

AN ANALYSIS OF PERSONALITY AND THE EFFECT OF PEER INFLUENCE ON
DEVIANT BEHAVIOR DURING ADOLESCENCE

by

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A Thesis Submitted to the Faculty of
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This thesis was prepared under the direction of the candidate's thesis advisor, Dr. Tasha Youstin, Department of Criminology and Criminal Justice, and has been approved by the members of her supervisory committee. It was submitted to the faculty of the College for Design and Social Inquiry and was accepted in partial fulfillment of the requirements for the degree of Master of Science.

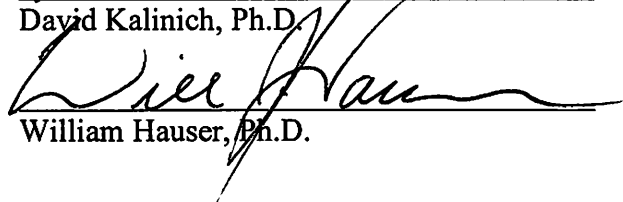
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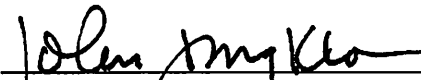
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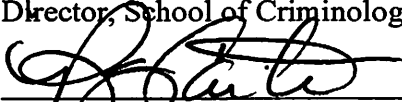
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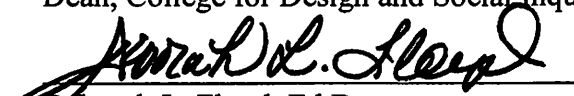
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ABSTRACT

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Criminologists have long since documented a connection between peer deviance and personal deviance. Some theories suggest that this connection is due to a learning process where individuals may adopt the attitudes, beliefs, and behaviors of those with whom they have significant interactions, such as friends. While individuals may be susceptible to learning anti-social behavior from peers, it is unclear if certain personality characteristics may affect this relationship. The purpose of this study is to determine if differences in specific personality characteristics, such as self-esteem, introversion and extroversion, can have a moderating effect on the pressures to participate in the use of drugs and alcohol that are projected on to individuals during their adolescent years. The findings of the current study can lead to new pathways in substance use prevention and personality assessment in conjunction with risk assessment for juveniles during their middle and high school years.

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CHAPTER 1: INTRODUCTION

Background

Criminology and Psychology are two very different disciplines that happen to share a majority of fundamental foundation points. Both rely heavily on the perceptions of human behavior by other people. Criminological theory poses explanations of why people commit crimes and act in deviant ways. Crimes are actions determined to be against the law based on the rulings of those in the legislative branch. Therefore, illegal activities are based on the opinions of others. Psychology also has to do with the explanation of human behavior and the interpretation of actions as normal or abnormal. The adoption of perceptions of rulings in both fields of what actions are right, wrong, abnormal or normal influence how people think, feel, and act. Human behavior is difficult, if not near impossible, to predict. If science could answer all of the questions about why people choose to act in certain ways, then many social science researchers would be without a job. With that being said, it is crucial to explore all alleys that are present within these fields.

In this day and age, the goal is to be proactive rather than reactive when it comes to crime control. With the changes in society and the advances in technology, changes in human behavior are bound to follow. Many researchers have followed in the footsteps of these societal changes and examined theories in both criminology and psychology that include explorations of new psychological traits and disorders as well as an abundance of

new explanations for crime in real life as well as in the virtual world. Theories such as Social Learning theory focus solely on how children learn from those that they interact with on a regular basis (Akers, 1990). With that being said, one area that is lacking an abundance of research is the combination of personality and crime and deviance. There are many studies that attribute personality disorders and mental illness to crime and deviance such as the work of Barry and his colleagues (2007). Additionally, Agnew attributed differences in personality such as in emotionality and constraint to differences in crime and delinquency when faced with strain (2002). However, not much is to be said about the potential moderating effects that possession of specific personality traits can have on participation in deviant activities. Additionally, there is a lack of research on this subject during the transitional period from childhood to adolescence.

Everyone can agree that children seem to be imitating the behaviors of adults at a much earlier age in the current era than in the time of the baby boomers. Social media is booming with photos of thirteen-year-old girls in midriff shirts and blogs rant about young boys being exposed to violent video games at an earlier age. With these changes in social norms come behavioral changes. Groups of teens and young adults have always been subjected to peer pressures, but is the pressure occurring earlier due to the shift in age of exposure to sex, drugs, and alcohol? News stories are constantly airing about teenagers being involved in drug busts or underage drinking, and one can only wonder, is there some way to prevent these changes in behavior or predict that these children are going to behave in this way?

In response to these cultural changes, the current study takes a problem that has been around for decades, peer pressure and peer deviance, and attempts to determine if

differences in personality in adolescents can mediate the effect of peer deviance during the transitional period from childhood to adolescence.

Problem Statement

In a society that is constantly changing, one problem remains: people are still participating in crime and deviant activities. Many individuals learn these behaviors from observing others participate in crime and deviance. Specifically, young children and adolescents are being involved in social groups where anti – social behaviors are a norm. These peers often pressure children in to engaging in similar activities, and eventually, attitudes and beliefs favorable to crime and deviance will be adopted throughout the group members. There are no clear – cut ways to stop children from facing these pressures. However, early intervention options must be explored.

Thesis Goal

The goal of this thesis is to explore the combination of psychological trait theories and social criminological theory. Additionally, this thesis aims to assess differences in personality and determine if these differences can account for varying levels of susceptibility to peer pressure. The current study will use data collected during a longitudinal study, the Project on Human Development in Chicago Neighborhoods, and will examine patterns in personality, peer substance use, and individual substance use during the crucial years of childhood and adolescence.

Relevance and Significance

Stories involving peer pressure and peer deviance are exploding over the media scene, and the influence that a circle of friends can have on one another is becoming frighteningly apparent. For example, in 2013, a group of friends conspired to attack

another peer that they knew from parties that were thrown at the victim's home. Together six young adults brutally assaulted a young woman, and eventually this woman, Latisha Frazier was choked to death in a closet. Though this story is an extreme case, there are many similar stories that involve groups of peers physically and verbally assaulting peers and classmates. In 2012, a young woman named Amanda Todd took her own life due to the constant bullying that she faced from peers and classmates at a variety of schools. This story went viral, and since then, more and more stories of suicide due to bullying have come to light. These attacks come from groups of students acting as one voice, sharing the same ideas, and acting in the same way.

Additionally, today's youth face pressures to harm themselves and potentially others by using drugs and alcohol. Some adolescents choose to participate in the use of drugs or alcohol based on the social group to which they belong. Intervention programs such as D.A.R.E (Drug Abuse Resistance Education) were once used to attempt to show children that drugs are not healthy for the body or the mind. Programs like these have been proven to have no real effects on the reduction of drug use by teens and adolescents (Rosenbaum et. al, 2013). Furthermore, the pressures to use drugs and alcohol still exist, and the use of drugs and alcohol still occurs. Peer pressures exist for children at all stages of their lives and can occur in many forms. Once the participation in deviant activities begins, they often persist and can even be a gateway to other participation in other types of crime.

Previously, the dramatic change in the ages of onset for drug use, sexual encounters, and exposure to violence were mentioned. The constant changes that are

occurring in society, and the effect that these changes have on the youth of today make this study extremely relevant

Summary

As society and societal norms continue to change, the way we analyze risk must also change. Proactive intervention in the early stages of development in the life of an adolescent is crucial to prevent participation in crime and deviance. By assessing differences in personality, it may be possible to predict who is more or less likely to participate in deviant activity, such as substance use, during adolescent years. The relationship between peer deviance and individual deviance will be explored, and the potential moderating effects of personality will be examined.

Chapter 2 will explore the background of social criminological theories as well as the different developmental theories of psychology. Chapter 3 will examine the methodology of the current study, as well as addressing the original study that was the source of data for the current study: the Project on Human Development in Chicago Neighborhoods. Chapter 4 will include an examination of the statistical findings through descriptive statistics and multiple regression analyses. Finally, Chapter 5 will discuss the findings of the study, the limitations involved in using a secondary data source, and the future directions for research relating to the current topic.

CHAPTER 2: A REVIEW OF THEORETICAL FOUNDATIONS AND EXISTING RESEARCH

Introduction

The idea that personality can have a moderating effect on the influence of deviant peers during adolescence relies heavily on the validity of Akers' Social Learning Theory of Crime. When children are put in to a new setting whether it is a new daycare, school, or extracurricular activity, they learn from one another and will adopt similar interests and attitudes as those that they constantly come in contact with. In addition to a criminological theory, the mediation of deviant activity in adolescents requires that the individual has a personality consisting of distinct traits. Many theories of personality share the common thesis that personality forms at a young age and as a person grows and changes, their personality will also go through changes. Eysenck's theory of personality will be the main focus during this discussion with some emphasis on other theorist's work such as the theories developed by Erikson, Vygotsky, and Bandura. The first section of this chapter delves deep in to personality and the theories that are prominent in explaining the development of personality in children. Additionally, the relationship between criminological theory and personality will be examined. The second section examines Social Learning Theory of Crime and how children are influenced by their peers. Additionally, the relationship between criminological theory and personality will

be examined. Finally, personality traits such as self – esteem, introversion, and extroversion are discussed as indicators of deviance, and the idea of these traits acting as mediators toward the adoption of deviant behaviors, in this case substance use, and attitudes that are favorable to use of illegal drugs and underage drinking are examined.

Theories on Personality Development

Personality theories vary in type, age, and span. There are theories that focus solely on cognitive development of children as well as those that focus primarily on behavioral development of children, social learning, or life course development. One commonality shared amongst these theories is that they explain changes in a child's thoughts and actions over the course of their lives through their adolescent years. Many of these theories rely on the fact that these children have distinct personality traits that influence their behaviors. Differences between children's behaviors and temperamental qualities are evident very early in life (Caspi & Roberts, 2001). Research on development of personality is constantly being conducted, and in a longitudinal study conducted by Caspi in 1995, data showed that personality traits that were present in 3-year-old subjects were commonly more developed and still present when these subjects were 18 years old (Caspi & Roberts, 2001). Caspi & Roberts also mention many theorists agree that development of most personality traits are developed by age 5, but socialization pressures could bring about minor changes in these traits over the course of the child's lifetime (2001). Over time, many researchers disputed that personality developed at such a young age. However, research generally does not support this conflicting idea (Caspi & Roberts, 2001). In the Block Longitudinal Project, researchers were interested in determining if strong personality traits continued to develop after age five (Caspi & Roberts, 2001).

Subjects were interviewed throughout their lives from age 3 until age 23, and results showed that these traits discovered very early in life did not fluctuate, but actually grew stronger with age (Caspi & Roberts, 2001). However, while research does show that personality does indeed begin to form as early as age 3, changes in an individual's life can affect these traits well in to adult hood (Caspi & Roberts, 2001). There are varying theories of development in childhood for all aspects of growth such as: personality development, socialization development, and life – course development. It is important to understand each theory individually before examining how two: such as personality and socialization can interact with eachother. Each theory will be discussed in this section.

Erikson's Psychosocial Developmental Theory

Erikson's theory explaining development in children consists of eight stages of changes that children undergo and their struggle to overcome a conflict in each stage of their lives (Domino & Affonso, 1990). As young children, Erikson theorizes that these individuals must overcome the issue of trust and mistrust (Domino & Affonso, 1990). Children are born in to this world with no knowledge of who is there to harm them or help them grow, and this concept is greatly important to the development of a healthy ego. Another stage of development that is crucial to this examination is the stage involving identity and role confusion. Even though personality traits are not discussed explicitly in this stage, the importance lies in the development of self that occurs during this stage in adolescence (Cote & Levine 1987). In order for an adolescent to refrain from being influenced by deviant peers it is crucial for the individual to have a solid idea of who they are and who they want to be in the future. If someone is pressured in to an identity that they are not necessarily comfortable with, this can lead to rebellion or

antisocial behavior patterns (Cote & Levine, 1987). This is a perfect example of the important role that personality traits such as self – esteem and self - concept can have on an adolescent.

