is misdiagnosed and misunderstood" (Bardick & Bernes, 2005, p. 72). Also there are often difficulties in diagnosing bipolar disorder in children. Early symptoms of bipolar disorder include:

- Irritability and unpredictability
- Hyperactivity
- Attention problems
- Social problems
- Eating disorders

- Childhood depression (Papolos & Papolos, (1999) as cited in Bardick & Bernes, 2005, p.73).

Previous research has shown that one-third of children who appear to be suffering from depression may later be diagnosed with bipolar disorder (Geller, Fox, & Clark, 1994; Lewinsohn, Klein & Seely, 1995; State, Altshuler & Frye, 2002). “It is important to prevent other difficulties associated with adolescent’s bipolar disorder such as engaging in risky behaviors, hypersexual behavior leading to unwanted pregnancy or sexually transmitted diseases, reckless driving, and the possibility of substance abuse” (Papolos & Papolos, (1999) as cited in Bardick & Bernes, 2005, p.74).

Schizophrenia

According to Walker, Kestler, Bollini, & Hochman (2004), “by definition, schizophrenia is a psychotic disorder and is arguably the most debilitating one” (p. 30). The authors noted there are different symptoms associated with schizophrenia such as hallucinations, thought disorder, and delusions. There are also different phases when it comes to schizophrenia. The first phase comes from genetics. Walker and Tessner (2008) found that first degree relatives with schizophrenia are more likely to be affected than second degree relatives. The second phase of schizophrenia is determined by gene-environment interactions (p.35). This means if someone has gene-environment interactions they have two different genotypes which respond to environmental variations. Those who are diagnosed with schizophrenia will experience:

- Delusions
- Hallucinations
- Disorganized speech

- Grossly disorganized or catatonic behavior
- Negative symptoms (diminished emotional expression)

(Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition, 2013, p.99).

There is in fact much support in the literature that people with schizophrenia have a greater risk at committing violent offenses than those without schizophrenia (Tengstrom, et al., 2004; Hodgins, 2008). One of the preventative measures we can utilize with this special population is to ensure that these persons receive proper psychiatric care, which could lessen their propensity to offend.

Depression

Depression is a major illness in the United States. In fact, depression is ranked fifth in leading diseases in the world (Monroe & Ried, 2009, p.68). There are many symptoms when talking about depression such as: insomnia, hypersomnia, fatigue, loss of energy, feelings of worthlessness or a sense of inappropriate guilt, etc. A study done by Kessler, et al. (2003) reported approximately, “16% of people in the United States have suffered from a major depressive episode at some point during their lives. It appears from recent studies that there is often a gender gap, with women diagnosed almost twice as often as men” (Monroe & Ried, 2009, p.68). The reported numbers may in fact be suspect, in that women may be more inclined to seek a diagnosis and receive treatment for depression compared to men who may not feel comfortable reporting.

With a significant number of people suffering from depression, the coping mechanisms which persons utilize in dealing with this disorder is important to study, for its confounding effects on behavior, as well as identifying the possible lack of social support for these individuals. For example, Taylor (2011) studied different social factors that contribute to

adolescents with depression who also turn to substance abuse. Such factors included daily life concerns including: school, employment, family relationships, and medical problems etc. The findings suggested that, “5% of adolescents use drugs because they feel sad, feel like they have failed, suffer from a loss of energy or stress or have family problems (p.703). We see that many of the crutches sufferers turn to is a result of a lack of social support.

Adolescents and Depression

Major Depressive Disorder (MDD) is a common problem for adolescents who often do not seek treatment. According to Hauenstein (2003) adolescents with poor peer relationships, academic failure, behavior problems, conflict with parents and other authority figures, and substance abuse are signs of depression. Most adolescents that suffer from depression have poor performance in school, they withdraw from friends and activities, feel sadness and hopelessness, lack enthusiasm, energy or motivation, experience anger and rage, overreact to criticism, possess feelings of being unable to satisfy ideals and have poor self-esteem. They also experience restlessness and agitation, undergo changes in eating or sleeping patterns, engage in substance abuse, have problems with authority, and possess suicidal thoughts or actions.

In a study conducted by Deykin, Levy, and Wells (1987), MDD was linked to alcohol and substance abuse. While the overall rate of adolescents who suffer from a major depressive episode is 6.8%, those who turn to alcohol while also suffering from MDD is roughly 8.2%; and those who turn to other substances is roughly 9.4%. (p.179). In other research studies, it is suggested that, “alcohol abuse/dependence is associated with elevated rates of depression, and that there are gender differences between boys and girls, i.e., where boys’ alcohol consumption was significantly associated with depression even after controlling for other psychiatric disorders (Wu, Hoven, Okezie, Fuller, & Cohen, 2007, p.51).

