

Summer 2015

Personality Traits and Deception Detection Ability Among College Students with Primary Psychopathic Traits

Megan Malmstrom
San Jose State University

Follow this and additional works at: https://scholarworks.sjsu.edu/etd_theses

Recommended Citation

Malmstrom, Megan, "Personality Traits and Deception Detection Ability Among College Students with Primary Psychopathic Traits" (2015). *Master's Theses*. 4598.

DOI: <https://doi.org/10.31979/etd.krn4-23rs>

https://scholarworks.sjsu.edu/etd_theses/4598

This Thesis is brought to you for free and open access by the Master's Theses and Graduate Research at SJSU ScholarWorks. It has been accepted for inclusion in Master's Theses by an authorized administrator of SJSU ScholarWorks. For more information, please contact scholarworks@sjsu.edu.

PERSONALITY TRAITS AND DECEPTION DETECTION ABILITY AMONG
COLLEGE STUDENTS WITH PRIMARY PSYCHOPATHIC TRAITS

A Thesis

Presented To

The Faculty of the Department of Psychology

San José State University

In Partial Fulfillment

of the Requirements for the Degree

Master of Arts

by

Megan O. Malmstrom

August 2015

2015

Megan O. Malmstrom

ALL RIGHTS RESERVED

The Designated Thesis Committee Approves the Thesis Titled
PERSONALITY TRAITS AND DECEPTION DETECTION ABILITY AMONG
COLLEGE STUDENTS WITH PRIMARY PSYCHOPATHIC TRAITS

by

Megan O. Malmstrom

APPROVED FOR THE DEPARTMENT OF PSYCHOLOGY

SAN JOSÉ STATE UNIVERSITY

AUGUST 2015

Dr. Gregory Feist Department of Psychology

Dr. Clifton Oyamoto Department of Psychology

Dr. Erin Woodhead Department of Psychology

ABSTRACT

PERSONALITY TRAITS AND DECEPTION DETECTION ABILITY AMONG COLLEGE STUDENTS WITH PRIMARY PSYCHOPATHIC TRAITS

by Megan O. Malmstrom

Because psychopaths are exceptionally good at deceiving others, researchers have proposed that this population of individuals may be more likely than the average person to detect deception. However, previous research has provided mixed results on the ability of individuals with psychopathic traits to detect deception at a greater level than chance. The inconclusive results on this topic have warranted future research on examining sex differences and personality traits that are attributed to individuals with psychopathy that may aid their ability to detect deception at a higher level than others. The current study tested 133 San Jose State University undergraduates by having them indicate whether individuals in 10 different video clips were lying or telling the truth. Participants' psychopathic tendencies were measured using the Levenson Self-Report Psychopathy scale (LSRP) and their personality traits were measured using the Big Five Inventory (BFI). A Fisher's r to z transformation was conducted to test Hypothesis 1, that sex would moderate the relationship between deception detection accuracy and primary psychopathic traits. However, our analyses revealed no moderating effect by sex. A one-tailed bivariate correlation was also performed to test Hypothesis 2, which stated that low scores on the BFI for Agreeableness and Conscientiousness would be correlated with higher deception detection accuracy. No significant relationships were found. However, non-significant results displayed non-linear relationships between Agreeableness, Conscientiousness and detection accuracy.

ACKNOWLEDGMENTS

First and foremost, I would like to thank my advisor, Dr. Greg Feist. From your General Seminar and Experimental Design classes to working with me on my thesis, the valuable information that I have learned from you over the past two years is sure to stick with me into my future. I am especially thankful for the time you committed to helping me, even when we couldn't meet in person. Our Skype meetings were always appreciated! Overall, I have enjoyed working with you and am glad to have met you. Dr. Clifton Oyamoto, I am extremely thankful for you allowing me to introduce this research to your undergraduate classes. I appreciate all the time you have taken to help me and for being a part of my committee. Dr. Erin Woodhead, in the short amount of time that we have known each other, I am truly grateful for the input that you have provided towards my research. Thank you for everything.

To the other students in my cohort, you all have fueled my excitement for this graduate program. My experience would not have been as enjoyable if it weren't for each and every one of you. I have enjoyed our get-togethers outside of school and will miss the great conversations we all shared. Specifically, Sherrie Jagolino, Nick Bathurst and Iya Vargas, I am thankful for the entertaining conversations, the advice, and mostly, the friendships you all have given me. Mom, without you, I wouldn't be where I am at today. I am eternally thankful for your love, guidance, and support that you have provided me throughout my life. I finally jumped through all the "hoops"!

TABLE OF CONTENTS

LIST OF FIGURES.....	viii
LIST OF TABLES.....	ix
INTRODUCTION.....	1
Psychopathy: Its Definition, Measurement and Structure.....	4
Deception Detection Among Psychopaths.....	7
Psychopathy and the Five-Factor Model for Personality.....	9
HYPOTHESES.....	11
METHOD.....	12
Participants.....	12
Measures.....	13
Procedure.....	15
RESULTS.....	16
Descriptive Statistics.....	16
Planned Analyses.....	18
Exploratory Analyses.....	19
DISCUSSION.....	21
Findings and Implications of the Current Study.....	22
Limitations.....	25
Future Research and Concluding Remarks.....	28

REFERENCES.....	31
APPENDICES.....	35
Appendix A: Demographic Questionnaire.....	35
Appendix B: Levenson Self-Report Psychopathy Scale (LSRP).....	36
Appendix C: Big Five Inventory (BFI).....	39
Appendix D: Deception Detection Videos.....	40
Appendix E: Response Sheet.....	41
Appendix F: Online Consent Form.....	43
Appendix G: In-Person Consent Form.....	45

LIST OF FIGURES

FIGURE 1. Hypothesis 1: Best-fit regression slopes for sex as a moderator between deception detection accuracy and primary psychopathic traits.....	12
FIGURE 2. Total video accuracy.....	17
FIGURE 3. Quadratic Regression of Agreeableness and Detection Accuracy.....	20
FIGURE 4. Cubic Regression of Conscientiousness and Detection Accuracy.....	21

LIST OF TABLES

TABLE 1. Descriptive Statistics for LSRP, BFI, and deception detection accuracy.....	18
--	----

Introduction

If everyone in the world each told one lie within the same day, there would be over seven billion lies told. In fact, according to DePaulo et al. (1996), people tell one to two lies on average per day. With so many lies being exchanged on a daily basis, it is evident why deception detection is an emerging field of study. Although it is important to identify liars for social reasons (i.e., personal relationships), it is even more important to identify liars accurately when there are serious consequences attached to the act of lying (i.e., law enforcement). As it turns out, the average person can detect deception with only 54% accuracy, when 50% would be expected by chance, suggesting that most people lack the ability to judge veracity in others (Bond & DePaulo, 2006; Bond & Uysal, 2007). However, the so-called discovery of deception detection “wizards” has suggested to researchers that individual differences are responsible for deception detection ability (O’Sullivan & Ekman, 2004). Because chance will not suffice when it comes to enforcing the law and in other applied settings, the individual differences that aid in deception detection accuracy must be identified.

Research on the individual differences in accuracy of deception detection has been focused primarily on the use of cues to judge credibility in others. Being successful in deception detection requires the ability to pick up on another individual’s verbal cues (e.g., voice fluctuations due to nervousness, amount of detail, or plausibility of their message), and nonverbal cues (e.g., gaze aversion, micro expressions on the face, or hand and leg movements) (Ekman & O’Sullivan, 1991; Reinhard, Greifeneder & Scharmach, 2013). On the other hand, the inaccurate use of such cues can lead to flawed judgments

of deception in others (Porter, Woodsworth & Birt, 2000). Campbell and Porter (2002) found that participants who were more accurate in judging the credibility of another person's childhood memory used significantly more cues, specifically nonverbal cues, compared to participants who inaccurately judged the credibility of others' childhood memories. Overall, the use of both verbal and nonverbal cues to detect deception in others has proven to be an effective tool in increasing accuracy.

The recognition of verbal and nonverbal cues is likely used in combination with the personality traits that an individual possesses and may aid in accurately judging veracity in others (Klaver et al., 2009). For example, DePaulo and Tang (1994) found that individuals with high levels of social anxiety were less accurate in detecting deception in others compared to their less socially anxious counterparts. They explained this finding with the idea that socially anxious individuals fail to process important cues that are given by the liar or truth teller. The individuals with personality traits such as social anxiety are thought to miss the chance at processing the important cues because they are internally focused on worries and concerns that are irrelevant to the deception detection task. Also, Campbell and Porter (2002) found that when using the Neuroticism-Extraversion-Openness-Five Factor Inventory (NEO-FFI), individuals who were more Arrogant-Calculating (i.e., egotistical, cunning and exploitative) and Aloof-Introverted (i.e., unsociable), but less Unassuming-Ingenuous (i.e., obliging, non-argumentative, deferential) reported higher detection accuracy. Further, they found that individuals who were more trusting, agreeable and sociable had lower detection accuracy.

In attempting to identify different groups of people that are superior at detecting deception, some researchers have focused on individuals with psychopathy. Because individuals with psychopathic traits are known for possessing personality traits that lead them to be experts at deceiving others and manipulating the truth, some researchers have proposed that psychopaths may potentially be better at detecting deception, compared to the average person, due to their personal experience at deceiving (Klaver et al., 2009; Martin & Leach, 2013). However, not enough research has been conducted on the two, separate sub-factors, primary and secondary psychopathy, in relation to deception detection accuracy. Individuals with primary psychopathy exhibit different behaviors than individuals with secondary psychopathy, which is why it is important to study the two sub-factors separately.