Vygotsky’s Sociocultural Theory of Development

The learning process that a children must undergo in order to be able to understand the world around them is a crucial element in all developmental theories. Vygotsky covers all elements of learning from basic language acquisition to the social process of learning. One major contribution from Vygotsky to the world of psychology that is extremely relevant to this study is the Zone of Proximal Development (Mahn, 1999). This concept involves both the potential that a child has to learn on their own, and the absolute potential that can be achieved by accepting help from a person who is more experienced and knowledgeable such as a teacher or mentor (Mahn,1999). Additionally, the Zone of Proximal Development solidifies the idea that learning takes place both in and outside of a formal setting and that a person is constantly being influenced by those around them (Mahn, 1999). Though this theory does not directly involve development of personality traits, it is crucial to understand that most theorists in psychology understand the influence that social encounters can have on a developing child. Another theorist that emphasizes the importance of social learning is discussed next in this chapter.

Bandura’s Social Learning Theory

Bandura is a theorist who pushed the idea of social learning to the extremes in his “BoBo doll” experiment. This experiment allowed children to act aggressively toward a doll with no negative consequences or responses. Part of the experimental group was allowed to observe an aggressive model in which a person beat the BoBo doll (Bandura,

Ross, & Ross, 1961). Others observed interactions with the doll, but no aggression was demonstrated (Bandura, Ross, & Ross, 1961). However the control group was not exposed to any aggressive material prior to being left alone with the doll (Bandura, Ross & Ross, 1961). Those who were exposed to violence prior to being left alone with the doll were significantly more likely to act aggressively toward the doll than those who were not exposed to violence (Bandura, Ross, & Ross, 1961). This experiment is important to the current experiment in that it is important to understand the importance that modeling can have on a developing mind. Additionally, Bandura focused on intrinsic rewards such as a sense of pride for completing an act (Bandura, Ross & Ross, 1961). With that being said, when a person develops attitudes favorable to crime, they will feel satisfied after completing a deviant action. These attitudes are learned from peers. After this experiment it will be discussed if personality can mediate these adoptions of negative attitudes and deviant actions that are learned from others.

Eysenck's Theory of Personality Development

Hans Eysenck developed a theory on the development of personality based on the central traits of extroversion, neuroticism, and psychoticism (Matthews & Gilliland, 1999). Unlike the other theories that I have referenced, Eysenck focuses on the biological science rather than the social aspects that can influence personality development and changes. According to Eysenck, the reticulo- cortical circuit, which controls cortical arousal produced by incoming stimuli, and the reticulo – limbic system, which controls response to emotional stimuli are the backbone of his idea of the nervous system of personality (Matthews & Gilliland, 1999). The level of arousal in the limbic system relates to the extroversion measure listed in Eysenck's personality scale (Matthews &

Gilliand, 1999). According to Eysenck, introverts are typically more aroused than an extrovert, which leads to extroverts seeking more arousal than introverts in order to reach the ideal threshold (Matthews & Gilliland, 1999). Neuroticism also involves the arousal of the cortico – limbic system in that neurotic individuals are not as stable and are more aroused by emotional situations than those who are considered stable individuals (Matthews & Gilliland, 1999). People who score high on the psychoticism scale are known to be aggressive, cold, and antisocial in reaction to negative emotional stimuli (Matthews & Gilliland, 1999). Eysenck’s theory relies heavily on the relationship that is shared between genetics, learning, and the interaction between the two (Rushton & Chrisjohn, 1980). Researchers comment that Eysenck’s theory has a major strength of naming arousal of a moderating factor that influences how personality relates to physical responses produced by an individual to emotional situations (Matthews & Gilliland, 1999).

According to Eysenck, each individual falls on a continuum for each of these traits, and this is typically stable over time due to the fact that these traits are influenced largely by genetics (Sammons, 2009). This theory explains that personality is linked to development of criminal behaviors due to the socialization process (Sammons, 2009). Children learn from those around them and react to negative consequence of behaviors with feelings of anxiety (Sammons, 2009). Eysenck theorizes that children who are more extroverted and neurotic have more difficulty associating antisocial behavior with feelings of anxiety, and therefore, are less likely to adopt negative feelings towards deviant behaviors (Sammons, 2009).

The personality trait extroversion and its converse, introversion, are two of the traits that will be measured in this analysis. Additionally, this research will examine the relationship between self – esteem and the mediation of deviant behaviors in adolescents. In a study conducted by Jacobs (1985), research showed that there is a positive relationship between self – esteem and intrusive or aggressive behaviors. This experiment was conducted on pre-school aged children, which illustrates the impact that socialization as well as personality can have on children at a very young age (Jacobs, 1985). As children grow and socialize with new crowds it can be assumed that they will undergo shifts in levels of self – esteem when faced with new challenges and experiences. This research aims to examine if adolescents whom possess specific traits such as high or low self – esteem, and demonstrate more of an introverted or extroverted personality style are more or less likely to be influenced by deviant peers. The longitudinal nature of this data allows for an examination of shifts in personality over time, if that occurs, and what the outcome will be for those in the form of increases or decreases in deviant behavior or changes in attitudes toward crime and deviance. The next portion of this review will examine how peers learn from each other and the theory that supports the idea of social learning.

Criminological Theories Involving Personality

Many criminological theories involve factors that influence an individual rather than those that are unique to an individual. Personality is one key factor related to crime that is unique to every individual person. This paper has reviewed the works of Hans Eysenck and his theory of personality and crime. However, there are other theories that also focus on the relationship between personality and criminal activity.

Agnew's general strain theory involves pressures on an individual leading to deviant behavior in some individuals (Agnew et al, 2002). These individuals are faced with the possibility of failure, and some will turn to crime in order to succeed (Agnew et al, 2002). With that being said, it is important to know that this theory is supported by other criminologists in the field and has been since its creation (Agnew et al, 2002). However, Agnew himself recognizes that there is an underlying reason that some individuals choose to be deviant when faced with strain while others react in a positive way (Agnew et al, 2002). According to theory, strain is created by negative emotions that are developed typically during a situation involving others whom the criminal has a relationship with (Agnew et al, 2002). In the current study, participants are faced with pressures to participate in criminal activities and use illegal substances and some choose to participate while others do not. Similar to Strain theory, the question arises as to why some individuals react negatively to pressures and stressors while others do not. General Strain theory rationalizes that the reasons why some individuals do not take pro – social actions to relieve stress is because everyone has variations in some key elements such as, coping mechanisms, interactions with deviant peers, attachment to goals, levels of social support, and amounts of self – esteem, and these variations account for the difference in stress relief techniques (Agnew et al, 2002).

General Strain Theory has adapted to include another sub theory known as the Trait theory when the idea of differences in personality traits effecting coping mechanisms was brought to light (Agnew et al, 2002). According to researchers, those individuals who are high in negative emotionality but are low in constraint are the most likely to turn to crime and deviance when faced with strenuous situations (Agnew et al,

2002). The shift to coping using deviant activities is said to be a result of both biological and environmental factors pressuring the individual (Agnew et al, 2002). Additionally, certain biological factors have the ability to make an individual especially vulnerable to stressors inflicted upon them by the environment (Agnew et al, 2002). According to Agnew and his colleagues, the consequences of being an individual who is both high and negative emotionality and low in constraint are dangerous to their lifestyle (Agnew et al, 2002). Overall individuals who possess these traits are not pleasant people and even though they choose to have attitudes and beliefs favorable to crime and deviance, they often elicit the negative responses from others based on their predisposed tendencies to socialize poorly (Agnew et al, 2002). Many of these individuals alienate themselves from others close to them such as family members or teachers in order to spend more time with deviant peer groups (Agnew et al, 2002).

Both the General Strain theory and the Trait theory reveal developing attitudes favorable to criminal and anti – social behaviors has much to do with the biology of the individual. Personality and emotionality traits such as self – esteem and self – control can greatly influence how an individual handles stress and in turn, will effect the likelihood of an individual becoming deviant. These theories discuss how having low constraint and negative emotionality can lead to individuals surrounding themselves with deviant individuals and participating in crime and deviants together. However, it is important to understand how social learning can greatly influence the attitudes, beliefs, and actions of a person. The next section will delve deep in to social learning and will explain the process by which individuals learn anti – social behaviors from each other.

Social Learning Theory of Criminology

Many theorists attribute deviant behaviors to learning (Akers, 2004). These theorists recognize that it is common to learn behaviors both good and bad from others. However, they do not explain how the process of learning occurs, and why some behaviors are learned and reinforced in children, while other behaviors are ignored (Akers, 2004). Beginning as early as the 1960's, Ronald Akers built a theory of social learning based off of the differential reinforcement principles within the operant conditioning framework that was developed originally by Sutherland (Akers, 2004). The foundation of Akers's theory holds the assumption that children do not come in to this world as inherently good or bad, but that they are neutral and they must be influenced by others around them in order to learn either criminal or conforming behavior (Payne & Salotti, 2007). The probability of a person either displaying criminal or conforming behavior depends on the influence in their lives and how they balance these influences (Payne & Salotti, 2007). There are four main elements to Akers's Social learning theory: differential associations, definitions, differential reinforcement, and imitation (Akers & Sellers, 2004).

Differential Association

Differential association describes the process in which a person is exposed to a behavior, and the definitions either favorable or unfavorable to that specific behavior (Payne & Salotti, 2007). The exposure to behaviors comes from interactions with others. During these interactions, a person learns what behaviors are accepted and which are considered to be inappropriate (Payne & Salotti, 2007). The strength interactions between the influenced person and his/ her peers depends on the patterns of the interactions

(Payne & Salotti, 2007). In the literature, a person who is being influenced is generally referred to as an “actor” (Krohn, 1999). The learning process is most effective within groups of individuals who are close to the actor and who provide reinforcements for the actor (Krohn, 1999). Additionally, the differential association theory developed by Sutherland states that the frequency, priority, intensity, and duration of these encounters with those whom are influencing the actor determine how likely the person is to accept these behaviors and adopt them as their own (Cressey, 1960). Frequency refers to how often the actor encounters the influencer (Cressey, 1960). Priority refers to how early in life the person is influenced, and the earlier the child is when the influential encounters begin, the stronger the likelihood of imitation of the behavior (Cressey, 1960). Intensity of the encounter depends on the prestige that is attributed to the individual or individuals that the actor is associating with (Cressey, 1960). The higher regard the actor has for the individual or the group, the more likely he/she is to adopt their behaviors (Cressey, 1960). Finally, duration describes the length of time that the actor encounters the influential person or group, the longer the pattern continues, the stronger the relationship (Cressey, 1960). All of these factors combined make up the process of differential association and determine how likely a person is to adopt a behavior.

Definitions

According to social learning theory, an individual adopts definitions during an interaction with an influential person whether it be a peer, family member, mentor, or even a person that they have not physically met (Payne & Salotti, 2007). A definition is the meaning that a person attaches to a behavior, and is based off of the definitions belonging to whomever is most influential to that person (Payne & Salotti, 2007). If

people with definitions favorable to crime surround a person, then they are more likely to adopt similar definitions (Payne & Salotti, 2007). For instance, if people whom constantly use drugs surround an actor, then they are more likely to adopt the definition that drug use is acceptable (Payne & Salotti, 2007). These definitions are important because they influence the way a person feels about crime in general and their own involvement in deviant activities.