According to Petersen, Sarigiani, and Kennedy (1991), female adolescents are more at risk for depression than male adolescents. The authors researched depression patterns of male adolescents compared to female adolescents and found that, "studies that have looked for evidence of gender divergence in adolescence and identification with same-sex stereotypes have not found clearly supportive results"(p.249). Males and females cope in different ways while dealing with depression. Research also suggests that, "men are more likely to participate in distracting behaviors that dampen their mood when depressed, whereas, women are more likely to amplify their moods by ruminating about their depressed states and the possible causes of their depression" (Nolen-Hoeksema, 1987, p.259).

Gun Violence

Youth gun violence is a major public health issue in the United States, despite the fact that gun possession by adolescents is unlawful. Little is known about the determinants of weapon carrying among adolescents. According to Williams, Mulhall, Reis, and DeVille (2002), there are several behavioral and psychosocial factors in the lives of adolescents that cause them to both possess a handgun and carry that gun to school. They administered a cross-sectional survey that sampled 21,981 adolescents in 6th, 8th, and 10th grade. The findings suggest that parents, schools, and policy makers should intervene in order to reduce the risks of adolescents carrying a handgun and carrying it especially to school.

To give some explanation as to why weapons are so common among adolescents, Simon et al., (1998) determined that depression, stress, risk taking and drug use were all associated with gun carrying. An adolescent's choice to carry a handgun involves both individual and interpersonal factors in their decision making.

Although there are internal psychological variables related to behavior that impact youth to carry a gun, the social structural environment also has an impact. According to Callahan, Rivara, and Farrow (1993) handgun ownership is more common among adolescents who have problem behavior. These researchers conducted an anonymous self-report survey given to adolescents in a youth center. The findings show that, 59% of adolescents own a handgun, 46% of adolescents carry a gun to school, 68% fire at another person, 27% hurt themselves with a gun, and 35% of adolescents have a family member who has committed homicide or suicide with a gun (p.350).

There are a number of reasons as to why a youth would possess a weapon. There is also a distinction to be made between carrying a weapon and using a weapon. The distinction lies with the intent of the adolescent. Thurnherr, Michaud, Berchtold, Akre, and Suris (2009) examined the difference between weapon carriers versus weapon users. They used a cross-sectional school-based survey of 7,548 adolescents, (age ranged from 16-20 years old) to identify adolescents who carry a weapon compared to adolescents who use a weapon (p.270). It appears that self-protection was a motivating factor for both male and female adolescents who have a prior history of being the victim of physical violence.

According to Daane (2003), “violence is the number one cause of death in African American adolescents and the second leading cause of death among adolescents overall” (Daane, 2003 p.23). The study found 16- to 19-year olds to have the highest rate of violence, and 15-year-olds have the second highest rate (p.24). It is possible that other factors outside of one’s mental health could very well impact whether one carries a handgun such as the social environment. For example social learning suggests a youth’s decision to carry a weapon, is due in part to violence within the home. Daane (2003) states, exposure to violence in the home,

school, community, as well as through a social environment laden with violent entertainment through video and other graphic images can significantly influence aggressive behavior in youth (p.23). The literature on social learning tells us that children often pattern their behavior after repeated observation and interaction with intimate others. A juvenile's past and present experiences with family, friends, and teachers may all impact a person's propensity towards violence (Sutherland, 1939; Akers, 1990).

One cannot overlook the fact that weapon carrying among youth depends on their availability to adolescents. Many juveniles have weapons available to them within their own home. Americans pride themselves on their Second Amendment right to keep and bear arms. However, weapon availability mixed with the availability of alcohol and other substances within the home, such as prescription medication, is cause for concern. Swahn, Hamming, and Ikeda, (2002) examined how accessible guns are to youth within their own homes, "shotguns were the most available weapon (63%), followed by a rifle (61.3%), handgun (57.3%), and "other" (16.4%)" (p.229). Accessibility of guns to adolescents is conditional in large part to parents who make them so readily available.

Vaughn et al., (2012) suggest firearm use among adolescents is a serious public health concern with 3.1% of adolescents between the ages of 12 and 17 admitting to carrying a handgun in the past year. Valois, et al., (1995) suggests violent behavior is common among adolescents, grades nine through twelve. The authors did a youth risk behavior survey conducted by the Center for Disease Control and Prevention. The final results of the study indicated other demographic breakdowns in that thirty-eight percent of males and eleven percent of females carry a weapon.