When trying to figure out the components of deception detection ability, we must also consider the sex differences in deception detection accuracy as well as the personality traits among the individuals of each sub-factor of psychopathy. Little research has been conducted on the sex differences among individuals with psychopathy, making the literature on this topic inconclusive. For example, some research has suggested that females are better at judging veracity in others compared to males (Lyons, Healy & Bruno, 2013). However, when primary psychopathy was included into the analysis, males with primary psychopathic traits were more accurate at detection deception than females with primary psychopathic traits. These variables must be studied more in depth to get a better understanding of their relationship with each other.

Although researchers have suggested a link between psychopathy and an increased ability to detect deception (Lyons, Healy & Bruno, 2013), research still remains mixed on this topic. In order to understand deception detection in its entirety, further research must be conducted on the different types of personality traits that certain individuals possess that may make them more accurate in detecting deception in others. In an attempt to bridge the gap between conflicting research on psychopathy and deception detection, the current study examined the sex differences between college students with primary psychopathic traits as well as their personality traits and deception detection accuracy, in order to answer the following question: What personality traits do individuals with primary psychopathic traits possess that allow them to detect deception at a level greater than chance?

Psychopathy: Its Definition, Measurement, and Structure

Psychopathy was first described in 1941 by the American psychiatrist, Hervey M. Cleckley, in his book, *The Mask of Sanity*. The trait-based criteria for the classification of psychopathy, referred to as the “Cleckley criteria”, were first gathered from a variety of common case studies, which Cleckley (1941) used to identify the defining features of individuals with the disorder (Brinkley et al., 2001). These 16 criteria are summarized as: superficial charm, irrational thinking, absence of nervousness, unreliability, insincerity, lack of remorse, antisocial behavior, poor judgment, egocentricity, poverty of affective reactions, loss of insight, unresponsiveness in interpersonal relations, uninviting behavior, suicide threats rarely carried out, promiscuous sex life and failure to follow any life plan (Cleckley, 1976).

Currently, individuals with psychopathy make up an estimated one percent of the world's population (Anderson et al., 2014). Even though "psychopathy" has become the household name for the collection of personality traits that generally describe someone with a lack of remorse for others, criminal behavior, or pathological lying, it is still not recognized as a personality disorder. According to the American Psychiatric Association (APA), psychopathy is a construct under the umbrella of antisocial personality disorder (APD) in the fifth and most current edition of the Diagnostic and Statistical Manual for Mental Disorders (DSM-5) (APA 2013).

Because Cleckley never created a measure of psychopathy, Robert D. Hare did. Psychopathy is currently measured in adults by Hare's Psychopathy Checklist Revised (PCL-R), which classifies respondents with low scores as having an emotional dysfunction (primary psychopathy) and respondents with high scores as displaying antisocial behaviors (secondary psychopathy) (Hare, 1991). High scores on the PCL-R are also closely related to the diagnosis of APD (Blair, 2001). Some have considered APD and psychopathy to be synonymous, but Hare, Hart and Harpur (1991) differentiate the two based on their knowledge that "criminal behavior is central to the construct of APD, whereas psychopathy is a set of personality traits that can lead to criminality" (Gowlett, 2014, p. 3). Despite the lack of consensus on a definition, the collections of traits that describe psychopathy have been closely investigated for hundreds of years (Millon et al., 1998).

The Two Factor Model (TFM) for psychopathy, as described by Hare (1991), is generally the most accepted theory of psychopathy. Factor 1 (F1), also known as primary

psychopathy, is categorized by interpersonal and affective traits such as grandiosity, compulsive lying, and lack of empathy or remorse. Factor 2 (F2), also known as secondary psychopathy consists of lifestyle and antisocial traits such as impulsivity, and poor behavioral control. The two factors correlate in the range of .50, which suggests that they somewhat overlap (Miller, Gaughan & Pryor, 2008).

Because psychopaths are often over-categorized as criminals and killers who cannot function in normal society, the TFM has made it easier for researchers to categorize the different symptoms of this disorder depending on the type of psychopathy that exists. The TFM has also been proposed to comprise of a primary psychopathy, which is an “inherited affective deficit” and a secondary psychopathy, which is an “acquired affective disturbance” (Skeem et al., 2007, p. 395). Although, research still has not discovered whether there is a genetic predisposition for psychopathy.

Many different measures have been created to assess the traits of psychopathology, but the PCL-R remains the most commonly used among incarcerated offenders because of its comprehensive review assessing individuals using both personality and behavioral dimensions (Lynam, Whiteside & Jones, 1999). However, the creation of self-report measures of psychopathy that do not require the extensive interview portion of measurement paved the road for the research on successful psychopaths or non-violent psychopaths.

The term “successful psychopaths” describes the individuals who display the personality traits of psychopathy, such as low emotional intelligence and low empathy, but who are still functional members of society and typically avoid incarceration

(Mullins-Sweatt et al., 2010). Levenson, Kiehl and Fitzpatrick (1995) created the Levenson Self-Report Psychopathy Scale (LSRP), which excluded the lengthy interview in order to measure the two factors of psychopathy in non-institutionalized populations. Once the LSRP and other self-report scales for psychopathy gained credibility, the measurement of successful psychopaths became much more accessible to researchers and not just clinicians working with a criminal population.

Although psychopaths are not criminals by definition, there have been many cases that display an undeniable link between psychopathy and crime (Gowlett, 2014). For example, in some cases, psychopaths perform more violent crimes than any other type of criminal offender (Kosson, Smith & Newman, 1990; Ross, Lutz & Bailey, 2004). However, individuals with psychopathy can also be business professionals that lie and cheat their way to high-powered positions, such as CEOs and managers, who never commit violent crimes (Babiak & Hare, 2006). Even though psychopathy has been proposed as a multi-faceted construct as far back as 1941 (Karpman, 1941), there is still an ongoing debate about how many variants of psychopathy there truly are.

Deception Detection Among Psychopaths

Knowing that deception is a trait of psychopathic individuals, one can make assumptions about their ability to detect deception in others. Even though research has shown that psychopathic criminal offenders are less successful at deceiving others compared to non-psychopathic criminal offenders (Klaver et al., 2009), it may seem logical to conclude that individuals who frequently deceive others will have a heightened awareness and know what to look for when someone is lying due to all of the practice

that the individual has had in their experiences lying to others. In fact, one study by Lyons, Healy and Bruno (2013) reported that males with primary psychopathic traits had significantly greater deception detection ability compared to females with primary psychopathic traits.

However, other research has failed to find significant results suggesting that psychopathic individuals are more inclined to detect deception in others and also are unable to link psychopathy to the ability to detect deception with greater accuracy (Castellano, 2013; Martin & Leach, 2013; Peace & Sinclair, 2012). Although, the methods used across these studies are somewhat varied and may suggest that the results from each study are unable to be evenly compared. For example, even though Castellano (2013) used the same 10-lie/truth videos as the current study, and measured psychopathic traits using the LSRP, the hypothesis was focused on differences in lie bias between psychopathic individuals and non-psychopaths. Furthermore, Peace and Sinclair (2012) used written narratives for the participants to judge deception instead of pre-recorded videos.

Even though previous research has suggested that there may not be a significant relationship between psychopathic traits and the increased ability to detect deception, other research has suggested that there may be a significant difference between the way that psychopaths and non-psychopaths use cues in judging veracity in others. Peace and Sinclair (2012) found a significant, positive relationship between psychopathy scores and greater reliance on cues, such as hesitation, uneven flow, and repetition. In other words, participants who scored higher than most on the Youth Psychopathic Traits Inventory

(YPI) utilized the use of cues to help in making their judgments of veracity in other people. Future research should focus on the types of cues that psychopaths utilize to judge veracity in others compared to their non-psychopath counterparts.

Because the existing literature provides mixed results on psychopathy and the increased ability to detect deception, the focus should shift towards identifying the common personality traits among psychopaths who can detect deception greater than chance, so that the link between psychopathy and deception detection ability can be further explained by other psychological traits, such as personality.

Psychopathy and the Five-Factor Model for Personality

Before examining the connection between psychopathy and personality, the structure of personality has to be clarified. The Five Factor Model (FFM) for personality, also known as “The Big 5”, includes five domains: Openness, Conscientiousness, Extraversion, Agreeableness, and Neuroticism. In Costa and McCrae’s version of the Big Five, each broad domain has six underlying facets that are correlated to their respective domains. For example, “feelings” is a facet of Openness, “self-discipline” is a facet of Conscientiousness, “assertiveness” is a facet of Extraversion, “compliance” is a facet of Agreeableness, and “impulsiveness” is a facet of Neuroticism (Costa & McCrae, 1985; and other later sources).

In the literature on psychopathy and personality, the Big Five Inventory (BFI) (John, Donahue & Kentle, 1991) is the most widely used self-report measure for “The Big Five” personality domains. Researchers studying psychopathy use the BFI to measure which personality traits are most typical of individuals with psychopathy. For

instance, individuals with traits reflecting primary psychopathy have been described as having low scores on the BFI for Agreeableness and Conscientiousness, while individuals with traits reflecting secondary psychopathy have also been described as having high scores on the BFI for Neuroticism (Lynam et al., 1999; Miller et al., 2008; Poy et al., 2014; Ross et al., 2004). Lynam and colleagues (1999) further demonstrated that Factor 1 on the LSRP, which measures primary psychopathic traits, had the strongest negative correlation with Agreeableness on the BFI. Also, Factor 2 of the LSRP, which measures secondary psychopathic traits, was negatively correlated with Agreeableness, Conscientiousness, and positively correlated to Neuroticism on the BFI.