Differential Reinforcement

Differential reinforcement is based on the principle of operant conditioning (Payne & Salotti, 2007). This concept involves the anticipation from the actor of the potential rewards or punishments that will be inflicted upon them if a specific behavior is demonstrated (Payne & Salotti, 2007). The anticipation is then countered by the actual rewards or punishments that are experienced by the individual, creating a balance (Payne & Salotti, 2007). Ultimately, this balance can be shifted once a person experiences a harsh punishment for an act or is rewarded heavily. The shifting results in a change of definitions, and can influence which definitions are ultimately adopted by an individual (Payne & Salotti, 2007). For instance, if a person is rewarded for deviant behaviors, then they are more likely to adopt definitions that are favorable to participating in deviant activities (Payne & Salotti, 2007). Additionally, the actions that are rewarded with the greatest amount of frequency and probability are the ones that are the most likely to be repeated (Akers, 1990). Therefore, if a person interacts with a group that is constantly acting out and is not being reprimanded, then that person is more likely to adopt definitions favorable to deviance. Furthermore, if the person participates in these actions and receives reward in the form of praise, money, etc. from the group on numerous

occasions, then that person is more likely to adopt that behavior as their own, or imitate their peers.

Imitation

Imitation occurs when an individual finally engages in a behavior, either deviant or non – deviant, after observing the behavior themselves (Payne & Salotti, 2007). The decision to imitate a behavior comes after a peer, family member, or other acquaintance introduces the behavior. Additionally, if that behavior proves to provide a reward of some kind it is more likely to be imitated. The frequency of the exposure to this act and the probability of a positive outcome are the underlying factors that influence adoption and imitation of a behavior (Payne & Salotti, 2007). With that being said, it is crucial to understand how a person adopts and imitates a behavior in order to understand social learning theory and how a person can be influenced by others around them. This concept is the foundation of the idea that in a school setting, a child will learn from their peers and will imitate behaviors that prove to have successful outcomes. It has been proven in many studies that children do learn from one another and that they do share similar definitions of right and wrong. Some of these studies will be discussed in detail in the next section of this paper.

Social Learning Theory in Action

Warr and Stafford decided to put both Sutherland's theory of Differential Association and Aker's Social Learning Theory to the test when they evaluated the strength of attitudes favorable to crime and the strength that witnessing a friend act in a deviant manner can have on an individual (1991). The analysis on these two variables was conducted separately to see if attitudes were more influential than actions. Though it has been noted that both the attitudes displayed by friends as well as actions

demonstrated are important if imitation of a behavior is to occur, this study finds that effects of behaviors are more powerful than attitudes when examined alone (Warr & Stafford, 1991). Additionally, after exploring multiple pathways leading to the imitation of a behavior, Warr and Stafford concluded that friend's behaviors directly influence an individual's behavior (1991). However, the pathway between friends' attitudes and a person's behavior is not quite as direct (Warr & Stafford, 1991). When an individual observes a person's attitudes towards crime, it is shown to affect their own attitudes, which in turn affects their behaviors (Warr & Stafford, 1991). The strongest influence on an individual's behavior is the behavior of their friends (Warr & Stafford, 1991).

One common objection to the validity of Social learning theory questions the process of learning from peers if an individual has both deviant and non – deviant peers. To combat these disputes, Haynie conducted an experiment that put this learning process to the test (2002). Haynie argues that the intensity of the relationships between peers may matter more than the proportion of deviant to non – deviant peers in that, if a person has a close group of friends who are deviant and a wider scope of friends who are non – deviant, the influence of the deviant friends would outweigh that of the outer look of friends and vice versa (2002). Surveys were distributed to children in twelve different schools, and students were asked to identify up to five of their closest friends by name both male and female, for a total of ten friends per student (Haynie, 2002). Friend groups were classified as either having: no delinquent friends, mixed deviant and non – deviant, or all delinquent friends (Haynie, 2002). Results showed that most commonly, friend groups contained both deviant and non – deviant peer influences (Haynie, 2002). Individuals that were involved with groups of entirely deviant friends were significantly

more likely to be deviant themselves than those with mixed influences and 57% more likely to be deviant when compared to groups with only non – deviant peers (Haynie, 2002). These groups consisted of the peer’s ten closest friends, which shows that the proportions of deviant friends, as well as the strength of the relationships, both play a crucial role in the process of social learning.

In addition to the strength of a friendship, the structure of a friend group can influence how susceptible an individual is to imitating anti – social behaviors. Haynie (2001) analyzed the structure of a friendship network and categorized individuals in to the core of the friendship and the peripheral rings of the friend network. This suggests that there are those individuals who are more dedicated to one specific friend network, while others spend time with many peer groups (Haynie, 2001). The research here shows that the structure of a friend network is the facilitating factor that leads to some individuals adopting the attitudes shared among the group while others tend to have their own attitudes toward delinquency, even if the overall attitude of one group is favorable to crime. These networks are the links of the differential association theory in that they allow for the attitudes and behaviors of an individual to infiltrate a group as a whole (Haynie, 2001).

Another factor often overlooked when analyzing peer networks and friendships is the density of the friendship (Haynie, 2001). According to Haynie, when the density of a network is high, the relationship is extremely cohesive and the group is filled with interactions and communication that less dense groups of friends do not demonstrate. This is important to the adoption of beliefs and attitudes due to the evidence that reflects the idea that the increase of communication in dense groups allows for individuals to

have many opportunities to express ideas and beliefs that lead to imitation by others within the group (Haynie, 2001). Groups that are not dense have many outliers coming and going between friendship networks, and are not as easily united. This leads to variations in attitudes and actions, and there is not always a common set of beliefs shared amongst group members (Haynie, 2001).

The research conducted by Haynie in both of her studies contributes to research on Differential Association Theory. Specifically, the strength of a friendship or a group of friends is addressed as being one of the most significant factors that can lead to the adoption of attitudes within a group, and eventually, the imitation of behaviors both deviant and non – deviant. Additionally, the proportion of deviant peers to non – deviant peers in an individual's life can be crucial to the development of either pro – social or anti - social attitudes during adolescence.

Social Learning and Substance Use

While it has been noted that individuals can be influenced to act in a deviant manner when pressured by those around them or after observing common behaviors from those whom they spend most of their time with, adolescents are especially likely to imitate the act of smoking and other kinds of substance use when they are a part of a close group of friends who use these substances (Simons – Morton & Farhat, 2010). In fact, research shows that socialization is responsible for the adoption of most behaviors that directly affect health such as smoking, sexual intercourse, and substance use (Simons – Morton & Farhat, 2010). The reason that individuals choose to participate in the use of drugs and alcohol when in the presence of others who have attitudes favorable to this deviant activity relates to the adoption of social norms and the desire to fit in to a group

(Simons – Morton & Farhat, 2010). In order to be a member of a group, an individual must share attitudes and beliefs with the other group members. This fact leads to individuals branching out and trying new things, such as smoking and drinking, in order to fit in with a social group.

In a research study conducted by Simons – Morton and Farhat in 2010, the socialization process and the friend selection process were examined to determine if some individuals are more likely or less likely to conform to a group and to adopt norms of that group. Additionally, the influence of best friends, close friends, and a crowd of peers on an individual's deviant behavior was studied and compared (Simons – Morton & Farhat, 2010). Results showed that individuals are likely to both socialize in to a group if they want to fit in with a crowd, even if prior to becoming a part of the group the individual did not participate in the use of drugs and alcohol, and select a group that they wish to become a member of based on similar beliefs and interests (Simons – Morton & Farhat, 2010). A second finding concluded that the closer the relationship to a peer, the more likely they are to adopt the norms and beliefs related to substance use (Simons – Morton & Farhat, 2010). This finding supports other research that states that the strength of a relationship between a peer group and an individual can affect the likelihood of an individual adopting beliefs related to general deviance and participation in crime during adolescence.

It is known that peers have a great influence on each other due to the socialization process. However, researchers also speculate that there are some underlying personality traits that influence how likely some individuals are to participate in the use of alcohol and illegal drugs. Research supports the idea that personality differences may account for

differences in susceptibility to fall in to the pressures to use drugs and alcohol. Wills and Cleary (1999) collected longitudinal data to determine which personality traits are correlated with increased use of substance use after also examining substance use of peers and close friends. In their study of adolescents the data showed that personality traits such as poor temperament and lack of self – control are often related to an adolescent initially experimenting with drugs and alcohol (Wills & Cleary, 1999). According to the researchers, the experimentation phase for adolescents can occur when children as young as eleven years old (Wills & Cleary, 1999).

After the initial experimentation, these individuals will gravitate toward others who have used drugs and alcohol (Wills & Cleary, 1999). From that point on, the socialization process takes over and the attitudes and beliefs of the group are formed (Wills & Cleary, 1999). For those individuals who do not possess those personality traits that are said to make some people more likely to dabble in drug use, peer influence is the strongest predictor of potential substance use (Wills & Cleary, 1999). After some adolescents choose to participate in substance use, others around them such as friends from school, neighborhood friends, or even family friends will become in their social network and the anti – social attitudes will be shared with those friends who have never used drugs or alcohol before (Wills & Cleary, 1999). This is where social learning comes in to play, and peer influence will most likely result in some adolescents conforming to the beliefs of their friends, and using drugs and alcohol (Wills & Cleary, 1999).

With that being said, it is important to take away two major thoughts from this section. First, peer substance use is a strong indicator of individual substance use for adolescence. The reason for this correlation has to do with social learning, peer pressures,

and the adoption of attitudes and beliefs favorable to a group (Simons – Morton & Farhat, 2010). Second, personality traits have the possibility to help indicate which individuals are more likely to experiment with drugs and alcohol (Wills & Cleary, 1999). Knowing that some personality traits can act as indicators of deviance, the question arises as to if some traits could act as mediators against pressures of peers.

Moderating Variables

Previous research has been done on the moderating effect that various factors in an adolescents life can have on their susceptibility too succumb pressures to be deviant during adolescent years. Typically, these moderating factors include attachments to parents, attachments to extracurricular activities, prior attitudes to delinquency, and a wide range of childhood factors and developmental disadvantages that one may face while growing up in an impoverished area (Vitaro, Brendgen, & Tremblay, 2000). Research on the potential moderating effects of a specific variable is crucial due to the fact that it is nearly impossible to eliminate the possibility of a child ever encountering a peer that has attitudes favorable to crime or deviant behaviors (Vitaro, Brendgen, & Tremblay, 2000). However, by identifying variables that may act as mediators to the influence of peers and peer pressures it may be possible to manipulate these variables in order to prevent negative influence (Vitaro, Brendgen, & Tremblay, 2000).

When examining the effect that having a deviant best friend can have on an individual, researchers found that parental influence can have a moderating effect under certain circumstances (Vitaro, Brendgen, & Tremblay, 2000). For instance, in the study conducted by Vitaro, Brendgen, and Tremblay results showed that if an individual has over – influential or over – bearing parents with little attachment to them, best friend’s

deviancy has a significant effect on the individuals own deviant behaviors (2000). The relationship is positive being that the more over – bearing the parents, the more likely it will be for the individual to imitate these deviant activities (Vitaro, Brendgen, & Tremblay, 2000). On the contrary, those individuals who had both a high level of monitoring and a high level of attachment to their parents were not significantly affected by their delinquent best friends influence (Vitaro, Brendgen, & Tremblay, 2000). Additionally, even those individuals who were not frequently monitored by their parents, but were attached to them, are less likely to imitate deviant behaviors demonstrated by their best friends when compared to those who are not attached to their parents (Vitaro, Brendgen, & Tremblay, 2000). These results suggest that parental attachment can mediate potential adoption of deviant attitudes and behaviors, even if there is strong peer influence by an important player in the individual’s life.