Juvenile Justice tackles many subjects involving our youth. The system deals with everything from status offenses to dependent children. What we can conclude is that “violence represents a significant public health problem in the United States, particularly for young people” (Valois, Mckeown, Garrison & Vincent, 1995, p. 26). The next chapter focuses on the data collection and analytic statistical procedures for examining whether or not clinically depressed adolescents are more likely to carry a handgun than non-clinically depressed adolescents.

Chapter 3 Methodology

Data History & Collection

The design used to conduct this research is a secondary data analysis on the 2013 National Survey of Drug Use and Health, a self-report survey. The data was available for public use. The 2013 National Survey on Drug Use and Health is funded by the Substance Abuse and Mental Health Services Administration, (SAMHSA), which is an agency in the United States Department of Health and Human Services. Secondary analysis of the 2013 National Survey on Drug Use and Health was conducted for 70,000 respondents over the age of 12 throughout the 50 states. A consulting firm employing a professional Research Triangle Interviewer (RTI) makes the visits to these households. The professional interviewer asks general questions, and the residents will be asked to participate in the survey by completing an interview. The secondary data analysis that I will be using provides national and state-level data on the use of tobacco, alcohol, illicit drugs, treatment for substance use and mental health problems. The National Survey on Drug Use and Health is used in many different studies especially those involving substance use and mental illness (https://nsduhweb.rti.org/respweb/project_description.html).

Research Question

According to Fox (2015), “One-third of Americans reported owning a gun. In the state of Ohio nearly 20% of its citizens own a gun, a stark contrast to the state of Alaska, where gun ownership is nearly 62% (<http://www.nbcnews.com/news/us-news/one-three-americans-own-guns-culture-factor-study-finds-n384031>). The widespread availability and acceptance of gun ownership in this county has its roots in American Culture and with the increasing numbers of

persons suffering from mental illness as previously reported here, this combination necessitates studying the possible violent link between the two.

In this study, I will examine whether clinically depressed adolescents are more likely to carry a handgun than non-clinically depressed adolescents. As studied in the prior literature, there is a link between mental health and violence, thus leading to the present inquiry (Simon, et al., 1998). Gun carrying is a controversial topic. Although much gun violence is committed by citizens who possess handguns illegally, there is an ongoing debate regarding the level at which mental health indicators should prohibit or at least tighten gun purchases. Others have suggested that enhancing gun laws would not stop citizens from getting guns and committing violence, even if stricter background checks were in place. There is a problem with gun violence in the U.S. and this thesis explores what factors are at play when an adolescent decides to carry a weapon.

Variables for analysis

In the present analysis, the dependent variable is whether youths carried a handgun in the past year. The major independent variable (or predictor variable) asks youth whether or not they have had a major depressive episode within the past year. Other independent variables include: social support, (youth who talks with someone about serious problems), youth violence, (youth who may have attacked someone with the intent to seriously harm another), and substance abuse, (whether the youth abused any drug or alcohol). Furthermore, I will control within the study whether there is any statistical difference in gun carrying among: depressed boys (as opposed to girls), any racial differences, and possible variation among ages.

Analytic Strategy

The secondary analysis of the 2013 National Survey of Drug Use and Health was conducted through the use of the computer program: Statistical Package for the Social Science (SPSS) Statistics 20. The analysis was conducted in three stages. First, descriptive statistics on the dependent and independent variables were examined using frequencies and percentages. Results provided information regarding overall population and sample size, as well as the number of respondents to each survey question. The second stage included comparisons of each independent variable along with the dependent variable by using independent sample T-tests. The third stage involved an examination of the correlations between the variables of interest. The fourth and final stage calls for the use of Ordinary Least Squares regression where the dependent variable has multiple simultaneous predictors. It is during this stage that we test each independent variable on the dependent variable while controlling for the influence of the other variables.

All of the statistical techniques mentioned above will provide useful information for exploring whether adolescents who have suffered a major depressive episode within the past year are more likely to carry a handgun. Descriptive statistics will first provide a profile of the respondents surveyed. Next, comparisons between each independent variable in relation to the dependent variable will be explored. Third, to determine if any of the predictors were related to carrying a handgun, a series of seven correlations will be tested. Finally, Linear Regression will look at each independent variable and its possible significance when compared to the dependent variable controlling for other factors.