Miller et al. (2008) examined Widiger and Lynam's (1998) hypothesis that the FFM can adequately represent psychopathy. They measured the convergence of F1 and F2 of the LSRP by measuring their relationship to the personality traits of the Big Five. Results showed that F1 of the LSRP is associated with low Agreeableness, whereas F2 of the LSRP is related to high Neuroticism and low Conscientiousness. The total LSRP scores also showed a significant positive correlation to Neuroticism and also a significant negative correlation to the domains of Extraversion, Agreeableness, and Conscientiousness. Neuroticism was significantly related to both F1 and F2, however the magnitude of the correlation between F2 and Neuroticism was significantly stronger. Facets of Extraversion, such as warmth and positive emotion, were both negatively correlated with F1 and F2. For Openness, F1 was closely related to the facet of "openness to feelings", while F2 was more related to the "openness to fantasy" facet.

Overall, Miller and colleagues found that psychopathy could be adequately represented by the FFM.

Because the existing literature is contradictory and it is not clearly understood whether individuals who score high on psychopathic inventories are naturally better at detecting deception, further research on the personality traits among psychopathic individuals who can detect deception with greater accuracy is needed. The current research was intended to add to the literature by examining sex differences and to also confirm whether particular individual differences in personality traits are associated with primary psychopathy and the role that they play in the ability to detect deception.

Hypotheses

Hypothesis 1. In an attempt to replicate the findings from Lyons et al. (2013), we expected that sex would moderate the relationship between deception detection and primary psychopathic traits. More specifically, we hypothesized that men, who have primary psychopathic traits, as measured by the LSRP, would be able to detect deception with greater accuracy than women who have primary psychopathic traits.

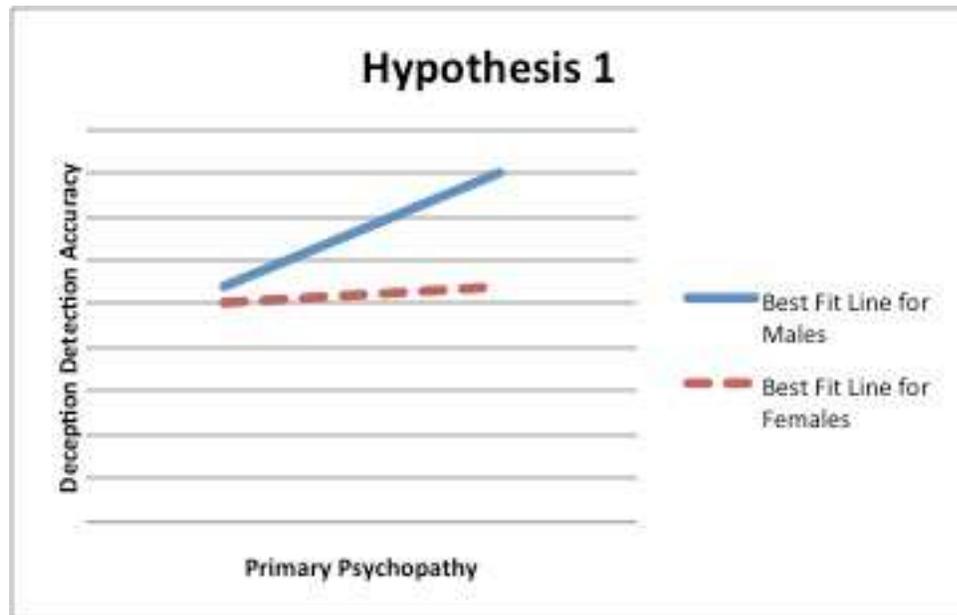


Figure 1

Hypothesis 1: Best-fit regression slopes for sex as a moderator between deception detection accuracy and primary psychopathic traits

Hypothesis 2. We hypothesized that the personality traits associated with primary psychopathy (low Agreeableness and low Conscientiousness) would display a negative relationship with deception detection accuracy. In other words, low scores on the Big Five Inventory for Agreeableness and Conscientiousness would be related to greater deception detection accuracy.

Method

Participants

The total sample consisted of 217 students enrolled in an undergraduate Psychology course at San Jose State University. Participants were recruited from SONA

Systems and also by personally introducing the research to undergraduate Psychology classes on campus. All participants were required to be fluent in English and also to be at least 18 years of age. Participants who did not complete both the online portion and the in-person portion were excluded from the analyses (excluded $n = 84$), creating a final sample of 133 participants. Participants' ages ranged from 18 to 24 years with a mean age of 18.81 years. Females accounted for a majority of the sample at 60.9% and the most frequent ethnicities were Asian (34.6%), Hispanic/Latino (30.1%), and White/Caucasian (15.8%). The sample consisted of 96 freshmen, 29 sophomores, 7 juniors, and 1 senior. All participants received credit towards their undergraduate Psychology course for participating in this study.

Measures

Demographics Questionnaire. All participants were asked to provide a self-report of their general demographics (see Appendix A). This survey included relevant questions that helped in further defining our sample (e.g., age, gender, and ethnicity).

Levenson Self-Report Psychopathy Scale (LSRP). The LSRP (Levenson et al., 1995) is a 26-item, self-report assessment tool to measure an individual's psychopathic tendencies or traits (see Appendix B). This scale separately measures primary psychopathic traits using the first 16 items and secondary psychopathic traits using the last 10 items. All items were constructed using the forced-choice paradigm and required the respondent to answer each item on a 4-point scale (1 = *Disagree Strongly*, 2 = *Disagree*, and 3 = *Agree*, 4 = *Agree Strongly*). Reverse-scored items are 10, 12, 14, 15, 16, 19, and 23. Each subscale was scored using a summation of the responses to the

collective items in each subscale. Total scores can range from 26 to 104, primary psychopathy scores can range from 16 to 64, and secondary psychopathy scores can range from 10 to 40. Because the LSRP is not intended to diagnose respondents with psychopathy, and is instead used to measure their psychopathic traits, clinical cutoff scores are not provided. One item on the LSRP scale that measures primary psychopathic traits was, “Success is based on survival of the fittest; I am not concerned about the losers” and one item that measures secondary psychopathic traits is, “I find myself in the same kinds of trouble, time after time.” The internal consistency for the total LSRP has been reported as (Cronbach $\alpha = .83$), F1 (Cronbach $\alpha = .82$), and F2 (Cronbach $\alpha = .61$) (Miller et al., 2008). For the current study, we calculated the internal consistency of the total LSRP as (Cronbach $\alpha = .76$), F1 (Cronbach $\alpha = .78$), and F2 (Cronbach $\alpha = .54$).

Big Five Inventory (BFI). The BFI (John et al., 1991) is a 44-item, self-report scale that measures individual’s personality traits based on the dimensions of the Big Five (see Appendix C). Respondents were asked to indicate the extent to which they agreed or disagreed with each item, with a 1 indicating that they disagreed strongly to a range of 5 indicating that they agreed strongly. The BFI measures the domains of Openness (e.g. I see myself as someone who is curious about many different things), Conscientiousness (e.g. I see myself as someone who can be somewhat careless), Extraversion (e.g. I see myself as someone who is talkative), Agreeableness (e.g. I see myself as someone who is considerate and kind to almost everyone), and Neuroticism (e.g. I see myself as someone who can be tense). Reverse-scored items were: 2, 6, 8, 9, 12, 18, 21, 23, 24, 27, 31, 34, 35, 37, 41, and 43. The domain scores of the BFI show

high internal consistency with Cronbach α coefficients ranging from .79 for Agreeableness and Conscientiousness to .88 for Extraversion (Lynam et al., 1999). For the current study, we calculated the internal consistency of the total BFI as (Cronbach α = .74), Openness (Cronbach α = .71), Conscientiousness (Cronbach α = .81), Extraversion (Cronbach α = .87), Agreeableness (Cronbach α = .67), and Neuroticism (Cronbach α = .80).

Deception Detection. Participants watched a sequence of 10 videos that are each approximately one minute in length (see Appendix D). Each video was a recorded conversation of a male interviewer asking another male interviewee what his opinions are regarding certain socially debatable topics, such as capital punishment and public smoking (Frank & Ekman, 1997). Unbeknownst to the viewers, five out of the 10 interviewees were telling the truth and the other five were lying about their opinions on such topics. Participants were asked to record which interviewees they believe were telling the truth and which were lying (see Appendix E). Accuracy was measured as the number of correct evaluations the participants made out of the 10-truth/lie videos.

Procedure

When individuals volunteered to participate in this study, they logged in to their SONA account and signed up for Part 1, the online portion of the study. Once the participants signed up for Part 1, they had access to the online portion of the experiment where they agreed to the online consent form (see Appendix F), and took the demographic questionnaire, LSRP scale, and the BFI surveys. In order to sign up for a time slot for Part 2, the in-person portion of the study, they were required to fully

complete Part 1. Once Part 1 was completed, participants signed up for a time slot to complete Part 2 of the study in-person at the San Jose State University campus in Dudley Moorhead Hall. When participants arrived for their scheduled time slot, they were given the in-person consent form (see Appendix G) and response sheet. Once the consent form was signed by the participant, the researcher informed the participant that he or she would be watching a series of 10 videos in which different men talk about their opinions on morally debatable topics such as capital punishment and public smoking. Participants were then notified that some of the men were lying and some of the men were telling the truth. By telling them this information, they would be able to choose which videos fit under the correct categories of “being truthful” or “being deceptive”. A MacBook Pro laptop was used to display the videos onto two LCD projectors in the classroom where the participants watched them. After viewing each individual video, participants had 30 seconds to complete their responses on their handout for which category they believed the video belonged in. After completing the full sequence of the 10 videos and response times, the participants handed their response sheets to the researcher and were thanked for their participation. After Part 2 was completed, participants were debriefed that the study is looking at the relationship between primary psychopathic traits, personality type and deception detection ability. They were also reminded that any inquiries or questions could be answered by contacting the researcher via email.