The significance of childhood disruptiveness was examined in this study. Children were split in to groups based on when they displayed disruptive behaviors throughout their early years (Vitaro, Brendgen, & Tremblay, 2000). Disruptiveness was reported by teachers at the end of the school year for students ages 6 and 10 (Vitaro, Brendgen, & Tremblay, 2000). The four groups consisted of: nevers, desisters, late starters, and persisters (Vitaro, Brendgen, & Tremblay, 2000). The “nevers” did not show any signs of disruptive behavior as young children. The “desisters” did demonstrate these disruptive traits, however, they stopped acting out during the duration of the prior study (Vitaro, Brendgen, & Tremblay, 2000). Late starters are those students who showed disruptiveness at the second recording date, while previously no disruptive behavior was reported (Vitaro, Brendgen, & Tremblay, 2000). Persisters are those students who are

constantly acting out in a disruptive manner (Vitaro, Brendgen, & Tremblay, 2000). Evaluation of the relationship between these groups and the influence of best friend's deviant behavior showed that there was no significant relationship between best friend's delinquency and the delinquency of those who were never disruptive or were labeled as "desistant" (Vitaro, Brendgen, & Tremblay, 2000). In contrast, those who were labeled as either "late starters" or "persisters" showed significant influence to their best friend's deviancy (Vitaro, Brendgen, & Tremblay, 2000).

This research shows that there is a possibility of manipulating factors in a child's early life to intervene and reduce the likelihood of the adoption of deviant attitudes and behaviors demonstrated by a network of deviant peers in the adolescent years. However, if the moderating variable is a static variable and is not able to be manipulated is it still possible to intervene? The current study is interested in examining personality traits that an individual develops at an early age in conjunction with changes over the lifespan to determine if it is possible to identify those individuals whom are more likely to adopt anti – social attitudes as their own due to peer influence before they are affected during adolescence. Specifically, self – esteem, introversion and extroversion will be examined in great detail. However, these traits are not ones that are easily manipulated in a short period of time. Oftentimes, these traits will waiver and evolve over the span of a child's life depending on what changes they are enduring physically and mentally. Until now, little research has been done on the possibility of personality as a mediator to the pressures faced during adolescence. However, research has been done on the idea of personality as a predictor of crime. After analyzing the effects that possessing a specific trait can have on the adoption of anti – social behavior, the analysis of personality as a

mediator will begin. The use of traits in prediction of crime will be discussed in the next section of this paper.

Extroversion and Introversion

Eysenck's theory on personality development and the relationship that personality can have to criminality was discussed previously in this paper. Extroversion is a key component to his theory and the development of attitudes favorable to crime in the adolescent years. The definition of extroversion for this study involves an individual who is outgoing, active and social than the introverts who keep to themselves and are less active (Hindelang, 1971). According to Eysenck's theory, those who score high on the extroversion scale are generally less socialized due to the lack of ability to be conditioned (Rushton & Chrisjohn, 1980). Therefore, since these individuals are less likely to be conditioned, they are less likely to adopt the norms of society, and are more likely to participate in all kinds of behaviors: both pro – social and anti – social (Rushton & Chrisjohn, 1980). On the contrary, individuals who are classified as introverts are more likely to adopt the more common societal norms, which are generally pro- social (Rushton & Chrisjohn, 1980). Additionally, Eysenck rationalizes that the relationship between extroversion and cortical fatigue, a term coined by Pavlov, is the exact scientific reason that extroverts are less likely to be conditioned (Hindelang, 1971). There is evidence that shows that this cortical fatigue does indeed build up at a faster rate in extroverts than in introverts (Hindelang, 1971). This difference in cortical fatigue leads to differences in the internalization of norms in introverts and extroverts (Hindelang, 1971). Specifically, those individuals who come from a similar environment will be socialized differently: introverts will be more likely to internalize the norms while

extroverts will be more likely to explore many options to increase stimulation (Hindelang, 1971). Generally speaking, extroverts get bored more easily than introverts, and time passes slower for extroverts than it does for introverts (Hindelang, 1971). Many studies have been conducted to analyze the relationship between all three of Eysenck's primary personality traits and anti – social behaviors. While psychoticism and neuroticism vary in strength, there is a vast amount of research supporting that extroversion is related to participation in anti – social activities (Rushton & Chrisjohn, 1980). Eysenck does not specifically link introversion to pro – social behavior, but does correlate extroversion to anti – social behavior.

For example, Hindelang conducted a study on high school males in 1969, using a self – report questionnaire. Twenty-six delinquent activities were listed on this questionnaire and respondents listed how many times they participated in each given activity(Hindelang, 1971). Extroversion and neuroticism scores were compared to self – reported delinquency and individuals were classified in to three groups based on their individual levels of extroversion and neuroticism (Hindelang, 1971). Participation in nearly every deviant activity was positively correlated with extroversion (Hindelang, 1971). Results indicated that there was a direct linear relationship between extroversion and delinquency (Hindelang, 1971). This supports Eysenck's theory that extroversion directly correlates with delinquency (Hindelang, 1971). Research on the relationship between introversion and delinquency is not prevalent in the literature. This adds to the reasons as to why a study needs to be conducted to analyze the relationship between various personality traits and susceptibility to peer influence.

Self – Esteem

Thousands of studies have analyzed the consequences and benefits of possessing

varying levels of self – esteem (Trzesniewski et al, 2006). Most literature reflects the idea that individuals who possess high levels of self – esteem promote goals, assists in development of coping mechanisms and leads to behaviors that help promote productive work experiences (Trzesniewski et al, 2006). Additionally, it has been noted that high self - esteem can impede the development of various physical and mental health issues as well as prevent substance abuse and anti – social behaviors (Trzesniewski et al, 2006). However, even with numerous studies that state that high self – esteem is a blessing that is capable of combatting many ailments that are prevalent in our society, it is not confirmed that having low – self esteem is a predictor of negative life outcomes (Trzesniewski et al, 2006). Even with countless amounts of research supporting the correlation between high self – esteem and positive life outcomes, other theorists argue that self – esteem fluctuates with life experiences and that they are not independent of one another (Trzesniewski et al, 2006).

The reason for most of the criticism about the relativity of self – esteem and positive life outcomes comes from the experimental design of the studies that reflect a positive correlation between the two (Trzesniewski et al, 2006). However, there are studies that are both credible and reflect positive relationships between high self – esteem and positive life outcomes. For example, Baumeister, whom was once a critic of the consequences and benefits of self – esteem found evidence that those individuals whom possess high levels of self esteem are more likely to persist in the event of failure than those with a low self – esteem (2003). Additionally, in a longitudinal analysis which consisted of over 900 participants conducted by Trzesniewski et al, the researchers discovered that adolescents with low self – esteem grew up to have significantly more

mental health issues than those with high – self esteem. To illustrate, adolescents that reported to have low self – esteem were 1.26 times more likely to develop major depression disorder, 1.60 times more likely to develop anxiety disorder, and 1.32 times more likely to be dependent on tobacco later in adulthood (Trzesniewski et al, 2006). These results were collected with controls in place for gender, socioeconomic status, and adolescent depression (Trzesniewski et al, 2006). Mental health is relevant to our study because many criminals suffer from mental illness themselves, and if self – esteem could be an indicator of the development of mental health issues in adulthood, then it would be possible to intervene at an earlier time in life for some individuals before the development of mental illness or criminal activity.

Self – esteem was also directly correlated with participation in criminal activity in the previously mentioned study. Individuals with low self – esteem were 1.48 times more likely to be convicted of a violent crime during adulthood (Trzesniewski et al, 2006). To further illustrate, this study concluded that individuals who reported to have low self – esteem during adolescence were 1.32 times more likely to commit any crime when compared with those who reported to have high – self esteem during adolescence (Trzesniewski et al, 2006). This evidence suggests that self – esteem is more than just a product of what events are occurring at a specific time in a person’s life, and that they can actually be used for prediction of crime or delinquency in later years (Trzesniewski et al, 2006).

Another study conducted by Donnellan et al, examined the relationship between self – esteem, aggression, and delinquency (2005). This study greatly contributes to the current literature on this by departing from the norm, and using more than a self – report

survey to collect data on self – esteem and externalizing issues. Input from both parents and teachers of the participants were also incorporated in to this study as well as use of a personality test (Donnellan et al, 2005). This test was conducted in the United States as well as New Zealand, which adds to the validity of its results (Donnellan et al, 2005). Results of the surveys showed that low self – esteem leads to externalizing problems and aggression, which increases with age (Donnellan et al, 2005). These results were gathered while controlling for a disorder such as narcissism and were consistent across both countries (Donnellan et al, 2005). These findings support the idea that having a low – self-esteem can lead to problems in adulthood that may not be present in those who have a high – self-esteem. The fact that the aggression progressed with age from age 11 to age 13 suggests that even with changes occurring within the adolescent, such as beginning puberty, the self - esteem level did not waiver (Donnellan et al, 2005).

These results are crucial to understanding how some personality traits may influence deviant behaviors in the future. With that being said, it is important to now examine the converse situation: if some personality traits can predict crime and delinquency, is it possible for personality traits to mediate the pressures to participate in crime and delinquency that occur through the social learning process? Previous research demonstrated that there are moderating variables present in the world such as attachment to parents. However, is it possible for a trait or combination of traits that is not easily manipulated to mediate the effects of peer influence to participate in anti – social activities during adolescence? The current study will examine this possibility

Summary

Both criminological theories as well as psychological theories have been discussed in detail throughout this review. Though these two fields deal with two completely different types of scenarios, theories, and ideas, there are constants that are crucial to the future of both fields. For example, all individuals start learning as soon as they are exposed to the world. Psychologists argue over what kind of learning occurs and who possesses the most important influence over a small child. Criminologists argue over when exactly a child begins to deviate from the norm and if some children are “born bad.” Both types of theorists agree that people are different and that they possess traits that make them think and behave differently.

This review has explored the emergence of personality as well as the idea of social learning in great detail. In addition to providing a plethora of research that describes what we do know about development of children, this paper leaves room for further experimentation and discussion. The idea of moderating variables is explored when discussing why some children are more likely than others to adopt social norms that are favorable to crime and deviance. Moderating variables are usually malleable and can be changed with outside influence - parental attachment, parental attention, association with peer groups, and involvement in pro – social activities. However, the idea that personality cannot only be a predictor of future criminal behaviors, but can act as a moderating variable has yet to be explored.

This paper will delve deep into the areas of self – esteem and introversion and extroversion to see if there is a moderating effect hidden beneath these traits that leads some children to be less likely to fall prey to the pressures that they will face during

adolescence to participate in crime and delinquency. Additionally, it will be examined whether these traits act alone or in combination with one another to produce these moderating effects. These ideas bring up a number of research questions that are specific to this current study.

Research Questions

A review of the current literature available on personality and social learning theory reveals that there is very little research connecting the two. More specifically, most research that has been done on this subject describes personality as an aggravating factor that may actually influence some individuals to indulge in their deviant sides, and commit crime or delinquent acts during adolescence. This research, though it may be crucial for determining what can be done to intervene early in a child's life to control their potential urges to commit crime, does not account for personality as a moderating factor. Thus, the research questions that will frame this thesis will involve the interaction of both personality traits and life style changes in a person's life from a very young age in to adulthood. Furthermore, the research for this study will allow for the consolidation of two unique fields and could assist in profiling of individuals in criminal circumstances as well as mediations in counseling for children and adolescents in the future.

Research Question 1

Is there a relationship between the differences in personality traits, specifically self-esteem, introversion, and extroversion and the task of selecting friends or friend networks? This research question seeks to understand the patterns that may emerge when analyzing why some individuals choose to surround themselves with deviant peers. Furthermore, the question of similarity between personality traits within these groups will

be examined to see if there is truth behind the common belief that individuals choose to surround themselves with those similar to them, or if in fact individuals conform to fit in with the groups that they desire to be a part of despite their prior personality attributes.