Chapter 4

Table 1.
(N=17,736)
Descriptive Statistics of the Entire Sample

Variables	N	%
Carried handgun		
0 = No	16,948	96.0
1 = Yes	697	4.0
Abuse any Drug		
0 = No	17,079	96.3
1 = Yes	657	3.7
Intent to harm		
0 = No	16,677	94.5
1 = Yes	978	5.5
Talk with about problem		
0 = No	809	4.7
1 = Yes	16,472	95.3
Depressive Episode		
0 = No	15,508	89.5
1 = Yes	1,814	10.5
Age		
12 years old	2,725	15.4
13 years old	2,925	16.5
14 years old	3,039	17.1
15 years old	3,006	16.9
16 years old	3,058	17.2
17 years old	2,983	16.8
Race		
0 = White	9,920	55.9
1 = Minority	7,816	44.1
Gender		
0 = Female	8,617	48.6
1 = Male	9,119	51.4

The National Survey on Drug Use and Health queried nearly 18,000 youth regarding a multitude of issues related to weapon usage and substance use. Table 1 shows the frequencies for the variables in the analysis. For example, 4% of youth responded in the affirmative to the question regarding whether or not they carried a handgun within the past year. This is a significantly lower percentage than forecasted in this research. One of the ways in which adolescents deal with mental health issues is to self-medicate or abuse drugs. Unfortunately, 657 of the adolescents responded that they do in fact abuse drugs, which is 3.7% of the total. Still this news is somewhat encouraging, as 96% of respondents claim they do not abuse drugs. Previous literature suggests that gun ownership and therefore gun possession, exists in a culture of violence (Fox, 2015). Included was a question on whether or not the youth has ever attacked another person with the intention to cause serious harm and 978 respondents, a mere 5.5%, replied in the affirmative. One of the most important concerns facing adolescents with mental health issues is their sense of loneliness and isolation. Youth who have a strong social support system in place either through family or friends or both is critical in helping them cope with their problems (Colvin, Cullen, and Vander Ven, 2002). Respondents were asked if they had someone to talk with about their problems. Only 4.7% of the total respondents stated they did not have someone to talk with about their problems, while an overwhelming 95.3 % stated they did in fact have someone to confide in with their personal issues. The predictor variable regarding whether or not one suffered from a major depressive episode within the past year was 10.5% of respondents (N=1,814), but still a significantly lower percentage than expected in that nearly 90% did not experience such episodes.

For this sample, the median age was 14.5 years with a range of 12 to 17. Other demographics indicate that 55.9% were white, versus 44.1% minority, and that there was a near even split with regard to gender (males = 51.4%, females = 48.6%).

Comparisons

Phase 2 of the investigation represents a comparative analysis and it involves testing certain variables in my hypotheses at the initial level. The hypothesis was that an adolescent with a major depressive episode would be more likely to carry a handgun than non-clinically depressed adolescents. A T test is an inferential statistic conducted to see if two means from two groups are reliably different from one another. T tests were performed comparing the average percent of respondents who have carried a handgun.

Table #2: Comparison of Prior Violent Activity and Handgun Carrying

Groups	% Carry a Gun	n	P-Value
Intent to harm			
1=yes	3%	973	<.001
0=no	16%	16,642	

Those adolescents who had violent tendencies reported carrying a handgun 16% compared to 3% who had no violent history. Again the chance that these means occurred randomly is less than <.001.

Table #3: Comparison of Having a Major Depressive Episode and Handgun Carrying

Groups	% Carry a Gun	n	P-Value
Depressive Episode			
1=yes	4%	15,463	<.546
0=no	4%	1,812	

The mean scores for those who have and those who have not suffered a major depressive episode within the past year and carried a handgun appears to be identical, however, the p-value indicates that we cannot say with confidence that the reported means of the two groups are the same.

Table #4: Comparison of Abuse of Drugs and Handgun Carrying

Groups	% Carry a Gun	n	P-Value
Abuse any drug			
1=yes	10%	651	<.001
0=no	4%	16,994	

When comparing those who have abused drugs to those who have not, we see that 10% of adolescents who abuse drugs carried a handgun, while 4% of those who did not abuse any drugs carried a handgun. The P-value indicates that the probability that this occurred by chance is less than <.001, so these two groups are not similar with respect to gun carrying.

Table #5: Comparison of Social Support and Handgun Carrying

Groups	% Carry a Gun	n	P-Value
Social Support			
1=yes	4%	16,425	<.001
0=no	8%	808	

Adolescents who do not have someone to talk to carry a handgun 8% while those who do have someone to talk to reported carry a handgun 4% of the time. The P-value indicates that the probability that this occurred by chance is less than <.001.