Results

Descriptive Statistics

On average, participants correctly detected deception with 53.6% accuracy (see Figure 2). Participants' overall confidence in their responses was not significantly related to total accuracy, $r(131) = .04, p = .68$. An independent samples t-test was conducted to examine the difference between means of male and female accuracy scores. The t-test revealed that there was no significant difference between the accuracy scores of males ($M = 5.48, SD = 1.41$) and females ($M = 5.28, SD = 1.54$), $t(131) = .745, p = .36$.

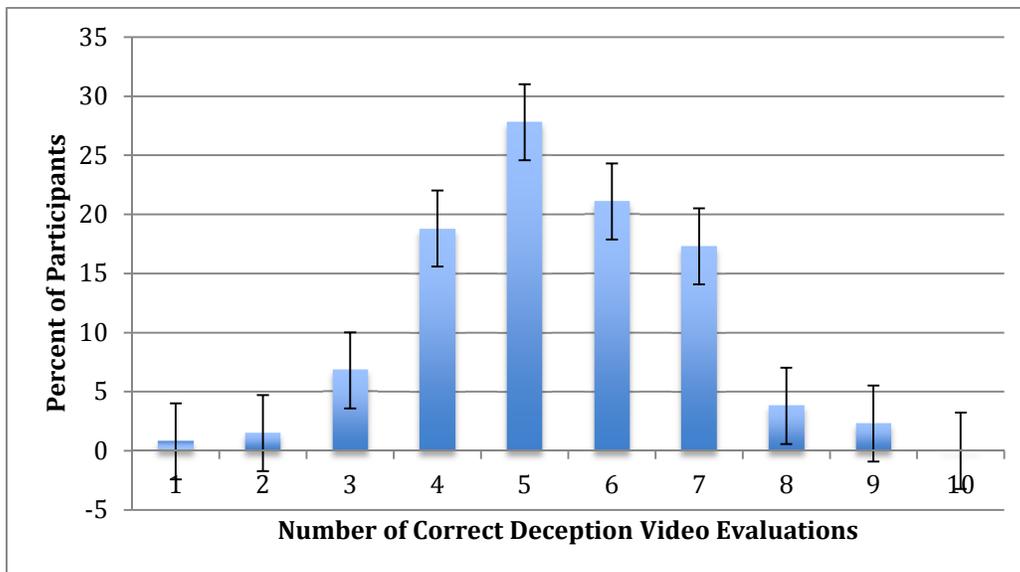


Figure 2

Total video accuracy

The descriptive statistics for the LSRP, BFI and the accuracy on the deception detection videos can be found in Table 1. Males ($M = 34.98, SD = 6.84$) had a

significantly higher average score for LSRP Primary Psychopathy compared to females ($M = 31.85$, $SD = 4.39$), $t(131) = 3.22$, $p = .01$. Overall, participants' scores for Primary Psychopathy ranged from 20 to 61, which represents a low occurrence of primary psychopathic traits in our sample. Participants' scores for Secondary Psychopathy ranged from 15 to 33, which also represents a low occurrence of secondary psychopathic traits in our sample. We did not conduct any further analyses on the LSRP scores for Secondary Psychopathy because we were focused on examining LSRP Primary Psychopathy for this study.

Table 1

Descriptive statistics for LSRP, BFI and deception detection accuracy

	<i>n</i>	<i>M</i>	<i>SD</i>	Range
LSRP				
Primary Psychopathy	133	33.08	5.67	20-61
Males	52	34.98	6.84	20-61
Females	81	31.85	4.39	22-44
Secondary Psychopathy	133	22.74	3.29	15-33
BFI				
Openness	133	34.88	4.90	24-47
Conscientiousness	133	28.65	5.20	14-44
Extraversion	133	25.24	6.28	12-39
Agreeableness	133	33.13	4.33	21-42
Neuroticism	133	25.78	5.44	11-37
Deception Detection				
Total video accuracy	133	5.36	1.48	1-9
Males	52	5.48	1.41	
Females	81	5.28	1.54	
0% - 20% accuracy	3			
30% - 50% accuracy	71			
60% - 80% accuracy	56			
90% - 100% accuracy	3			

Planned Analyses

To test *Hypothesis 1*, that sex would moderate the relationship between lie detection accuracy and LSRP Primary Psychopathy scores, we first calculated correlations between accuracy and primary psychopathy separately for males and females and then tested whether these correlations were significantly different from one another using a Fisher's r to z transformation. Deception detection accuracy was not correlated with LSRP Primary Psychopathy scores for males, $r(50) = .19, p = .18$, or for females, $r(79) = -.08, p = .50$. Furthermore, the difference between these correlations was not statistically significant, $z = 1.47, p = .07$. However, we did discover a non-significant trend showing that males with primary psychopathic traits tended to be more accurate at detecting deception compared to females with primary psychopathic traits.

To test *Hypothesis 2*, that low scores on the BFI for Agreeableness and Conscientiousness would be significantly correlated with higher deception detection accuracy, a one-tailed bivariate correlation was conducted. There was no significant relationship between Agreeableness and Accuracy, $r(131) = .03, p = .38$, or between Conscientiousness and Accuracy, $r(131) = .09, p = .15$.

Exploratory Analyses

Upon examination of the scatterplots on the relationships between personality traits and deception detection accuracy, we decided (post-hoc) to test for quadratic and cubic relationships. Although our tests were not statistically significant, they suggested that there may be a quadratic, rather than linear, relationship between Agreeableness and deception detection accuracy, $R^2(2, 130) = .03, p = .14$. That is, participants who were

either low or high on Agreeableness had better accuracy than those who scored in the middle for Agreeableness. Also, our tests suggested that the relationship between Conscientiousness and deception detection accuracy was cubic, rather than linear, $R^2(3, 129) = .03, p = .30$. More specifically, participants who scored high on Conscientiousness were more accurate at detecting deception than participants who scored low on Conscientiousness. However, those who scored in the middle on Conscientiousness had no relationship to detection accuracy. The scatterplots displaying these relationships can be found in Figure 3 and Figure 4.