Research Question 2

Is there a relationship between measured levels of self – esteem, introversion, and extroversion and the ability to resist pressures to participate in deviant activities or adopt anti – social beliefs and attitudes. Prior research makes connections between the possession of specific personality traits and the likelihood that an individual will become criminal at some point in their adult years. However, for this study it is important to view personality as a moderating factor instead of a potential cause of delinquency during adolescence. Instead of intervening in the life of a juvenile who shows signs that they may become delinquent by sending them to therapy this research could identify if there is a way to change their behaviors by manipulating environmental and social factors that are leading them down the wrong path such as, anti – social peers, poor support networks, or lack of involvement in pro – social activities.

Research Question 3

How does the possession of one or more personality traits affect the overall predictability of behaviors in an individual? In other words, if a person possesses one trait showed to mediate negative influences, but also possesses one trait that has proven to increase the likelihood of becoming deviant, which will prove to be a stronger influence. This question will help discover the true reasons why some individuals are less susceptible to peer influence while others are more easily influenced. If some traits prove to be cancelled out by others, this will only add to the research in this field

CHAPTER 3: METHODOLOGY AND THE ANALYSIS OF THE LONGITUDINAL DATA

Introduction

In order to study shifts in personality and patterns of deviance for an individual, a longitudinal analysis must be conducted. The current study utilizes data that was collected beginning in the early 1990's through a variety of self – report surveys, personality assessments, and other surveys completed by parental guardians, teachers, and school officials in the Chicago Area. The project, known as The Project on Human Development in Chicago Neighborhoods (PHDCN), is study that measures a variety of factors that can influence the development of children and adolescents such as, familial structures and school and neighborhood characteristics. The study also examined the pathways that can lead a juvenile to evolve in to taking part in juvenile delinquency, criminal activity, acts of violence, and substance abuse in adult life. PHDCN is a two - part analysis. The first portion of the study examines the physical characteristics of Chicago, the culture of its residents, and the changes in the city over time. The current study utilizes the second part of the project, which consists of a longitudinal study of over 6,000 randomly selected children, adolescents, and young adults over the course of their school years.

The purpose of the current study is to use the data collected during the duration of the PHDCN, and complete an extensive analysis of personality in relation to

deviance. Specifically, this study will utilize surveys given to three cohort groups – 9, 12, and 15, which involve personality traits, self – reported delinquency, and peer deviancy to attempt to discover patterns of behaviors that emerge within individuals. Additionally, analyses will be run that help to correlate possession of specific personality traits over time with shifts in beliefs from those of a pro –social nature to an anti – social nature. Recognizing the current literature on Social Learning Theory, it is important to also examine changes in an individual’s behavior that imitate those of his/ her surrounding peers and friends. Ultimately, the goal of this study is to determine if some individuals are more or less likely to be influenced in to engaging in deviant activities if they possess specific personality traits. Along with the analysis of personality traits, the PHDCN consists of an extensive study of both peer deviance and individual delinquency, which will be key to this study when attempting to find patterns related to possession of personality traits, changes in friend networks, and levels of self – reported delinquency in the children, adolescents, and young adults that participated in this study.

Research Design and Data Selection

The current study uses a correlational design to examine relationships between both personality and levels of self – reported delinquency and associations with deviant peers and levels of self – reported delinquency. Three cohort groups were analyzed in this stud. A total of 1,400 students were surveyed in the three cohort groups 9, 12, and 15. Other cohort groups were not used based on various factors such as, lack of participants, lack of ability to report for themselves (cohort 0), aging out (cohort 18), or lack of participation in all surveys for each wave of the study. After examining the data from the PHDCN and selecting which cohort groups are to be studied, survey questions were

selected. The selection process was based on the strength of the question, the use of the question in each wave for each cohort group, and the similarity to questions used in other well – known personality scales.

Research was conducted on various personality scales such as those developed by Rosenberg and Eysenck. Rosenberg’s scale is primarily catered to self – esteem and uses a ten - question assessment to analyze if a person feels primarily positive or negative feelings towards themselves (Rosenberg, 1965). Lipsitt’s self –esteem scale was also used as an example of which questions are most suitable to represent an overall category of self – esteem. Survey questions related to introversion and extroversion were chosen based on strength of the question based on the definitions of introversion and extroversion and also the repetition of questions in each wave for each cohort group.

Table 1: Selected Survey Questions for Self – Esteem

Table 1

Self Esteem Questions

I can become successful*

I can finish assignments / homework*

I can go far in the world*

I cannot figure out answers in school

I cannot do the work expected in school

I cannot do well in school

I cannot make myself happy

-
- Survey questions have been reverse coded
-

These selected questions were asked to each participant in each cohort group

studied. Additionally, these questions were selected due to the ages of the participants in each group due to the fact that they were in school and also at the ages where they start to think about their future career choices and possibilities.

Table 2: Coding Scales for Self - Esteem

Table 2

Coding Self – Esteem

1= Very Untrue

2= Somewhat of Untrue

3= Somewhat True

4= Very True

For the variable self – esteem, lower total scores represent lower self – esteem. Higher total scores at the end of the survey represent an individual having a high self – esteem. If an individual scores a 28, they have the highest level of self esteem while a score of 7 would indicate the lowest possible level of self – esteem.

Extroversion and Introversion were sorted in to their own categories for this study due to the results of the factor analysis and reliability analysis. A reliability analysis was run to measure the reliability of the scales used to measure each of the personality traits in this study. It is important to ensure that if the same questions were asked of participants in a study on another occasion, that the responses would be stable and reliable over time (Santos, 1999). The result of a reliability analysis is a numeric coefficient known commonly as the Crohnbach’s Alpha (Santos, 1999). The value reflected in the Crohnbach’s Alpha describes the internal consistency of items used in a

scale or survey to measure reliability. The reliability is said to be strong if the Cronbach's Alpha value is over .7. For the current study the variable self – esteem had a alpha value over .7. However, introversion and extroversion had values under .7. After reviewing the scales and the questions being asked of the participants, it was decided that based on other prominent scales that are used to measure introversion and extroversion and the consistency of questions in all waves of the study, that the scales for introversion and extroversion was theoretically sound and should be used for the current study even though the Cronbach's alpha is slightly lower than desired.

A factor analysis was also conducted in this study in order to ensure that the scales used to measure each personality variable were consistent and that there is a pattern in the questions that leads to each personality trait being identified as an individual variable (Brown, 2001). The eigenvalue is the numeric calculation of a factor analysis that leads researchers to determine how many factors to extract, and how many independent variables there are in an experiment (Brown, 2001). For a factor to be selected, it must have an eigenvalue of at least 1.00 (Brown, 2001). For the current study, when the questions reflecting introversion and extroversion were entered in to SPSS to run a factor analysis, the results showed that this variable, if measured as one personality variable, reflects two factors instead of one. Therefore, in order for each variable to be a one - factor solution, the variables introversion and extroversion had to be categorized and measured separately.

There is much controversy as to whether extroversion and introversion are their own distinct traits or if they fall on two opposite ends of a continuum. Many social psychologists such as Freud or Eysenck, believe that extroversion and introversion are

separate traits that affect intellect as well as sociability (Sammons, 2009). While other researchers believe that these traits are simply opposites on a continuum on which all individuals fall. Currently, there are no solid answers as to which of these theories is true or is most supported by research. However our results indicate they should be treated as two separate personality traits.

Table 3: Selected Survey Questions for Extroversion

Table 3

Extroversion Questions

Likes to be with people

Makes friends easily

Prefers playing with others then alone

Is very sociable

These questions were selected to represent the category of extroversion. They were chosen because they were repeated to all cohort groups being studied in all of the waves of the studies. These studies are representative of extroverted individuals because they involve being outgoing and enjoying the company of others in a social setting. The questions for introversion were split in to their own category and used the same coding scheme to measure a different variable.

Table 4: Selected Survey Questions for Introversion

Table 4

Introversion Questions

Is a loner

Takes a long time to warm up to strangers

Prefers quiet or inactive games

Tends to be shy

These questions in the chart above were asked of all of the participants to determine if they were classified as introverts. They were selected based on the description of introverts as being quiet, shy, and preferring to be alone.

Table 5: Coding for variables extroversion and introversion

Table 5

Coding extroversion and introversion

1= Uncharacteristic

2= Somewhat uncharacteristic

3= Neither

4= Somewhat Characteristic

5= Characteristic

For the variables extroversion and introversion, higher scores indicate a possession of the trait. Therefore, if an individual scored a 20, they have high levels of introversion or extroversion depending on which variable is being measured. If a person scores a 4, they do not possess characteristics of the trait being measured.

The charts listed above represent all of the various questions that are used in the current study and the coding used to examine personality traits in the participants of this

study. All questions were chosen based on the applicability to the participants in each cohort group. Participants in these groups are primarily in middle or high school and are developing physically and mentally. This time in an adolescent's life can be filled with mixed feelings, vulnerability, and the desire to fit in with a group. All of these factors can lead to susceptibility to the influence of deviant peers.

Dependent, Independent, Control, and Interaction Variables

Personal self – reported deviance is the dependent variable for this study. Specifically, substance use is measured and represents deviance for this study. Each participant was asked about his/her use of cigarettes, alcohol, marijuana, cocaine, inhalants (glue), psychedelics, heroin, and methamphetamines. Frequency was measured by the number of days in the past year that the individual reportedly used each of these substances.

Each personality trait, self – esteem, introversion, and extroversion, represents an independent variable for this study. Additionally, peer substance use is used as an independent variable. This variable was chosen to examine the relationship between an individual's own deviant behaviors and the amount of peers who participate in deviant activities. Questions used to measure peer deviance included questions about substance use and the frequency of the usage of specific drugs and alcohol.

Three control variables were utilized in this study: gender, race/ ethnicity, and receipt of public assistance by the family. For the race/ethnicity variable, Hispanics were lumped in to one category even if they are mixed with another category. For example, if an individual is a white Hispanic, they are categorized as Hispanic. This makes the

representative amount of Hispanics for this study larger than expected.

Interaction variables were used in this study based on the design in order to determine if personality traits could have a moderating effect on the influence of peers on an individual when surrounded by substance use. The three independent variables involving personality: self – esteem, introversion, and extroversion were used as interaction variables with the final independent variable: peer delinquency (substance use). The goal was to determine which, if any, of these traits could effect how an individual handles the pressures and stress of having peers who use drugs and alcohol.

Analysis Methods Research Question 1

For the current study, the first research question is, is there a relationship between personality and the likelihood for an individual to choose peers who use drugs or alcohol? This question seeks to determine if there is a correlation between the possession of a personality trait: self – esteem, extroversion, or introversion, and the level of self – reported substance use from a participant’s peers. This question was examined using a Poisson Regression to determine the relationship between each personality trait alone and the use of substances such as marijuana, alcohol, cocaine, etc. A Poisson regression was used because the data used to determine the relationship between peer substance use and personality is recorded as a count, and there is an overabundance of 0 values in the count data. Instances of drug use are recorded as specific counts rather than on a scale. To interpret the results for each comparison as significant or not – the p value must be less than .05 ($p < .05$)*. The hypothesis for this research question is that there will be a negative relationship between self – esteem and the number of friends an individual possesses who use drugs and alcohol. Additionally another hypothesis is that that there

will be a positive relationship between extroversion and substance use and a negative relationship between introversion and substance use.

Analysis Methods Research Question 2

The second research question for this study is, is there a relationship between peer substance use and each personality variable, introversion, extroversion and self - esteem and the level of self – reported individual substance while controlling for other factors use for participants in this study? This question aims to determine whether there is a relationship between having associations with peers who use substances and the participation in use of these substances for participants in this study. This question was also examined using a negative binomial regression analysis because the data is recorded as count data and the variance is greater than the mean. This type of situation requires a specific type of regression analysis be used. Research shows that there is in fact a relationship between having deviant peers and developing attitudes and beliefs favorable to deviance (Payne & Salotti, 2007). However, it is important for the validity of this study to determine that this fact holds true for these participants. The hypothesis for this research question is that there will be a positive relationship between peer substance use and reports of individual substance use. Additionally, the hypothesis for the personality traits is that there will be a positive relationship between extroversion and substance use, and a negative relationship between introversion and self – esteem and substance use.