Table 6.
(N=17,736)
The Connection between Predictors and Carrying a Handgun

Variables	Pearson's r	sig. (2-tailed)
Abuse any Drug	.061**	<.001
Intent to harm	.153**	<.001
Talk with about problem	-.043**	<.001
Depressive Episode	-.005	.546
Age	.018*	.016
Race	-.035**	<.001
Gender	.113**	<.001

Note: p<.05* p<.01** p<.001***

Pearson's r is used if both the independent and dependent variable are numeric. Pearson's r helps identify the direction, between two variables as well as measuring the strength of the relationship between those variables, and more importantly, tells us whether or not there is a statistically significant relationship between the two. Pearson's r works best when the variables are normally distributed.

A total of seven correlations were examined to determine if any of the predictors were related to carrying a handgun. Table 6 shows all the variables have a weak relationship to the dependent variable (carrying a handgun), because they are all closer to 0 rather than + or -1. According to table 6, adolescents who abuse any kind of drug, have the intention to seriously harm someone, are older compared to younger, and are males, are all more likely to carry a handgun. There is an inverse relationship between two variables of interest in this study. One of the most important variables is related to social support. Specifically, the survey asked

adolescents about whether or not they have someone to talk with when they are experiencing emotional difficulties. There is a statistically significant negative relationship between adolescents who have someone to talk with about their problems, and whether they carry a handgun. Similarly, only one demographic variable provided a statistically significant negative relationship in the model, and that was race. Whites are more likely to carry a handgun compared to minorities. The main independent variable (outcome variable) of interest to the study was the relationship between a major depressive episode within the past year incurred by an adolescent and the probability of him/her also carrying a handgun. There is no statistically significant relationship between handgun carrying and adolescents who suffer from depression.

Table 7.
(N=17,736)
The Effect Of Depression on Adolescents Carrying a Handgun

Variables	Standardized B	Significance
Abuse any Drug	.042**	<.001
Intent to harm	.147**	<.001
Talk with about problem	-.032**	<.001
Depressive Episode	-.007	.373
Age	.013	.091
Race	-.046**	<.001
Gender	.105**	<.001

Note: p<.05* p<.01** p<.001***

Table 7 displays all of the variables used in the OLS regression. The dependent variable is whether or not an adolescent carries a handgun. The major predictor variable was whether or not the adolescent suffered a major depressive episode within the past year. The independent variables in the model included whether or not the adolescent abused any drugs, whether or not the adolescent had intentionally harmed someone, and whether or not the adolescent had someone with whom to talk about their problems. The model also included a set of demographic control variables (age, race, gender).

Table 7 shows the explained variance in the OLS regression model. According to the results, only 4% of the variation in the dependent variable which in this model are adolescents carrying a handgun, can be explained by those same adolescents having a major depressive episode within the past year.

What we can see is that the following independent variables show a level of statistical significance: adolescents who abuse any kind of drug, ($B=.042$, $p<.01$), have the intention to seriously harm someone, ($B=.147$, $p<.01$), and are males, ($B=.105$, $p<.01$), all are more likely to carry a handgun when controlling for the other variables, i.e. holding the other variables constant. What we can observe is that as one has less of an opportunity to talk with someone about their problems, ($B= -.032$, $p<.01$), the odds increase that they are more likely to carry a handgun, controlling for the other variables in the model. It also should be noted that regardless of substance abuse, prior violent actions, social support, and mental health status, more whites carry a handgun compared to minorities, ($B= -.046$, $p<.01$). There was no statistically significant result regarding age. The predictor variable in the model was an adolescents' major depressive episode within the past year. The predictor variable was not statistically significant when other variables both independent and control were included in the model.

Chapter 5 Conclusion and Discussion

Summary of Major Findings

This research set out to examine the factors which may lead to an adolescent carrying a handgun. A sample of adolescents was drawn from the 2013 National Survey of Drug Use and Health in order to examine mental health and the relationship to guns. The sample resulted in 17,736 adolescents responding to a host of questions regarding mental health, prior violence, and social support, coupled with a range of demographic variables. This exploratory study sought to discover the relationship between an adolescents' experience with a major depressive episode within the past year and whether that adolescent would be more likely to carry a handgun. The hypothesis was that an adolescent with a major depressive episode would be more likely to carry a handgun. The results did not support this prediction. Although the main research question found no statistically significant relationship between the predictor variable and the dependent variable the analysis did provide some important data.

There is a statistically significant finding between an adolescent's use of drugs and the likelihood that the adolescent will carry a handgun. This is an important finding because an adolescent who is under the influence and also possesses a weapon is cause for concern. Similarly, prior violent episodes also indicate a higher chance that the adolescent will carry a handgun. One of the most significant findings of the entire analysis was the relationship between carrying a handgun and having someone to talk with about their problems. The bottom line is that when a young person does not have a positive solid social support system, they are more likely to carry a handgun.