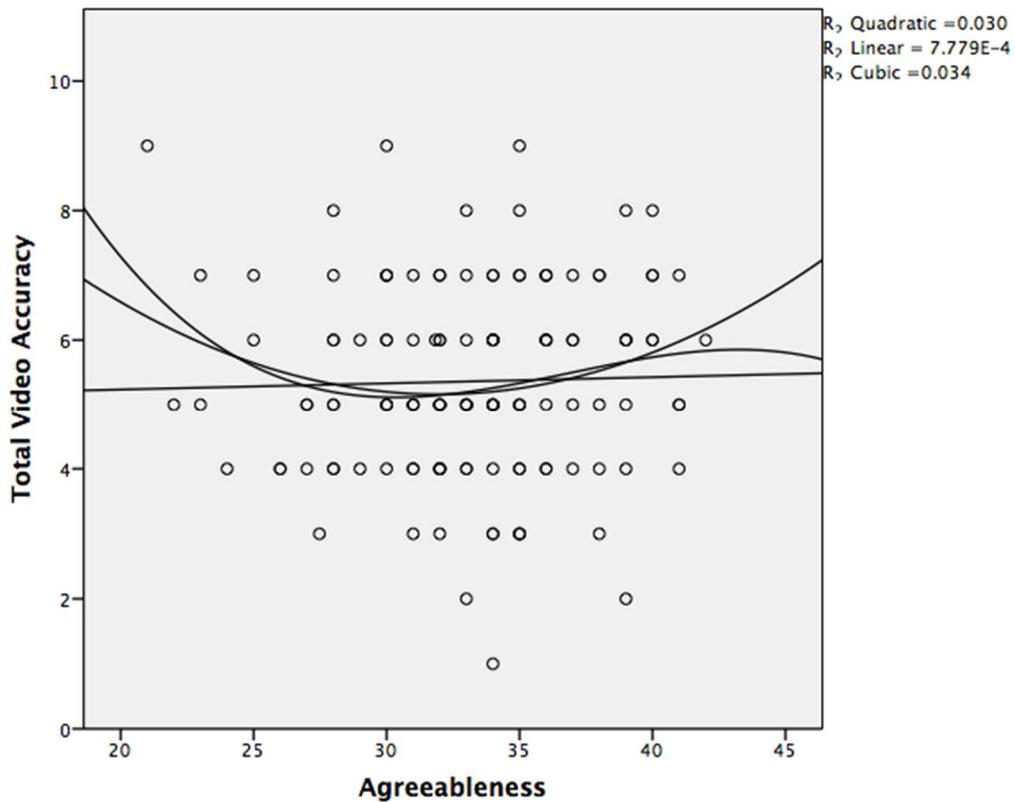


Figure 3

Quadratic Regression of Agreeableness and Detection Accuracy

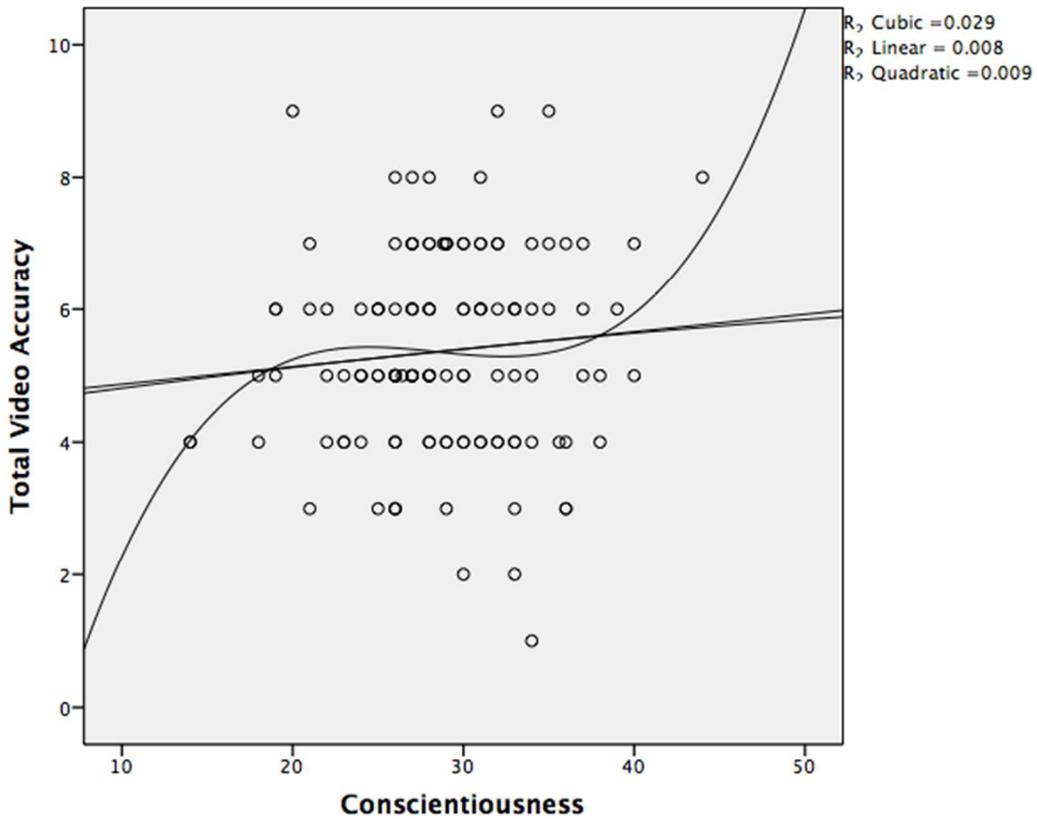


Figure 4

Cubic Regression of Conscientiousness and Detection Accuracy

Discussion

In one of the most noteworthy articles in the deception detection literature, Bond and DePaulo (2006) conducted a meta-analysis on the accuracy of deception judgments. They concluded that the average person is able to detect deception with only 54% accuracy, when 50% would be due to chance. Interestingly, the current study also reported 54% accuracy. From that point on, researchers have continued trying to identify certain groups of individuals that are superior at deception detection with little success.

The world's population of psychopaths has provided a focal point for researchers studying the relationship between personality traits and deception detection ability. However, even after decades of research, there is still much to learn about psychopathy. The present study sought to add to the literature by examining the sex differences and personality traits of college students with primary psychopathic traits in relation to deception detection accuracy, in hopes of answering the question: What personality traits do people with primary psychopathic traits possess that aid their deception detection ability?

Findings and Implications of the Current Study

Hypothesis 1 stated that males with primary psychopathic traits would detect deception with greater accuracy than females with primary psychopathic traits. Our reasoning for this hypothesis comes from the findings based on a similar experiment from Lyons, Healy and Bruno (2013). However, our results did not support this hypothesis. Our results for Hypothesis 1 may have differed from those of Lyons and colleagues (2013) due to methodological differences. More specifically, Lyons and colleagues used real news broadcasts from major television channels to represent real life deception, while the current study used videos of interviewers who were randomly assigned to the deception or truthful groups. Despite the differences in methodologies, the current study found a non-significant trend that males with primary psychopathic traits tended to be more accurate at detecting deception than females with primary psychopathic traits. These findings suggest that sex may moderate a small relationship between primary

psychopathic traits and deception detection. This could be due to evolutionary advantages for males to benefit from detecting deception.

Lyons, Healy and Bruno (2013) made a claim that primary psychopathy is a “male-specific adaptation” and that successful male psychopaths are likely to be better judges of veracity in others because they can benefit from processing deceptive information accurately in order to achieve the high-powered occupations that individuals with these personality traits typically aim to achieve. This would make sense given the history of men holding more high-powered occupations compared to women. To test this theory, researchers should recruit successful businessmen and women for their future research and examine the sex differences on psychopathy and personality measures as well as measure the relationship between those variables and deception detection accuracy.

Hypothesis 2 stated that low scores on the BFI for Agreeableness and Conscientiousness would result in greater deception detection accuracy. Our results also did not support this hypothesis. Low scores for Agreeableness as well as low scores for Conscientiousness on the BFI showed no significant relationship with increased deception detection accuracy. These results were likely due to our sample of college students, who overall, reported high scores for Agreeableness and Conscientiousness. In order to find support for this hypothesis, future research would benefit from recruiting participants who are more likely to score low on these personality traits.

Although our second hypothesis was not supported, we found a small, non-significant and non-linear relationship between personality traits (i.e., Agreeableness and

Conscientiousness) and detection accuracy. Participants with low or high scores for Agreeableness were both related to higher accuracy. Because this relationship was quadratic, scores in the middle were least accurate at detecting deception. Participants with low scores for Conscientiousness were related to low accuracy, while high scores were related to higher accuracy. Because this relationship was cubic, scores in the middle for Conscientiousness were the least accurate at detecting deception.

Although these findings were not significant, they suggest that individuals who are agreeable and conscientious may be more accurate at detecting deception. This trend may be explained by the idea that the participants in the current study who scored high for these two personality traits were simply more attentive to the deception videos or may have attempted to do their best because the experiment took place at school. However, this explanation would not hold true for the participants who scored low on Agreeableness because, just as we hypothesized, they were also related to higher accuracy. The participants who scored low for this personality trait may have been more accurate at detecting deception because they may be more familiar with the verbal and nonverbal cues that the deceptive interviewees displayed on the videos. On the other hand, unlike our hypothesis, participants who scored low for Conscientiousness also scored low in accuracy. We expected that the personality traits associated with primary psychopathy (i.e., low Conscientiousness) would translate to higher accuracy scores for deception detection. Because this was not the case, participants who scored low for Conscientiousness may have been less accurate because they were less dedicated to

completing the experiment properly. Overall, these trends only begin to explain the complex relationship between personality and deception detection accuracy.

Limitations

One limitation of deception research is that there is not one specific verbal or nonverbal cue that automatically qualifies a statement as a lie or truth. The act of lying can be unique to each individual and a liar's behaviors can vary based on his or her characteristics, to whom the lie is being told, the situation that the liar is in as well as the emotional content of the lie (DePaulo & Tang, 1994). This makes detecting lies extremely difficult and also provides one explanation for the fact that the average person can only detect deception with about 54% accuracy. To increase the accuracy of deception detection, individuals should attend to a wide variety of verbal and nonverbal cues and also become aware of the different circumstances in which the liar may be presented with.

Ekman (1992) described two potential explanations for such low deception detection accuracy in the literature. First, he argued that the emotions, such as fear, guilt, or excitement, that are typically present when a liar attempts to successfully get away with a lie, are not evoked in a laboratory setting. The liars in these studies simply do not have the motivation behind lying as they would in real life. This affects the ability of judges to detect the liars' deception because there would not be any emotion to prompt the judge that the liar is actually being deceptive. As Ekman, O'Sullivan and Frank (1999) perfectly explain it, "Without these emotional reactions interfering with thought processes, it is easier for the liar to assemble words into a credible fabrication" (p.263).

Secondly, Ekman (1992) argued that there might be no real difference between the liars and the truth tellers in the videotapes of deception research in general. Furthermore, he explained that the studies that utilize these videotapes to measure detection accuracy do not analyze the behavioral cues of the subjects displaying deceptive and truthful statements. Consequently, there may be no real verbal or nonverbal clues of deceit for the judges to detect. Paul Ekman and Walter Friesen previously solved this issue in 1976 and 1978, when they created the Facial Action Coding System (FACS) (Ekman & Rosenberg, 1997).

The FACS was created to provide a valid and reliable measurement of nonverbal cues in the form of facial expressions to predict human emotion. This technique of detecting facial expressions is interesting because it is based on the premise that all human beings use the same muscles in the face to display certain emotions. For example, there is an anatomical difference between a sincere smile (i.e., Duchenne smile) and an insincere smile (i.e., Pan Am smile). The FACS uses the anatomy of the facial muscles to identify emotions and therefore is able to aid deception detection.

In order to overcome some of the common problems with most deception videos, Frank and Ekman (1997), who originally produced the 10 videos that were used in the current study, had each video coded by a FACS-trained scorer. The scorer confirmed that each subject in the video displayed specific facial expressions that cued to deceit or truthfulness. More specifically, 90% of the liars in the 10 videos had a presence of either fear or disgust, while 70% of the truth tellers in the 10 videos had an absence of fear or disgust (Frank & Ekman, 1997). This system for coding facial movements has shown to

provide a reliable way for studying deception and has mostly eradicated the previously mentioned limitations described by Ekman (1992).