Analysis Methods Research Question 3

The third research question for this study is: is there a relationship between each of the three personality variables: self – esteem, introversion, and extroversion in combination with peer deviance on individual substance use for participants in this study.

This question examines the interaction effects of personality and peer substance use on individual substance use. The interaction between self – esteem and peer substance use on personal substance use is one variable. The second variable is the interaction between introversion and peer substance use on individual substance use. The third interaction variable is the interaction between extroversion and peer substance use on individual use.

Due to the known relationship between peer deviance and individual deviance, this question aims to determine if any or all of the three personality traits can mediate the effect of peer influence on an individual's own behaviors (Payne & Salotti, 2007). Many theories account for the possibility that differences in personality can influence behavioral responses to pressures or stressors, such as the Trait theory of crime or Eysenck's personality theory (Agnew et. al, 2002). Additionally, studies examine the relationship between personality and criminal activity, with personality being a predictor of potential participation in criminal activity (Donnellan et al, 2005). However, the idea that personality can mediate the effect of participation in crime, deviance, and substance use has not been well examined in the literature. This study aims to change that fact. A negative binomial regression was used to examine the relationship between the interaction variables and the dependent variable.

The hypothesis for this research question is that introversion and peer substance use together will have a negative relationship to personal substance use while the interaction between extroversion and peer substance use will have a positive relationship with personal substance use. Additionally, the hypothesis involving the interaction between self – esteem and peer deviance on individual deviance is that there will be a negative relationship between the interaction variable self esteem and peer deviance on

individual substance use. This would mean that as self – esteem increases, the effect of peer deviance on one’s own substance use decreases.

Summary and Limitations

The primary goal of this study is to determine if personality can have a moderating effect on the influence of peer substance use on personal substance use. The data for this study comes from the Project on Human Development in Chicago Neighborhoods. The previous study consisted of 7 cohort groups with participants ranging from 0 – 18 years old that were surveyed in 3 waves over the course of the longitudinal study. The current study utilizes surveys given to participants in the cohort groups 9, 12, and 15 in all three waves. There are 1,400 participants from these groups (N=1,401). The surveys obtained contain information about personality traits of the participants as well as demographic information, familial information, and self – reported substance use. Additionally, respondents reported the frequency of substance use from their peers they consider themselves to be close with.

Data was sorted in to categories based on what variables the surveys were examining and what questions were asked of the participants. The personality questions were chosen to be used in the current study to measure the traits: self – esteem, introversion, and extroversion based on: comparison to questions on other well known personality inventories, strength of the question in relationship to the trait being examined, and the contingency that the question was asked to all cohort groups in all three waves of the study. This ensured stability in the trait over time and that each cohort group was being examined and categorized equally. The substance use questions for both personal and peer deviance were taken directly out of surveys retrieved from ICPSR that

were distributed during the original study. The wording of those questions was not modified in any way, and questions that had reported responses were used.

A correlational design was used for the current study in order to determine relationships between each of the independent variables: self – esteem, introversion, extroversion, and peer substance use and the dependent variable: personal substance use. Interaction variables were used to answer the primary question: can personality mediate the effect of peer influence on personal behavioral choices. The results of the Poisson and Negative Binomial regression analyses will be discussed in the section, however, it is important to discuss the current limitations of this study.

This study was conducted in the early 1990's and since that time there are new ways for children to gain access to drugs and alcohol and to get high rather than soliciting on the corners for someone to purchase alcohol or buying drugs from a person on the street. There are a vast amount of new drugs that are concocted using only household items or items that can be purchased from the local drug store. Additionally, children in this day and age are acting and dressing as if they are years older than they actually are. This leads to children being exposed to these drugs and alcohol at an earlier age. All of these factors could possibly change the frequency of substance use if the surveys were given to adolescents in the current year, 2015.

Another limitation of this study is study is that the previous study lumped Hispanics in to a large category instead of creating sub categories for individuals of mixed ethnicities. This lead to the majority of participants in this study to be categorized as Hispanics which could lead to results which are not generalizable back to the current

population.

In summary, there are always limitations when using secondary data instead of collecting new data. There are especially limitations when comparing data collected in a previous decade to the generation of today. However, due to the lack of time and funding that is given to a student for their Master's thesis, the Project on Human Development in Chicago Neighborhoods is the best and most well – renowned study of this time that contains all of the elements: personality, self – reported deviance, and peer deviance, that are to be used in this study. The questions asked to the participants are theoretically sound and therefore, there are no worries going in to the current study that the results will not hold true if the study were to be duplicated with the youth of today

CHAPTER 4: DATA ANALYSIS

The purpose of this chapter is to examine the findings related to personality, peer deviance, and individual deviance. The results of each examination for the four research questions will be discussed. This chapter includes descriptive statistics for each independent variable, the dependent variable, and the control variables. Additionally, this chapter will illustrate the statistical findings of the negative binomial regressions as well as the Poisson regression mentioned in the methodology. Research question 1 was examined using a Poisson regression. Research questions 2, 3, and 4 were answered by using a negative binomial regression. The statistical program SPSS was the sole program used for the current study. This statistical software was also utilized to run a correlation to ensure that multicollinearity was not present for these variables. The analyses and interpretation of the results for each regression will be presented in this chapter. Followed by discussions and conclusions in chapter five.

Descriptive Statistics

Descriptive statistics examine the mean, minimum values, and maximum values for each of the independent variables and the dependent variable used for the current study. Each control variable was broken down based on percentage of the study population that possessed this variable. The descriptive statistics are based on the 1401 (N=1401) participants in the original study, the Project on Human Development in Chicago Neighborhoods (PHDCN) that were selected for use in the present study. These individuals were selected based on: cohort group, consistency in completion of surveys,

and participation in the entire project for all three waves.

Table 6: Descriptive Statistics

Variables	Mean	Min	Max
Extroversion	17.5516	4	20
Introversion	10.6046	4	20
Self – Esteem	25.0138	8	28
Peer Sub. Use	5.0344	3	12
Personal Sub. Use	3.2215	0	29
Gender: Male	.504		
Eth./ Race: Hispanic	.465		
Eth./ Race: Black	.343		
Eth./ Race: White	.151		
Eth./ Race: Other	.041		
Public Assistance: Yes	.326		

The Descriptive Statistics chart presented above breaks down how individuals identified with each independent variable and the dependent variable. For extroversion, most participants identified as more extroverted causing the mean (17.5516) to be closer

to 20. The least extroverted individuals had a response of 4 while the most extroverted individuals responded that all of the traits relating to extroversion were “characteristic” of themselves, which resulted in a score of 20. When examining introversion, the minimum and maximum values mirrored that of extroversion. However, fewer individuals reported possession of the trait introversion. This is evident based on introversion only having a mean of 10.6046 while extroversion had a mean of 17.5516. The results for self – esteem show a minimum of 8 and a max of 28. The mean for this variable was very high (25.0138) which reflects the possession of high self – esteem as a commonality for the participants of this study. Those with higher scores have higher self – esteem while those with scores closer to 8 possess low self – esteem. The final independent variable, peer substance use, had a mean of 3 and a max of 12, the data was based on counts of instances that peers used drugs and alcohol. Overall, most peers displayed overall low levels of substance use. The dependent variable, personal substance use had the lowest mean of all of the variables (3.2215). These results showed that overall, most individuals do not report to use drugs and alcohol frequently.

The percentages listed on the descriptive statistics chart reflect how much of the study population (N=1401) identified as possessing one of these control variables. Approximately half of the participants identified as male. A majority of participants identified as being Hispanic. However, as mentioned previously in the methods chapter, if a participant recorded being of mixed race/ ethnicity, they were automatically classified as Hispanic. Therefore, an individual who identifies as both White and Hispanic was sorted in to the Hispanic Ethnicity/ Race category. This leads to nearly half of the study population identifying as Hispanic (46.5 %). White individuals represented 34.3%, Black

individuals represented 15.1%, and the Other category represented 4.1% of individuals for this study population. The final control variable recorded how many individuals lived in a household where public assistance from the government was received. Overall, 32.6% of the study population fit in to this category, meaning that they lived in a home where public assistance was received in the past year.

Correlation

Before examining each of the research questions, a Pearson correlation was conducted to test for the presence of multicollinearity. Multicollinearity refers to the idea that two items being measured are too directly related and appear to act as one item. If two items are too similar, they will appear to have a perfect correlation of 1 or -1 and, if graphed, the coordinates would draw a straight line. For any study, if two items are measuring the same variable unknowingly, this could be detrimental to the results of the experiment. Pearson Correlations are typically conducted before beginning a study to ensure that there are no relationships between two variables that are stronger than a 0.8 or -0.8.

Table 7: Pearson Correlation

		Self - Esteem	Peer Delinq.	Extro.	Intro.	Gender	Age Wv.1	Public Assist?
Self Esteem	P. Corr	1	-.108**	.039	-.092**	-.093**	-.047*	-.071**
	Sig.		.000	.089	.000	.000	.041	.002
Peer Del.	P. Corr	.108**	1	-.025	.017	-.017	.649**	-.006
	Sig	.000		.298	.482	.463	.000	.792

Extro.	P. Corr	-.039	-.025	1	-.320**	-.022	-.096**	.011
	Sig	.089	.298		.000	.288	.000	.594
Intro	P. Corr	.092**	.017	-.320**	1	-.049*	.051*	.083**
	Sig	.000	.482	.000		.019	.015	.000
Gender	P. Corr	.093**	-.017	-.022	-.049*	1	-.011	-.012
	Sig	.000	.463	.228	.019		.392	.344
Age (Wv.1)	P. Corr	.047*	.649**	-.096**	.051*	-.011	1	-.192**
	Sig	.041	.000	.000	.015	.392		.000
Public Assist?	P. Corr	.071**	-.006	.011	.083**	-.012	-.192**	1
	Sig	.002	.792	.594	.000	.344	.000**	

**Correlation is significant at the 0.01 level (2 – tailed)

*Correlation is significant at the 0.05 level (2 – tailed)

The results of the Pearson Correlation show that there is no issue with multicollinearity present in this current study. While there is a significant relationship between the variables introversion and extroversion, the relationship is weak and negative. This relationship is classified as weak and negative based on the parameters defined by Salkind in 2011. The parameters for coefficient strength range from -1.0 to +1.0 and range in strength and direction. Salkind categorized the parameters in to the following relationship types:

+/- .8 to 1.0 – very strong relationship

+/- .6 to .8 – strong relationship

+/- .4 to .6 – moderate relationship

+/- .2 to .4 – weak relationship

+/- .0 to .2 – very weak relationship

Based on these parameters, one weak relationship was found between introversion and extroversion with a correlation of $-.320$ ($p=.000$). This relationship suggests that as extroversion increases, introversion decreases. This relationship is not a concern due to how weak the relationship is, and based on the fact that it does not reflect multicollinearity.

Research Question 1

Research question 1 states: Is there a relationship between the differences in personality traits, specifically self – esteem, introversion, and extroversion and the task of selecting friends or friend networks? This research question was tested using a Poisson Regression.

Hypothesis 1.

The hypothesis for the first research question declares that the relationship between peer selection and personality will vary based on the possession of traits in an individual. The higher level of self – esteem, the more deviant friends an individual will have. Additionally this hypothesis states that the more extroverted an individual is, the more deviant peers the individual will associate with. Finally, the more introverted an individual is, the less deviant peers they will associate with. The null hypothesis states that there is no relationship between self – esteem and peer deviance, extroversion and

peer deviance, and introversion and peer deviance. The alternative hypothesis states that there is a strong negative relationship between self – esteem and peer deviance as well as a strong negative relationship between extroversion and peer deviance. The alternative hypothesis also states that there is a strong positive relationship between introversion and peer deviance. A Poisson regression will be utilized to test this hypothesis.