Contributions

The research in this thesis underscores yet again some important considerations and policy initiatives that need to be put in place to help youth. First, we must give attention to the millions of adolescents in this country who suffer from drug abuse. In this study I found a possible dangerous link between drug usage, and carrying a handgun as well as harmful behavior, and carrying a handgun. Although handgun possession and using a handgun are two distinct situations, we must always remember that possession is required for usage. Second, one of the major contributions of this thesis is the connection between a lack of social support and handgun carrying. This thesis supports all of the prior criminological research that suggests that youth need a strong support system for dealing with the problematic situations that arise during the adolescent years. Finally, although the media often suggests a “minority threat” through negative racial stereotypes, evidence here suggest that it is in fact whites who are more prone to possessing handguns. The fact that there were no statistically significant findings connecting depression with carrying a handgun, the literature reviewed here indicates that we need to address how our youth who suffer from mental illness are treated. Every time there is a school shooting we spend no more than a week discussing America’s response to the mental health crisis in this country. Hopefully this topic will convince policy makers to devote more funding to mental health in the United States.

Limitations to the Study

Many of the limitations to this study revolve around the methodological instrument. Survey research is often plagued with skewed findings for several reasons. One reason is because adolescents may be resistant to divulge illegal activity, due to the fact that carrying a weapon

while underage and without a permit is illegal and they may be fearful of legal sanctions. There is also the problem of telescoping, in that we are asking about a specific time frame (within the past year) about depression as well as handgun carrying. Adolescents may not know the exact date of their last depression occurrence or when they were carrying a weapon. Another research limitation was the lack of a theoretical framework. This study found that the role of social support was a significant predictor of handgun carrying, however, because this was an exploratory study, we did not test such theories. Several theories related to coping mechanisms, social support and even strain could have been added to this study (Colvin, 2002; Agnew 1992).

The present analysis could have included more variables that represent an adolescent's social environment at school as well as their struggles with academic performance. This study could have included more variables to represent mental health other than asking about a major depressive episode. Finally, it could have included variables related to treatment for mental health, substance abuse disorders as well as factors related to socioeconomic status such as income. A final limitation to the present study was the incomplete attention given to political and public policy factors that could have an impact on mental health treatment and gun legislation. Although the Affordable Care Act was addressed, more policy analysis could have been conducted on the specifics of mental health as it relates to violence.

Recommendations for Future Research

The major problem identified in the current instrument was the lack of meaningful responses. Therefore, one could improve the generalizability of the current findings by targeting a more captive audience such as schools and youth detention centers across many geographic regions. One of the ways to improve survey accuracy would be the use of qualitative methodology. Although interviewers were used to collect the data, another instrument could add more open

ended questions to allow for a richer, descriptive explanation of answers to the questions of interest.

As social support was a significant finding in this study, further research should test the theories involving social support and strain as it applies to youth carrying a handgun. One question for consideration would be whether handgun carrying is a coping mechanism for dealing with issues involving self-protection. Furthermore, more variables could be added for consideration including income as a measure of socioeconomic status, variables representing school performance and a youth's social environment at school, as well as more indicators of mental health issues, not solely relying on a major depressive episode.

Finally, a new era of research can be developed with a focus on adults, mental health and handgun ownership. A cost benefit analysis on strategies outlined for dealing with mental health treatment programs for youth in the U.S. could be undertaken to see which options are available for implementation.

As of this writing (2016), America is in the midst of a Second Amendment debate, specifically regarding guns and mental health. We can only hope that the forthcoming research can be a catalyst for the improvement of mental health as well as gun policies.