Although the FACS has provided a solution to a certain issue pertaining to the use of pre-recorded videotapes of liars and truth tellers, FACS-coded videos are still at risk for low ecological validity. When participants watch a recorded video of another person lying, it somewhat differs from how they would encounter or interact with a liar in person. When a conversation takes place, each individual is not previously reminded that the other may be lying or may be telling the truth, as it is in most laboratory settings when studying deception detection. Our goal in telling the participants this information was to follow the procedures of the original study that created the 10 lie/truth videos (Frank & Ekman, 1997) and so that there would be no confusion about the task that is being asked of them. However, when participants are reminded that deception may occur, it gives them the opportunity to be biased towards the individuals in the videos.

Another limitation to the current research is the sample. Our sample of college students does not fully represent the general population, which presents an issue when drawing conclusions from our results. For example, 34.6% of our sample consisted of Asian participants, while the United States population only consists of about 5.3% (U.S. Census Bureau, 2013). Furthermore, our sample had a majority of females (60.9%), while the U.S. population has around 50% females.

Also, our sample had a low occurrence of individuals with primary psychopathic traits. Using a sample with low scores for primary psychopathy can limit our research in many ways. For example, if our sample had a representative occurrence of primary

psychopathic traits, we would have been able to draw generalizable conclusions from our findings. Also, if we had more participants with primary psychopathic traits, we may have found significant results that support our hypotheses. Since this was not the case, our results fall short in accurately representing individuals with primary psychopathic traits. In order to study the relationship between these traits and deception detection accuracy, a greater sample of individuals who score high on the LSRP for primary psychopathy is needed.

Future Research and Concluding Remarks

Although significant results were not found, we believe that future research should continue to attempt to replicate the current study, with the exception of recruiting a sample that is more likely to have primary psychopathic traits. As previous research has stated, the successful psychopaths are individuals who mask their psychosis and blend into society (Babiak & Hare, 2006; Cleckley, 1941). Due to the widespread use of college samples in psychological research, future researchers may consider using students from majors on campus that would appeal to an individual with primary psychopathic traits, such as the business or finance departments. These majors may host a greater sub-population of successful psychopaths compared to the Psychology department because degrees in these disciplines have the stereotype of leading to high-paying and highly successful careers after graduation. If primary psychopathy is a “male-specific adaptation”, as Lyons et al. (2013) claims, then male students with primary psychopathic traits may seek these majors on campus, in hopes of achieving a well-paying career to provide for their future family. Future research should also aim to recruit male

participants with primary psychopathic traits in the business and finance disciplines to test this hypothesis.

It is also worth noting that unconscious processes may improve lie detection accuracy (Reinhard et al., 2013). More specifically, research suggests that if an individual performs a taxing, non-related task in between viewing a lie/truth video and making a judgment about the veracity of the subject in the video, greater judgment accuracy can be achieved. Reinhard and colleagues (2013) attribute this finding to the ability of unconscious processes to lessen the constraints that conscious thought pose on an individual when making a veracity judgment. For example, they explain how unconscious thought has more processing capacity than conscious thought. Therefore, when an individual allows their unconscious to process the statement from the lie/truth video, they will have greater capacity to process the important cues that prompt a correct judgment of the veracity of the statement.

Future research should also explore the non-linear relationships between personality traits and detection ability more in depth. Although non-significant, these small relationships that were found in the current study reflect a trend that occurs among the participants. The fact that these relationships are best explained by quadratic and cubic formulas suggests that these variables are complex and require more testing other than just a Pearson correlation.

In conclusion, our ultimate goal was to add to the deception detection literature by gaining knowledge on the different variables that aid in accuracy of judging veracity in others. The current study aimed to find support for the hypothesis that sex moderates the

relationship between primary psychopathic traits and deception detection accuracy. We also thought there would be a significant relationship between low scores on the BFI for Agreeableness/Conscientiousness and high deception detection accuracy. Although no significant results were found, we did uncover small, non-linear trends in how sex differences and personality traits may affect deception detection ability among college students with primary psychopathic traits. Future research should examine these non-linear trends and attempt to replicate them with more representative samples and with samples that have higher (clinical) levels of psychopathology. Overall, we hope that our research takes the knowledge of deception detection ability one step further.

References

- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders: DSM-5*. Washington, DC: American Psychiatric Association.
- Anderson, J. L., Sellbom, M., Wygant, D. B., Salekin, R. T., & Krueger, R. F. (2014). Examining the associations between DSM-5 section III antisocial personality disorder traits and psychopathy in community and university samples. *Journal of Personality Disorders, 28*, 675-697.
- Babiak, P. & Hare, R. D. (2006). *Snakes in suits: When psychopaths go to work*. New York, NY, US: Regan Books/Harper Collins Publishers.
- Blair, R. J. (2001). Neurocognitive models of aggression, the antisocial personality disorders, and psychopathy. *Journal of Neurology, Neurosurgery, and Psychiatry, 71*, 727-731.
- Bond, C. F., & DePaulo, B. M. (2006). Accuracy of deception judgments. *Personality and Social Psychology Review, 10*, 214-234.
- Bond, C. F., & Uysal, A. (2008). On lie detection “Wizards”. *Law and Human Behavior, 31*, 109-115.
- Brinkley, C. A., Schmitt, W. A., Smith, S. S., & Newman, J. P. (2001). Construct validation of a self-report psychopathy scale: Does Levenson’s self-report psychopathy scale measure the same constructs as Hare’s psychopathy checklist revised? *Personality and Individual Differences, 31*, 1021-1038.
- Campbell, M. A., & Porter, S. (2002). Pinpointing reality: How well can people judge true and mistaken emotional childhood memories? *Canadian Journal of Behavioural Science, 34*, 217-229.
- Castellano, L. (2013). *Psychopathy and deception detection* (Unpublished Master’s Thesis). San Jose State University, San Jose.
- Cleckley, H. (1941/1976). *The mask of sanity*. St. Louis, Mo: Mosby.
- Costa, P. T., Jr & McCrae, R. R. (1985). *The NEO personality inventory manual*. Odessa, FL: Psychological Assessment Resources.
- DePaulo, B. M., Kashy, D. A., Kirkendol, S. E., Wyer, M. M., & Epstein, J. A. (1996). Lying in everyday life. *Journal of Personality and Social Psychology, 70*, 979-995.
- DePaulo, B. M., & Tang, J. (1994). Social anxiety and social judgment: The example of detecting deception. *Journal of Research in Personality, 28*, 142-153.

- Ekman, P. (1992). *Telling lies: Clues to deceit in the marketplace, politics, and marriage* (2nd ed.). New York, NY: WW Norton.
- Ekman, P., & O'Sullivan, M. (1991). Who can catch a liar? *American Psychologist*, *46*, 913-920.
- Ekman, P., O'Sullivan, M., & Frank, M. G. (1999). A few can catch a liar. *Psychological Science*, *10*, 263-266.
- Ekman, P. & Rosenberg, E. (1997). *What the face reveals: Basic and applied studies of spontaneous expression using the facial action coding system (FACS)*. New York, NY: Oxford University Press, Inc.
- Frank, M. G., & Ekman, P. (1997). The ability to detect deceit generalizes across different types of high-stake lies. *Journal of Personality and Social Psychology*, *72*, 1429-1439.
- Gowlett, C. T. (2014). Does secondary psychopathy exist? Exploring conceptualisations of psychopathy and evidence for the existence of a secondary variant of psychopathy. *Internet Journal of Criminology*.
- Hare, R. D., Hart, S. D., & Harpur, T. J. (1991). Psychopathy and the DSM-IV criteria for antisocial personality disorder. *Journal of Abnormal Psychology*, *100*, 391-398.
- John, O. P., Donahue, E. M., & Kentle, R. L. (1991). *The big five inventory--Versions 4a and 54*. Berkeley, CA: University of California, Berkeley, Institute of Personality and Social Research.
- Karpman, B. (1941). On the need of separating psychopathy into two distinct clinical types: The symptomatic and the idiopathic. *Journal of Criminology and Psychopathology*, *3*, 112-137.
- Klaver, J. R., Lee, Z., Spidel, A., & Hart, S. D. (2009). Psychopathy and deception detection using indirect measures. *Legal and Criminological Psychology*, *14*, 171-182.
- Kosson, D. S., Smith, S. S., & Newman, J. P. (1990). Evaluating the construct validity of psychopathy in black and white male inmates: Three preliminary studies. *Journal of Abnormal Psychology*, *99*, 250-259.
- Levenson, M. R., Kiehl, K. A., & Fitzpatrick, C. M. (1995). Assessing psychopathic attributes in a noninstitutionalized population. *Journal of Personality and Social Psychology*, *68*, 151-158.