Poisson Regression Results

Table 8: Poisson Regression

Parameter	B	Std. Error	Sig.	Ex(b)
(intercept)	1.494	.1229	.000	4.455
Cohort 15	.783	.0284	.000	2.188
Cohort 12	.452	.0290	.000	1.571
Cohort 9	0 ^a	.	.	1
Sex	.008	.0217	.706	1.008
Black	-.080	.0334	.016	.923
Hispanic	-.067	.0313	.033	.935
Other	-.123	.0657	.061	.884
Pub. Assist	.033	.0249	.188	1.033
Self – esteem*	-.012	.0033	.001	.989
Extrovert	.003	.0037	.456	1.003
Introvert	-.003	.0027	.285	.997
Scale	1 ^b			

Table 8 reflects the results of the Poisson Regression conducted to analyze research question 1 for the current study. The only significant findings for research question 1 involve the relationship between possession of deviant friends and self – esteem. The results of the regression suggest that individuals who have a higher self - esteem are less likely to socialize with deviant peers and are less likely to have deviant friends ($p > .05^*$) The converse of this result suggests that individuals with lower self – esteem are more likely to socialize with deviant friends.

The Poisson Regression did not find a significant relationship between the variables introversion or extroversion and the likelihood of having deviant friends. This suggests that sociability is not a factor that influences how adolescents choose who they should and should not associate with. Therefore, the hypothesis for research question 1 is incorrect. There is actually a negative relationship between the variable self – esteem and likelihood for individuals to have deviant friends. For this hypothesis it is proper to accept the alternative hypothesis. Additionally, due to the fact that there is no relationship between the variables introversion and extroversion and the likelihood for an individual to have deviant friends, it would be appropriate to accept the null hypothesis. The column Exp(b) reflects a ratio amount known as the incident rate ratio. For this current research question the Exp (b) number is 1.012, and the odds of this outcome increase 1.2%.

Research Question 2

The second research question for this study is: Is there a relationship between peer substance use and the level of self – reported individual substance use for participants in this study? Other relationships between personality traits such as: self – esteem, introversion, and extroversion and the main effects that these variables can have on the

participation in use of drugs and alcohol will also be explored during this analysis. A Negative Binomial Regression is used to analyze the data for this research question.

Hypothesis 2.

Hypothesis 2 states that there will be a positive relationship between peer substance use and individual substance use. This reflects the idea that the more deviant peers that an individual associates with on a regular basis, the more the individual will participate in use of drugs and alcohol themselves. This hypothesis is based off of the principles of the Social Learning Theory of Criminology (Akers, 2004) and the idea that individuals learn behaviors from their peers over time and will eventually adopt attitudes and beliefs that are similar to their peers, even if they are attitudes favorable to crime and deviance (Akers, 2004). For this research question, the null hypothesis is that there will be no relationship between individual substance use and peer substance use. The alternative hypothesis states that there is a strong negative relationship between individual substance use and peer substance use, meaning that the more deviant peers a person has, the less likely they are to participate in the same deviant act. In this situation, the deviant act is use of drugs and alcohol. A Negative Binomial Regression will be used to examine the findings for this research question.

Negative Binomial Regression Results

Table 9: Negative Binomial Regression (Main Effects)

Parameter	B	Std.Error	Sig.	Exp(b)
(intercept)	-1.584	.4305	.000	.205
Cohort 15*	1.877	.1192	.000	6.533
Cohort 12*	1.487	.1049	.000	4.424
Cohort 9	0 ^a			1
Sex*	.363	.0701	.000	1.438
Black*	-.497	.1063	.000	.608
Hispanic*	-.329	.0979	.001	.720
Other*	-.700	.2059	.001	.496
Pub. Assist	.099	.0839	.239	1.104
Peer Sub. Use*	.238	.0180	.000	1.269
S. Esteem	-.014	.0118	.236	.986
Extroversion*	.025	.0120	.034	1.026
Introversion	-.012	.0090	.195	.988
(Scale)	1 ^b			
(Negative Binomial)	1 ^b			

Table 9 reflects data used to determine if there are any main effects of any of the independent variables or the control variables on the dependent variable. For this study, the independent variables are: self – esteem, introversion, extroversion, and peer

delinquency. The control variables are gender, race/ethnicity, and receipt of public assistance in a household within the past year. The dependent variable is reported amount of individual substance use in adolescents. The negative binomial regression shows that there are numerous significant findings. First, there is a positive relationship between cohort group and likelihood of reporting substance use ($p < .05$)*. Though this category does not truly reflect the age of the participant, it can be said that as the age of the individual increase the likelihood of reporting substance use also increases. This can be assumed due to the categorization process that took place in the beginning of the study. Participants are grouped based on grade and age. Though we do not know the exact ages of every member of the cohort group, the results consistently reflect the increase in substance use with age. The incident rate ratio for this result indicates that when compared to those individual in cohort group 9, who are the youngest of those individuals used in the current study, the odds of substance use increasing in cohort group 12 increases by 44% ($\text{Exp}(b) = 4.424$) and the odds of substance use increasing for cohort group 15 increases by 65% ($\text{Exp}(b) = 6.533$).

When examining gender, Males are more likely to report using drugs and alcohol than females ($p < .05$)*. Females were used as the reference category for this variable. When examining the incident rate ratio it is evident that males are 14.3% more likely to report using substances than females ($\text{Exp}(b) = 1.438$).

The relationship between race/ ethnicity and reported substance use showed significant results when examined in this regression. When compared to white individuals, blacks, Hispanics, and “others”, were significantly less likely to report substance use ($p < .05$)*. When compared to whites, blacks were 39% less likely to report

substance use ($\text{Exp}(b)=.608$). Additionally, Hispanics were 28% less likely to report substance use when compared to white individuals ($\text{Exp}(b)=.720$). Finally, when compared to whites, those categorized in to the “other” race/ethnicity category are 50% less likely to report substance use ($\text{Exp}(b)=.496$).

Finally, there was no significant relationship found between those individuals who receive public assistance from the government being more or less likely to use drugs or alcohol.

When examining research question 2, the relationship between peer substance use and individual substance use becomes evident. The results of this regression show a significant positive relationship between peer deviance and individual reports of deviance for the participants in the current study ($p<.05$)* the odds of this increase are 12.69% ($\text{Exp}(b)=1.269$). This shows that individuals with deviant friends are 12.69% more likely to report using substances themselves compared to those who do not have deviant peers. This finding is based off of the peer substance use and individual substance use reports alone, and has no relationship to personality differences between individuals.

Each personality trait: self – esteem, introversion, and extroversion were examined in relation to individual reports of substance use. The only significant finding for these independent variables involves the relationship between extroversion and individual substance use. This finding shows that there is a significant relationship between extroversion and reports of substance use in adolescents ($p<.05$)*. However, there was no significant relationship between self – esteem and individual substance use nor was there a significant relationship between introversion and individual substance

use.

Research Question 3

Research question 3 seeks to determine if there is there a relationship between each of the three personality variables: self – esteem, introversion, and extroversion in combination with peer deviance on individual substance use for participants in this study. This question involves three interaction variables: self –esteem x peer substance use, introversion x peer substance use, and extroversion x peer substance use. Interaction variables are used when attempting to determine if one independent variable can manipulate the effects of another independent variable on the dependent variable. In this case, the interaction variables are being used to determine if the three personality variables can have a moderating effect on the established relationship between peer deviance and individual deviance.

Hypothesis 3

The hypothesis for this research question is that introversion and peer substance use together (introversion x peer substance use) will have a negative relationship to personal substance use while the interaction between extroversion and peer substance use (extroversion x peer substance use) will have a positive relationship with personal substance use. Additionally, the hypothesis involving the interaction between self – esteem and peer deviance (self esteem x peer substance use) on individual deviance is that there will be a negative relationship between the interaction variable self esteem and peer deviance on individual substance use. This would mean that as self – esteem increases, the likelihood of reporting substance use decreases. The null hypothesis for research question 3 would reflect the idea that the interaction variables have no

moderating effect on individual substance use. The alternative hypotheses for this research question would be: the relationship between the interaction variable introversion x peer substance use would be positive, the relationship between the interaction variable extroversion x peer substance use would be negative, and that the relationship between the interaction variable self – esteem and peer substance use (self –esteem x peer substance use) would be positive.

Negative Binomial Regression 2 Results

Table 10: Negative Binomial Regression Results for the Second Analysis

Parameter	B	Std. Error	Sig.	Exp(b)
(intercept)	-1.419	.4513	.002	.242
Cohort 15*	1.888	.1199	.000	6.605
Cohort 12*	1.491	.1053	.000	4.443
Cohort 9	0 ^a			1
Sex*	.369	.0702	.000	1.446
Black*	-.507	.1066	.000	.602
Hispanic*	-.342	.0985	.001	.710
Other*	-.711	.2073	.001	.491
Pub. Assist	.088	.0841	.297	1.092
Peer Sub. Use*	.239	.0181	.000	1.260
S. Esteem	-.022	.0122	.076	.979
Extroversion*	.028	.0130	.032	1.028
Introversion	-.012	.0094	.184	.988

S.Est x Peer Sub Use*	.011	.0048	.027	1.011
Intro X Peer Sub Use	.001	.0039	.783	1.001
Extro x Peer Sub Use	-.002	.0051	.683	.998
(Scale)	1 ^b			

Table 10 describes the results of the second negative binomial regression that was conducted to assess the relationship between peer deviance and individual deviance taking differences in personality traits in to consideration. When examining the three interaction variables, only one had a significant effect on the established relationship between peer substance use and individual substance use for adolescents. Introversion and extroversion had no impact on the relationship between peer substance use and individual substance use. This leads us to assume that differences in sociability do not increase the effect that peers can have on an adolescent’s own participation in the use of drugs and alcohol. However, when examining the relationship between the interaction variable self –esteem x peer substance use and individual substance use, a significant finding is present. This relationship shows that self – esteem has a moderating effect on peer substance use ($p < .05$)*. In fact, the higher self – esteem an individual has, the more likely they are to participate in the use of drugs and alcohol when peer substance use is a factor. Having a high self – esteem increases the likelihood that an individual will act in ways similar to the deviant peers that they associate with. Therefore, one can assume that the lower an individual’s self – esteem is, the less likely they are to be influenced by their peers and the less likely they are to adopt attitudes and beliefs that are anti – social, even when their peers participate in anti – social activities. The incident rate ratio for this result

shows an increase of 1.1% ($\text{Exp}(b)=1.011$).

CHAPTER 5: DISCUSSION, LIMITATIONS, AND FUTURE DIRECTIONS IN POLICY AND RESEARCH

Discussion of the Research Questions and Findings

There are many unanswered questions about the role that personality differences play in the adoption of criminal attitudes, beliefs, and actions. This paper attempts to isolate three major traits and determine if these traits can mediate or intensify the effects of peer influence on individual deviant behavior during a crucial transitional time in a young adolescent's life. Overall, personality is a complex entity filled with many descriptive traits, unique quirks, and varying theories of stability and change over time. Criminology is another social science discipline that has many theories that vary. Theories in criminology range from a biological standpoint to a solely social aspect, and there are many blended theories that include bits and pieces of both nature and nurture. However, one fact remains the same in both disciplines, research must be done to identify what patterns are present in behavior.

The current study focuses on the social learning process in combination with core personality traits that every individual can identify with possessing. A longitudinal study is the only sound method of examining changes in behavior and personality, and the Project on Human Development in Chicago Neighborhoods is a study that encompasses both criminology and psychology through a variety of surveys given to Chicago's youth during the 1990's. Though this survey was not designed to analyze the

relationship

between personality, peer influence, and individual deviance during adolescence, it contains all necessary pieces of the puzzle to depict a perfect picture of who these adolescents were, and who they associated with, and what actions they participated in during their childhood and teenage years. This study was the source of the secondary data used to conduct the current study.