Reference

- Agnew, R. (1992). Foundation For A General Strain Theory Of Crime And Delinquency. *Criminology*,(30)1,47-88.
- Akers, R. (1990). Rational Choice, Deterrence and Social Learning Theory in Criminology: The Path Not Taken. *Journal of Criminal Law and Criminology*, 81, 653-676.
- American Psychiatric Association, (2013). *Diagnostic and statistical manual of mental disorders: DSM-5*.
- Bardick, A. D., & Bernes, K. B. (2005). A Closer Examination of Bipolar Disorder in School-Age Children. *Professional School Counseling*, 9(1), 72–77.
- Black, J. J., Heffner, J. L., Anthenelli, R. M., Beavers, J. N., Albertz, A., Blom, T., DelBello, M. P. (2012). Diagnosing alcohol and cannabis use disorders in adolescents with bipolar disorder: a preliminary investigation. *Journal of dual diagnosis*, 8(1), 13-18.
- Callahan, C. M., Rivara, F. P., & Farrow, J. A. (1993). Youth in detention and handguns. *Journal of Adolescent Health*, 14(5), 350-355.
- Colvin, M., Cullen, F.T., Vander Ven, T. (2002). Coercion, Social Support, and Crime: An Emerging Theoretical Consensus. *Criminology*, 40(1), 19-23.
- Daane, D. M. (2003). Child and adolescent violence. *Orthopaedic Nursing*, 22(1), 23-29.
- Demidenko, N., Manion, I., & Lee, C. M. (2014). Father–Daughter Attachment and Communication in Depressed and Nondepressed Adolescent Girls. *Journal of Child and Family Studies*, 24(6), 1727-1734.
- Deykin, E. Y., Levy, J. C., & Wells, V. (1987). Adolescent depression, alcohol and drug abuse. *American Journal of Public Health*, 77(2), 178-182.

- Drug Policy Alliance (2015). *Marijuana Legalization in Washington State: One-Year Status Report*. Retrieved from <http://www.drugpolicy.org/news/2015/07/marijuana-legalization-washington-state-one-year-status-report>.
- Fox, M. (2015). One in Three Americans Own Guns; Culture a Factor, Study Finds. Retrieved From: <http://www.nbcnews.com/news/us-news/one-three-americans-own-guns-culture-factor-study-finds-n384031>
- Gavazzi, S. M., Lim, J. Y., Yarcheck, C. M., Bostic, J. M., & Scheer, S. D. (2008). The impact of gender and family processes on mental health and substance use issues in a sample of court-involved female and male adolescents. *Journal of Youth and Adolescence*, 37(9), 1071-1084.
- Geller, B., Fox, L., & Clark, K. (1994). Rate and predictors of pre-pubertal bipolarity during follow-up of 6- to 12-year-old depressed children. *Journal of the American Academy of Child and Adolescent Psychiatry*, 33, 461 -468.
- Grisso, T. (2008). Adolescent Offenders with Mental Disorders. *Future Of Children*, 18(2), 143-164.
- Hauenstein, E. J. (2003). Depression in adolescence. *Journal of Obstetric, Gynecologic, & Neonatal Nursing*, 32(2), 239-248.
- Hodgins, S. (2008). Violent behaviour among people with schizophrenia: a framework for investigations of causes, and effective treatment, and prevention. *Philosophical Transactions of the Royal Society B: Biological Sciences*, 363(1503), 2505–2518.
- Lamb, H. R., & Weinberger, L. E. (1998). Persons with severe mental illness in jails and prisons: A review. *Psychiatric Services*.
- Law Center To Prevent Gun violence. (2012, November). *Statistics on Youth Gun Violence &*

- Gun Access*. Retrieved From: <http://smartgunlaws.org/youth-gun-violence-gun-access-statistics/>
- Lithwick, D. (2015, October). *Leave Your Gun Out, Go to Jail*. Retrieved From: http://www.slate.com/articles/news_and_politics/jurisprudence/2015/10/gun_accidents_why_are_parents_who_leave_loaded_weapons_lying_around_never.html
- Lurigio, A. J., & Swartz, J. A. (2000). Changing the contours of the criminal justice system to meet the needs of persons with serious mental illness. *Criminal Justice*, 3, 45-108.
- Mason, W. A., Haggerty, K. P., Fleming, A. P., Casey-Goldstein, M. (2012). Family intervention to prevent depression and substance use among adolescents of depressed parents. *Journal of child and family studies*, 21(6), 891-905.
- Monroe, S. M., & Reid, M. W.. (2009). Life Stress and Major Depression. *Current Directions in Psychological Science*, 18(2), 68–72.
- Morrall, A.R., McCaffrey, D.F., Paddock, S.M. (2002). Reassessing the marijuana gateway effect. *Addiction*, 97(12) 493-504.
- National Alliance on Mental Illness (n.d.) Retrieved from <https://www.nami.org/Learn-More/Mental-Health-Conditions/Bipolar-Disorder>.
- Nolen-Hoeksema, S. (1987). Sex Differences in Unipolar Depression: Evidence and Theory: *Psychological Bulletin*. 101,(2), 259-282.
- Papolos, D.F., Papolos, J. (1999). *The bipolar child: The definitive and reassuring guide to childhood's most misunderstood disorder*. New York: Broadway Books.
- Patient Protection and Affordable Care Act, 42 U.S.C. § 18001 (2010).
- Petersen, A. C., Sarigiani, P. A., Kennedy, R. E. (1991). Adolescent depression: Why more girls? *Journal of youth and adolescence*, 20(2), 247-271.