- Lynam, D. R., Whiteside, S., & Jones, S. (1999). Self-reported psychopathy: A validation study. *Journal of Personality Assessment*, *73*, 110-132.
- Lyons, M., Healy, N., & Bruno, D. (2013). It takes one to know one: Relationship between lie detection and psychopathy. *Personality and Individual Differences*, *55*, 676-679.
- Martin, K., & Leach, A. M. (2013). Psychopathy and deception detection. *Personality and Mental Health*, *7*, 154-159.
- Miller, J. D., Gaughan, E. T., & Pryor, L. R. (2008). The levenson self-report psychopathy scale: An examination of the personality traits and disorders associated with the LSRP factors. *Assessment*, *15*, 450-463.
- Millon, T., Simonsen, E., Birket-Smith, M., & Davis, R.D. (1998). *Psychopathy: Antisocial, criminal, and violent behaviors*. Guilford: New York.
- Mullins-Sweatt, S. N., Glover, N. G., Derefinko, K. J., Miller, J. D. & Widiger, T. A. (2010). The search for the successful psychopath. *Journal of Research in Personality*, *44*, 554-558.
- O'Sullivan, M., & Ekman, P. (2004). The wizards of deception detection. In P.A. Granhag, L.A. Stromwall (Eds.), *Deception detection in forensic contexts*, (pp. 269–286). Cambridge Press, Cambridge, UK.
- Peace, K. A., & Sinclair, S. M. (2012). Cold-blooded lie catchers? An investigation of psychopathy, emotional processing, and deception detection. *Legal and Criminological Psychology*, *17*, 177-191.
- Porter, S., Woodworth, M., & Birt, A. R. (2000). Truth, lies, and videotape: An investigation of the ability of federal parole officers to detect deception. *Law and Human Behavior*, *24*, 181-224.
- Poy, R., Segarra, P., Esteller, A., Lopez, R., & Molto, J. (2014). FFM description of the triarchic conceptualization of psychopathy in men and women. *Psychological Assessment*, *26*, 69-76.
- Reinhard, M. A., Greifeneder, R., & Scharmach, M. (2013). Unconscious processes improve lie detection. *Journal of Personality and Social Psychology*, *105*, 721-739.
- Ross, S. R., Lutz, C. J., & Bailley, S. E. (2004). Psychopathy and the five factor model in a noninstitutionalized sample: A domain and facet level analysis. *Journal of Psychopathology and Behavioral Assessment*, *26*, 213-223.

- Skeem, J., Kerr, M., Eno Louden, J., Johansson, P., & Andershed, H. (2007). Two subtypes of psychopathic violent offenders that parallel primary and secondary variants. *Journal of Abnormal Psychology, 116*, 395-409.
- Widiger, T. A., & Lynam, D. R. (1998). Psychopathy and the five-factor model of personality. In T. Millon (Ed). *Psychopathy: Antisocial, criminal, and violent behaviors* (pp. 171-187). New York, NY: Guilford.

Appendix A

Demographic Questionnaire

Demographic Questionnaire

Age: _____

Sex:

____ Male

____ Female

____ Other

Ethnicity:

____ African-American ____ Middle Eastern

____ Asian ____ More than one race

____ White (Caucasian) ____ Unknown or not reported

____ Hispanic or Latino ____ Decline to answer

____ American Indian

Education Level:

____ Freshman

____ Sophomore

____ Junior

____ Senior

____ Other

Have you ever had any prior training on deception detection?

____ Yes ____ No

Appendix B

Levenson Self-Report Psychopathy Scale (LSRP)

1. Success is based on survival of the fittest; I am not concerned about the losers.
Strongly Disagree Disagree Agree Strongly Agree
2. For me, what's right is whatever I can get away with.
Strongly Disagree Disagree Agree Strongly Agree
3. In today's world, I feel justified in doing anything I can get away with to succeed.
Strongly Disagree Disagree Agree Strongly Agree
4. My main purpose in life is getting as many goodies as I can.
Strongly Disagree Disagree Agree Strongly Agree
5. Making a lot of money is my most important goal.
Strongly Disagree Disagree Agree Strongly Agree
6. I let others worry about higher values; my main concern is with the bottom line.
Strongly Disagree Disagree Agree Strongly Agree
7. People who are stupid enough to get ripped off usually deserve it.
Strongly Disagree Disagree Agree Strongly Agree
8. Looking out for myself is my top priority.
Strongly Disagree Disagree Agree Strongly Agree
9. I tell other people what they want to hear so that they will do what I want them to do.
Strongly Disagree Disagree Agree Strongly Agree
10. I would be upset if my success came at someone else's expense.
Strongly Disagree Disagree Agree Strongly Agree
11. I often admire a really clever scam.
Strongly Disagree Disagree Agree Strongly Agree

12. I make a point of trying not to hurt others in pursuit of my goals.
Strongly Disagree Disagree Agree Strongly Agree
13. I enjoy manipulating others people's feelings.
Strongly Disagree Disagree Agree Strongly Agree
14. I feel bad if my words or actions cause someone else to feel emotional pain.
Strongly Disagree Disagree Agree Strongly Agree
15. Even if I were trying very hard to sell something, I wouldn't lie about it.
Strongly Disagree Disagree Agree Strongly Agree
16. Cheating is not justified because it is unfair to others.
Strongly Disagree Disagree Agree Strongly Agree
17. I find myself in the same kinds of trouble, time after time.
Strongly Disagree Disagree Agree Strongly Agree
18. I am often bored.
Strongly Disagree Disagree Agree Strongly Agree
19. I find that I am able to pursue one goal for a long time.
Strongly Disagree Disagree Agree Strongly Agree
20. I don't plan anything very far in advance.
Strongly Disagree Disagree Agree Strongly Agree
21. I quickly lose interest in tasks I start.
Strongly Disagree Disagree Agree Strongly Agree
22. Most of my problems are due to the fact that other people just don't understand me.
Strongly Disagree Disagree Agree Strongly Agree
23. Before I do anything, I carefully consider the possible consequences.
Strongly Disagree Disagree Agree Strongly Agree

24. I have been in a lot of shouting matches with other people.

Strongly Disagree Disagree Agree Strongly Agree

25. When I get frustrated, I often “let off steam” by blowing my top.

Strongly Disagree Disagree Agree Strongly Agree

26. Love is overrated.

Strongly Disagree Disagree Agree Strongly Agree

Appendix C

Big Five Inventory (BFI)

Here are a number of characteristics that may or may not apply to you. For example, do you agree that you are someone who likes to spend time with others? Please write a number next to each statement to indicate the extent to which you agree or disagree with that statement.

Disagree strongly 1	Disagree a little 2	Neither agree nor disagree 3	Agree a little 4	Agree strongly 5
---------------------------	---------------------------	------------------------------------	------------------------	------------------------

I see Myself as Someone Who...

- | | |
|---|--|
| <p>___ 1. Is talkative</p> <p>___ 2. Tends to find fault with others</p> <p>___ 3. Does a thorough job</p> <p>___ 4. Is depressed, blue</p> <p>___ 5. Is original, comes up with new ideas</p> <p>___ 6. Is reserved</p> <p>___ 7. Is helpful and unselfish with others</p> <p>___ 8. Can be somewhat careless</p> <p>___ 9. Is relaxed, handles stress well</p> <p>___ 10. Is curious about many different things</p> <p>___ 11. Is full of energy</p> <p>___ 12. Starts quarrels with others</p> <p>___ 13. Is a reliable worker</p> <p>___ 14. Can be tense</p> <p>___ 15. Is ingenious, a deep thinker</p> <p>___ 16. Generates a lot of enthusiasm</p> <p>___ 17. Has a forgiving nature</p> <p>___ 18. Tends to be disorganized</p> <p>___ 19. Worries a lot</p> <p>___ 20. Has an active imagination</p> <p>___ 21. Tends to be quiet</p> <p>___ 22. Is generally trusting</p> | <p>___ 23. Tends to be lazy</p> <p>___ 24. Is emotionally stable, not easily upset</p> <p>___ 25. Is inventive</p> <p>___ 26. Has an assertive personality</p> <p>___ 27. Can be cold and aloof</p> <p>___ 28. Perseveres until the task is finished</p> <p>___ 29. Can be moody</p> <p>___ 30. Values artistic, aesthetic experiences</p> <p>___ 31. Is sometimes shy, inhibited</p> <p>___ 32. Is considerate and kind to almost everyone</p> <p>___ 33. Does things efficiently</p> <p>___ 34. Remains calm in tense situations</p> <p>___ 35. Prefers work that is routine</p> <p>___ 36. Is outgoing, sociable</p> <p>___ 37. Is sometimes rude to others</p> <p>___ 38. Makes plans and follows through with them</p> <p>___ 39. Gets nervous easily</p> <p>___ 40. Likes to reflect, play with ideas</p> <p>___ 41. Has few artistic interests</p> <p>___ 42. Likes to cooperate with others</p> <p>___ 43. Is easily distracted</p> <p>___ 44. Is sophisticated in art, music, or literature</p> |
|---|--|

Please check: Did you write a number in front of each statement?

Appendix D

Deception Detection Video



Appendix E

Response Sheet

Response Sheet

Video 1:

The subject was: _____ Being truthful _____ Being Deceptive

Confidence in your response:	1 Not Confident	2 Somewhat Unconfident	3 Somewhat Confident	4 Very Confident
---------------------------------	-----------------------	------------------------------	----------------------------	---------------------

Video 2:

The subject was: _____ Being truthful _____ Being Deceptive

Confidence in your response:	1 Not Confident	2 Somewhat Unconfident	3 Somewhat Confident	4 Very Confident
---------------------------------	-----------------------	------------------------------	----------------------------	---------------------

Video 3:

The subject was: _____ Being truthful _____ Being Deceptive

Confidence in your response:	1 Not Confident	2 Somewhat Unconfident	3 Somewhat Confident	4 Very Confident
---------------------------------	-----------------------	------------------------------	----------------------------	---------------------

Video 4:

The subject was: _____ Being truthful _____ Being Deceptive

Confidence in your response:	1 Not Confident	2 Somewhat Unconfident	3 Somewhat Confident	4 Very Confident
---------------------------------	-----------------------	------------------------------	----------------------------	---------------------

Video 5:

The subject was: _____ Being truthful _____ Being Deceptive

Confidence in your response:	1 Not Confident	2 Somewhat Unconfident	3 Somewhat Confident	4 Very Confident
---------------------------------	-----------------------	------------------------------	----------------------------	---------------------

Video 6:

The subject was: _____ Being truthful _____ Being Deceptive

Confidence in your response: 1 2 3 4
 Not Somewhat Somewhat Very Confident
 Confident Unconfident Confident

Video 7:

The subject was: _____ Being truthful _____ Being Deceptive

Confidence in your response: 1 2 3 4
 Not Somewhat Somewhat Very Confident
 Confident Unconfident Confident

Video 8:

The subject was: _____ Being truthful _____ Being Deceptive

Confidence in your response: 1 2 3 4
 Not Somewhat Somewhat Very Confident
 Confident Unconfident Confident

Video 9:

The subject was: _____ Being truthful _____ Being Deceptive

Confidence in your response: 1 2 3 4
 Not Somewhat Somewhat Very Confident
 Confident Unconfident Confident

Video 10:

The subject was: _____ Being truthful _____ Being Deceptive

Confidence in your response: 1 2 3 4
 Not Somewhat Somewhat Very Confident
 Confident Unconfident Confident

Appendix F

Online Consent Form

REQUEST FOR YOUR PARTICIPATION IN RESEARCH

SOCIAL COGNITION AND PERSONALITY STUDY

MEGAN MALMSTROM, San Jose State University graduate student

PURPOSE

The purpose of this experiment is to gather generalizable knowledge on individuals' deception detection abilities. This study is being conducted in fulfillment of San Jose State University's requirements to obtain the M.A. degree in Experimental Psychology.