Literature on both social learning and personality was gathered and analyzed on an individual basis as well as together in studies that focused on both disciplines. Overwhelming portions of the literature that was discovered focused on substance use as being a common problem in children and adolescents in this day and age. With this knowledge, the current study was developed to focus solely on substance use as a deviant act, and the effects that associating with the “wrong crowd” can have on a person as they transition from childhood to adulthood. The discussion of the current study will begin by examining each of the research questions and their findings. Finally, limitations of the study and future policy implications that should be considered will be addressed.

Research Question 1

As previously mentioned in this paper, the first research question focuses on differences in personality and if these differences can affect the friend selection process for adolescents. Specifically, this question aims to determine if some people are more or less likely to have deviant friends. The Poisson Regression results revealed that introversion and extroversion alone do not have an effect on the number of deviant peers that an individual may associate with. In other words, the sociability of a person does not influence the socialization process with deviant individuals and extroverted and introverted individuals are equally as likely to have deviant peers.

When examining the relationship between self – esteem and the friend selection process, there were significant findings. It appears that differences in self – esteem do affect the likelihood of an individual having deviant peers. The regression results suggest that extroverted individuals are less likely to associate with deviant peers. The converse of this finding would indicate that individuals with lower levels of self – esteem are more likely to associate with deviant peers.

In conclusion, sociability (introversion and extroversion) appears to have no main effect on the amount of deviant peers that one chooses to associate with. Additionally, individuals with high self – esteem are less likely to associate with individuals who use drugs and alcohol, while those with low self – esteem are more likely to involve themselves in peer groups who use substances on a frequent basis.

Research Question 2

Research question 2 aims to discover if there is a significant relationship between peer substance use and individual substance use. Many researchers have addressed the power of peer pressure and the social learning process. Adoption of attitudes and beliefs of a group by an individual who seeks to be a part of that group is a common occurrence. The results of the negative binomial regression further support this finding. Overall, there was a significant relationship ($p < .05$)* between peer deviance and individual deviance. Therefore, it is appropriate to reject the null hypothesis for this research question.

The findings of this regression indicate that the likelihood of a person using drugs and alcohol can increase by 127% if they associate with individuals who use drugs and alcohol. This relationship is stable and has nothing to do with differences in personality,

race/ethnicity, gender, or age.

Research Question 3

Research question 3 involves the interaction of personality traits and peer substance use and the moderating effects that personality can have on the established relationship between peer deviance and individual deviance. All three personality traits: self – esteem, introversion, and extroversion were examined separately with peer deviance to determine which traits, if any, were able to mediate the relationship between peer deviance and individual deviance. An ideal result would indicate that a personality trait could lead to the decrease in the strength of the effects of peer deviance on individual reported deviance. However, this was not the case.

When assessed alone, extroversion was the only trait that had a main effect on reports of individual substance use, which would indicate that more extroverted individuals use drugs and alcohol more frequently. Additionally, it has already been mentioned that peer deviance has a main effect on individual deviance. However, when each personality trait was examined as an interaction variable with peer deviance, self – esteem was the only trait that acted as a mediator. Additionally, instead of decreasing the effect of peer influence on individual deviance, self – esteem acted as an intensifying force and strengthened the relationship. Interestingly enough, the relationship also indicates that individuals who have a higher self – esteem and interact with deviant peers are more likely to report using drugs and alcohol than those with a lower self – esteem.

A Discussion of the Significant Findings

Four main findings should be highlighted as possibly impacting policy and

promoting the frequency of proactive intervention in the lives of children who are transitioning to adolescence and adulthood. One main finding is that: extroverted individuals are more likely to report using drugs and alcohol than introverted individuals. This relationship is only based on the individual and has no association or interaction with deviant peers. Support for this finding can be found in Eysenck's theory of personality and the research conducted by Rushton & Chrisjohn (1980). Overall, extroverts typically are more likely to explore outside of social norms, and compared to introverts, would be more likely to try new things (Rushton & Chrisjohn, 1980). This finding would explain why participants in this study reported using substances even though not all of these individuals had deviant peers. Additionally, this is an important finding because these individuals who are exploring the world of drugs and alcohol first, and therefore, could turn in to the deviant peers that children of other ages and other personality types are associating with in the future.

The second crucial finding that emerges from this research is that there is a relationship between peer deviance and individual reported deviance. Numerous studies have shown that peer pressure exists and that people do imitate others that they are close with and that they spend most of their time around. Simons – Morton and Farhat found that this fact is true, especially with the imitation with use of drugs and alcohol. Though this study did not uncover this as a fact due to the well – known relationship that exists between peer deviance and individual deviance, it is still a crucial finding due to the policy implications and parenting techniques that can emerge with knowledge of this relationship. If parents get to know their children's friends on a more personal basis, they can learn what types of behaviors are being adopted and shared within their inner circle

of friends. Additionally, parents and teachers can use this new knowledge of the relationship between extroversion and substance use in combination with the well known relationship between peer deviance and individual deviance to identify who is the key influential member of a peer group and who is more or less likely to experiment outside of social norms.

The third and fourth important findings for the current study fall hand in hand. The results of the regressions for research questions 2 and 3 showed that individuals with higher self – esteem are less likely to associate with deviant peers. However, individuals who have high self - esteem and choose to associate with deviant individuals are significantly more likely to use drugs and alcohol. Initially, most of the research that I reviewed associated low self – esteem with criminal activity and did not see high self – esteem as an indicator of potential participation in crime and deviance. However, many studies link high self – esteem with possession narcissistic tendencies (Barry et. al, 2007). Individuals who possess these narcissistic traits tend to think that they are able to do things better than others, and that they are all around better than other people (Barry et. al, 2007). These thoughts could lead to individuals with high self – esteem using drugs and alcohol without worrying about the side effects that could come from substance use. Even if an individual does not associate with many deviant peers, an individual with high self – esteem is likely to feel more confident about themselves and their abilities and will explore out of their comfort zone easier than individuals with low self – esteem. Other research shows that low self – esteem can be linked to substance use and mental illness later in life. However, at this crucial age in an adolescent’s life, they are being exposed to new people, new experiences, and new substances as they transition from middle school

to high school.

These individuals who have confidence and a high self – esteem are going to be the ones to interact with all social groups. This factor would explain why some individuals choose to associate with deviant peers while others do not. However, the likelihood for an individual with high self - esteem to try new things is higher than the likelihood of an individual with low self - esteem to try new things. This leads to the rationalization that even if an individual with high self – esteem does not have many deviant peers, they are more likely to explore substance use if they have the opportunity to. Deviant peers would enable these individuals to gain access to drugs and alcohol. Therefore, it is not the number of deviant peers that matter, but it is the strength of the relationship and the right opportunity that can lead to some individuals using drugs and alcohol even with very few deviant friends.

Conclusions

The current study shows that individuals of all genders, races/ethnicities, and social classes have deviant peers and use drugs and alcohol. Some people choose to associate with deviant individuals while others do not. Previous research has found relationships between all personality types and participation in crime and deviance. Additionally, previous research has showed that some personality traits intensify the effect of peer deviance on individual deviance. The current study originated due to the lack of existing research on moderating effects of personality on deviant behavior. The goal of this paper was to answer the question: can personality differences determine which individuals were more or less likely to succumb to peer pressure and in turn, become deviant. All in all, this paper did not find that possession of a specific personality

type could make some individuals less likely to be pressured by peers. However, new findings were discovered about the differences in personality type as being an indicator on the potential anti – social behaviors that will emerge in time. All in all, this study had its significant findings and should be reviewed when considering policy changes. Additionally, schools and child psychologists can utilize this information. The limitations of the current study and the possibility for future directions will be discussed in the following section.

Limitations

As previously mentioned, the current study is a secondary data analysis of research conducted during the Project on Human Development in Chicago Neighborhoods. Though this project was well developed and has extensive information on the demographics, family life, personality, and deviant activities of adolescents living in Chicago during the 1990's, it is always more beneficial to collect new data due to changes in individuals and the way of life. However, due to time constraints and lack of funds to complete a new longitudinal study, a secondary data analysis had to be conducted.

Another limitation of the current study is the fact that the data was collected by use of self – report surveys. There is no fool – proof way to ensure that all data collected is accurate. Some individuals may fabricate results, which leads to the possibility that the survey results do not reflect the truth about the population. This is always a limitation of using a self – report survey.

A final limitation in this study was that the survey questions asked were not

always consistent across waves and cohort groups, which resulted in some questions being left out do to lack of consistency. For the current study, questions were only included in the scales for personality and deviance if they were asked of all individuals in all cohort groups.

Future Directions in Policy and Research

The current study opened new doors for policies and research in the fields of psychology and criminology. In conjunction, the two disciplines can lead to new explorations in human behavior and can inspire new studies in personality analysis, friend selection, and many other overlapping areas that are crucial factors in both criminology and psychology research. This study focuses on children ages 9 through 15. This window is a transitional period for adolescents in which they are subjected to new people and new experiences as they make the shift from elementary school to middle school, and from middle school to high school. Additionally, while social aspects of these adolescent's lives are changing, they are enduring biological changes that can take a toll on their mental and emotional state. This study attempts to predict human behavior to a certain extent by revealing some potential indicators of the likelihood for adolescents to use drugs and alcohol.

Some policy implications that could benefit by reviewing this study would focus on how to handle an adolescent that is arrested for possession of drugs or for underage drinking. Currently, many juveniles who are arrested for these crimes are sent through diversion programs or rehabilitation programs where they socialize with other adolescents who are charged with the same crimes. Together, they come up with new solutions to “say no” to drugs and alcohol. While this idea is based on a solid foundation

of restorative justice and public shaming by forcing these juveniles to admit their crimes, and often times write apologies to parents and other individuals who were harmed in the process, other possibilities are possible based on the research conducted in this current study. Due to the patterns revealed about personality differences in this study, distributing a personality inventory to juveniles who are entering one of these diversion programs could allow for psychologists and criminal justice officials to gather more information about these adolescents, and in turn, assist them based on their specific traits and their likelihood of participating in deviance based on their personality type. Some individuals are extroverted, and would be likely to repeat these actions even without peer pressure.

Additionally, the information that was revealed in the current study could help school counselors, teachers, and parents predict behaviors based on social networks and peer groups that are commonly observed in schools, extracurricular activities, and outside of the school setting. If parents are more educated about social learning and the impact that personality can have on friend selection, peer deviance, and individual deviance. It is possible that they would be able to intervene at an earlier age if signs of conformation to ant – social group norms arise at home. Schoolteachers and counselors can take these same actions. If a teacher or counselor notices that a group is bullying others or acting in a deviant way, they could intervene earlier if more knowledge about imitation, differential association, and social learning in general is available to them. Oftentimes, teachers have more contact with children in a shorter period of time than parents do at home, and now more than ever teachers need to be encouraged to observe behaviors that could be worrisome if left without intervention.

Future research in this subject area should expand on the personality types that are

being examined. Though sociability and self – esteem are two prominent traits, there are many more that could also indicate that some individuals are more or less likely to be pressured by peers or use substances without pressure. Additionally, more longitudinal data needs to be collected that is relevant to the current generation. In the past 10 years technology has boomed and even toddlers have access to electronics that were non – existent when the Project on Human Development in Chicago Neighborhoods began. This is crucial because with access to technology at an earlier age, children are also being exposed to the existence of drugs and alcohol at an earlier age. This could drastically change how early parents and teachers should begin intervening in a child’s life if they notice specific indicators of drug and alcohol use. Now more than ever it is important to be pro – active, and by use of personality in conjunction with criminological theory, there are endless possibilities for both advances in research and shifts in policy.

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