Schwartz, R. (2010, February 18). Kids should never be tried as adults. CNN. Retrieved from <http://www.cnn.com/2010/OPINION/02/18/schwartz.kids.trials/>

Schwartzberg, E. (2016). Average of one school shooting a week since 2013. *Journal-News*. Retrieved from <http://www.journal-news.com/news/news/average-of-one-school-shooting-a-week-on-national-/nqZ4D/>

Simon, T. R. Richardson, J.L., Dent, C.W., Chou, CP, Flay, B.R. (1998). Prospective Psychosocial, Interpersonal, and Behavioral Predictors of Handgun Carrying among Adolescents. *American Journal of Public Health*. 88(6), 960-963.

State, R. C., Altshuler, L. L., & Frye, M. A. (2002). Mania and attention deficit hyperactivity disorder in a prepubertal child: Diagnostic and treatment challenges. *American Journal of Psychiatry*, 159(6), 918-925

Substance Abuse Mental Health Services Administration. (2013). Behavioral Health Trends in the United States: Results from the 2014 National Survey on Drug Use and Health. SMA15-4927.

Substance Abuse Mental Health Services Administration. (2014). Behavioral Health Trends in the United States: Results from the 2014 National Survey on Drug Use and Health. SMA15-4927.

Sutherland, E. H. (1939). *Principles of Criminology*. Philadelphia, PA: Lippincott.

Sutton, K. K. (2013). Childhood Bipolar Disorder: A Difficult Diagnosis. *Beyond Behavior*, 23(1), 30-37.

Swahn, M.H., Hammig, B.J., Ikeda, (2002). Prevalence of youth access to alcohol or a gun in the

home. *Injury Prevention*. 8, 227-230.

Taylor, O. D. (2011). Adolescent depression as a contributing factor to the development of substance use disorders. *Journal of Human Behavior in the Social Environment*, 21(6), 696-710.

Tengstrom, A., Hodgins, S., Grann, M., Langstrom, N., & Kullgren, G. (2004). Schizophrenia and Criminal Offending The Role of Psychopathy and Substance Use Disorders. *Criminal Justice and Behavior*, 31(4), 367-391.

Templin L.A., (1990). The prevalence of severe mental disorder among male urban jail detainees: comparison with the Epidemiologic catchment area program. *American Journal of Public Health* (80), 663-669.

Templin L.A., Abram K.M., McClelland G.M. (1996). Prevalence of psychiatric disorders among incarcerated women. *Archives of General Psychiatry* 53, 505-512.

Thurnherr, J., Michaud, P. A., Berchtold, A., Akre, C., & Suris, J. C. (2009). Youths carrying a weapon or using a weapon in a fight: what makes the difference? *Health education research*, 24(2), 270-279.

Valois, R. F., McKeown, R. E., Garrison, C. Z., & Vincent, M. L. (1995). Correlates of aggressive and violent behaviors among public high school adolescents. *Journal of adolescent health*, 16(1), 26-34.

Van Loon, L. M., Van de Ven, M. O., Van Doesum, K. T., Witteman, C. L., & Hosman, C. M. (2014). The relation between parental mental illness and adolescent mental health: The role of family factors. *Journal of Child and Family Studies*, 23(7), 1201-1214.

Vaughn, M. G., Perron, B. E., Abdon, A., Olate, R., Groom, R., & Wu, L. T. (2012). Correlates

- of handgun carrying among adolescents in the United States. *Journal of interpersonal violence*, 27(10), 2003-2021.
- Walker, E., & Tessner, K. (2008). Schizophrenia. *Perspectives on Psychological Science*, 3(1), 30–37.
- Walker, E., Kestler, L, Bollini, A., Hochman, K. (2004). schizophrenia: etiology and course. *Annual Review of Psychology*, 55, 401-430.
- Waxman, H. A. (2006). Improving the Care of Children with Mental Illness: A Challenge for Public Health and the Federal Government. *Public Health Reports*, 121(3), 299-302.
- Williams, S. S., Mulhall, P. F., Reis, J. S., & DeVille, J.O. (2002). Adolescents carrying handguns and taking them to school: psychosocial correlates among public school students in Illinois. *Journal of adolescence*, 25(5), 551-567.
- Wu, P., Hoven, C. W., Okezie, N., Fuller, C. J., & Cohen, P. (2008). Alcohol abuse and depression in children and adolescents. *Journal of Child & Adolescent Substance Abuse*, 17(2), 51-69.