PROCEDURES

You will be asked to first participate in the online portion of the experiment, which requires full completion of a demographic questionnaire, and two other surveys. All responses for the online portion of the experiment will be recorded on the Qualtrics online survey platform. The estimated time commitment for the online portion is 20 minutes. After full completion of the online portion, you will be asked to sign up for a time slot to participate in the in-person portion of the experiment. The in-person portion of the experiment consists of viewing 10 videos of men who are either lying or telling the truth. The videos will be projected onto a screen for viewing using a MacBook Pro laptop. You will be given a response sheet prior to viewing the videos so that you can record whether or not you think the men are lying or telling the truth and also your confidence in your response. The estimated time commitment for the in-person portion is 20 minutes. The total estimated time commitment for complete participation in both portions of this experiment is 40 minutes.

POTENTIAL RISKS

Potential risks from participation in this experiment may include emotional discomfort from answering the questions on the self-report surveys, or also from the lie detection videos, which include conversations about morally debatable topics (i.e. capital punishment, public smoking). If such a risk should happen, notify the researcher immediately and they will help determine the best plan of action. Also, please remember that participation in this experiment is completely voluntary and you can terminate your participation at any time.

POTENTIAL BENEFITS

A direct benefit of participation in this experiment is the advancement towards completion of the undergraduate Psychology 1 course requirements of research participation credits. Potential indirect benefits from participation in this experiment include gaining insight about oneself due to the self-report questions required by the surveys and a generalizable knowledge of deception and detecting deception due to the lie detection videos.

COMPENSATION

Compensation will be provided to participants in the form of course credit towards their SJSU Introductory Psychology course. For full participation in the online portion of the experiment, participants will be awarded .50 course credits. For full participation in the in-person portion of the experiment, participants will be awarded .50 course credits with a bonus credit of .50 credits for participating in-person. For full completion of both portions of the experiment, participants will be awarded 1.50 course

credits. Partial participation in either portion of the experiment will result in a reduction of only .25 credits being awarded to the participant.

CONFIDENTIALITY

All data collected electronically through the online survey platform, Qualtrics will be kept confidential. Only the primary investigator will have access to the login information to the Qualtrics account to ensure confidentiality. All signed consent forms and the response sheets collected from the participants during the in-person portion of the experiment will initially be stapled together so that the primary experimenter can match the in-person data with the data collected online. After the data is matched and recorded, the signed consent form will be detached from the response sheet to ensure that the responses will not be able to be connected to the individuals. All data collected from the in-person portion of the experiment will be kept in an enclosed folder that will be kept in a locked cabinet in the office of the primary researcher's advisor. Although the results of this study may be published, no information that could identify you will be included.

PARTICIPANT RIGHTS

Your participation in this study is completely voluntary. You can refuse to participate in the entire study or any part of the study without any negative effect on your relations with San Jose State University. You also have the right to skip any question you do not wish to answer. This consent form is not a contract. It is a written explanation of what will happen during the study if you decide to participate. You will not waive any rights if you choose not to participate, and there is no penalty for stopping your participation in the study.

QUESTIONS OR PROBLEMS

You are encouraged to ask questions at any time during this study.

- For further information about the study, please contact Megan Malmstrom at mmalmstrom1326@gmail.com.
- Complaints about the research may be presented to the Psychology Department Chair, Ronald Rogers, Ph.D. at (408) 924-5653.
- For questions about participants' rights or if you feel you have been harmed in any way by your participation in this study, please contact Dr. Pamela Stacks, Associate Vice President of Graduate Studies and Research, San Jose State University, at 408-924-2427.

AGREEMENT TO PARTICIPATE

By clicking "Agree" and your completion of the following surveys indicates that you voluntarily agree to be a part of the study, that the details of the study have been explained to you, that you have been given time to read this document.

Appendix G

In-Person Consent Form

REQUEST FOR YOUR PARTICIPATION IN RESEARCH

SOCIAL COGNITION AND PERSONALITY STUDY

MEGAN MALMSTROM, San Jose State University graduate student

PURPOSE

The purpose of this experiment is to gather generalizable knowledge on individuals' deception detection abilities. This study is being conducted in fulfillment of San Jose State University's requirements to obtain the M.A. degree in Experimental Psychology.

PROCEDURES

You will be asked to first participate in the online portion of the experiment, which requires full completion of a demographic questionnaire, and two other surveys. All responses for the online portion of the experiment will be recorded on the Qualtrics online survey platform. The estimated time commitment for the online portion is 20 minutes. After full completion of the online portion, you will be asked to sign up for a time slot to participate in the in-person portion of the experiment. The in-person portion of the experiment consists of viewing 10 videos of men who are either lying or telling the truth. The videos will be projected onto a screen for viewing using a MacBook Pro laptop. You will be given a response sheet prior to viewing the videos so that you can record whether or not you think the men are lying or telling the truth and also your confidence in your response. The estimated time commitment for the in-person portion is 20 minutes. The total estimated time commitment for complete participation in both portions of this experiment is 40 minutes.

POTENTIAL RISKS

Potential risks from participation in this experiment may include emotional discomfort from answering the questions on the self-report surveys, or also from the lie detection videos, which include conversations about morally debatable topics (i.e. capital punishment, public smoking). If such a risk should happen, notify the researcher immediately and they will help determine the best plan of action. Also, please remember that participation in this experiment is completely voluntary and you can terminate your participation at any time.

POTENTIAL BENEFITS

A direct benefit of participation in this experiment is the advancement towards completion of the undergraduate Psychology 1 course requirements of research participation credits. Potential indirect benefits from participation in this experiment include gaining insight about oneself due to the self-report questions required by the surveys and a generalizable knowledge of deception and detecting deception due to the lie detection videos.

COMPENSATION

Compensation will be provided to participants in the form of course credit towards their SJSU Introductory Psychology course. For full participation in the online portion of the experiment, participants will be awarded .50 course credits. For full participation in the in-person portion of the experiment, participants will be awarded .50 course credits with a bonus credit of .50 credits for participating in-person. For full completion of both portions of the experiment, participants will be awarded 1.50 course

credits. Partial participation in either portion of the experiment will result in a reduction of only .25 credits being awarded to the participant.

CONFIDENTIALITY

All data collected electronically through the online survey platform, Qualtrics will be kept confidential. Only the primary investigator will have access to the login information to the Qualtrics account to ensure confidentiality. All signed consent forms and the response sheets collected from the participants during the in-person portion of the experiment will initially be stapled together so that the primary experimenter can match the in-person data with the data collected online. After the data is matched and recorded, the signed consent form will be detached from the response sheet to ensure that the responses will not be able to be connected to the individuals. All data collected from the in-person portion of the experiment will be kept in an enclosed folder that will be kept in a locked cabinet in the office of the primary researcher’s advisor. Although the results of this study may be published, no information that could identify you will be included.

PARTICIPANT RIGHTS

Your participation in this study is completely voluntary. You can refuse to participate in the entire study or any part of the study without any negative effect on your relations with San Jose State University. You also have the right to skip any question you do not wish to answer. This consent form is not a contract. It is a written explanation of what will happen during the study if you decide to participate. You will not waive any rights if you choose not to participate, and there is no penalty for stopping your participation in the study.

QUESTIONS OR PROBLEMS

You are encouraged to ask questions at any time during this study.

- For further information about the study, please contact Megan Malmstrom at mmalmstrom1326@gmail.com.
- Complaints about the research may be presented to the Psychology Department Chair, Ronald Rogers, Ph.D. at (408) 924-5653.
- For questions about participants’ rights or if you feel you have been harmed in any way by your participation in this study, please contact Dr. Pamela Stacks, Associate Vice President of Graduate Studies and Research, San Jose State University, at 408-924-2427.

SIGNATURES

Your signature indicates that you voluntarily agree to be a part of the study, that the details of the study have been explained to you, that you have been given time to read this document, and that your questions have been answered. You will receive a copy of this consent form for your records.

Participant Signature

Participant’s Name (printed)	Participant’s Signature	Date
------------------------------	-------------------------	------

Researcher Statement

I certify that the participant has been given adequate time to learn about the study and ask questions. It is my opinion that the participant understands his/her rights and the purpose, risks, benefits, and procedures of the research and has voluntarily agreed to participate.

Signature of Person Obtaining Informed Consent	Date
--	------