MORAL DISENGAGEMENT AND PSYCHOPATHY: A QUANTITATIVE CORRELATIONAL STUDY ON ATTACHMENT TO GOD AND EMPATHY

by

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Abstract

Moral disengagement and lack of empathy are rising concerns in the United States. Those who are morally disengaged or display limited empathy are often associated with anti-social personality disorder or psychopathy. Studies consistently show trauma and early childhood attachment are predictors for the development of behaviors associated with psychopathy. Current literature has demonstrated semi-effective therapeutic treatment and pharmacotherapy for comorbid disorders and symptoms such as anxiety. However, research fails to adequately address the prevention and treatment of lack of empathy – a major factor in the perilous behaviors of psychopathy. Psychopathy includes structural and functional brain abnormalities in the cortical (i.e. orbitofrontal cortex, insula) and subcortical (i.e. amygdala, corpus callosum) regions. Thus, leading to neurocognitive deficiencies in emotional responses, and decision-making skills. A neurological understanding of the empathetic and moral drive of these individuals is needed to better determine possible treatment modalities. If poor parental attachment predicts lack of empathy, it is possible attachment to God plays a role in prevention and treatment of these symptoms. This study used a correlational analysis to examine the relationship between attachment to God and empathy. Additionally, it used neuroscience as a theoretical foundation to link trauma, empathy, and spirituality. It was determined: cognitive and affective empathy were statistically different amongst the four attachment styles; number of trauma experiences influenced combined empathy scores; secure attachment was less likely to report any trauma, avoidant and disorganized attachment were more likely to report complex trauma; higher psychopathy scores positively related to higher empathy scores; and attachment to God had a moderating effect on the relationship between trauma and empathy. *Keywords: empathy, moral disengagement, anti-social, spiritual, neuropsychology, attachment, psychopathic*

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CHAPTER 1: INTRODUCTION TO THE STUDY

Introduction

Research found that moral disengagement moderates the relationship between empathy and aggression (Wang, et al., 2017), thereby advancing the current disconnect and influencing individuals to move further away from Christ. Moreover, a positive relationship has been found between religiosity and empathy (Lowicki, Zajenowski, & Cappellen, 2020; Lowicki & Zajenkowski, 2021). Moral disengagement is associated with negative characteristic traits, leading researchers use the term moral disengagement alongside other terms such as lack of empathy and psychopathy. Some studies have used the term moral disengagement and anti-social behaviors or criminal mindsets together (Hyde, Shaw, & Moilanen, 2010; Kiriakidis, 2016). While another set of researchers combined the terms psychopathic and sociopathic traits with anti-social personality disorder (Delisi, et al., 2013; Petruccelli, et al., 2017). The International Statistical Classification of Diseases and Related Health Problems (ICD), and the *Diagnostic Statistical Manual of Mental Health Disorders, 5th edition,* (DSM-5), intertwine the terms anti-social, psychopathy, sociopathy, and dissocial. It is important to understand moral disengagement and lack of empathy are not diagnoses, rather they are characteristic traits linked to psychopathy, anti-social personality disorder and other various conduct disorders (Marshall, et al., 2021).

Moral disengagement and psychopathy are both increasing concerns (Hare, 1990; Meloy, 2002; McAlister, et al., 2006). Moral disengagement and psychopathy are associated with each other (Gini, Pozzoli, & Bussey, 2015; Risser and Eckert, 2016) and emerge from lack of empathy and remorse, often originating from anxious/avoidant attachment styles and childhood trauma (Cheng et al., 2017; Hyde, Shaw, & Moilanen, 2010; Fang et al., 2020; ; Jin et al, 2017;

Sun et al., 2017; Schaffer, Clark, & Jeglic, 2009). Individuals continue to be ego-centered, focusing on self-interest, thus, potentially explaining the rise in morally disengaging behaviors. Anti-social personality disorder is not diagnosed until the age of eighteen (APA, 2013). However, moral disengagement and anti-social behavior begins to develop in childhood. These behaviors may be considered risky, criminal, and often are associated with violence and manipulation. It is a collection of symptoms such as shallow effect, lack of empathy and remorse, and impulsivity (Kiehl & Hoffman, 2011; Paris, 2013). The most common and problematic symptom is reported as lack of empathy and remorse.

Lack of empathy appears to facilitate the ability to justify the criminal, risky, and/or violent behaviors and mindset. It has been suggested by Kristellar & Johnson (2005), that a spiritual mindset requires the individual to first reflect on self, then others, then humanity as a whole. This type of inside-out reflection is referred to as loving-kindness, and is potentially the construct by which spirituality cultivates and advances empathy. Supporting research shows that individuals who identify as religious or spiritual are four times more likely to be involved in empathetic experiences than those who classified themselves as nonbelievers (Neugebauer et al., 2020). Huber and MacDonald (2012) state that spirituality could be a point of intervention to build and nurture empathy in those who have lower empathetic scores. Meaning, nurturing empathy could aid in the psychopathology impairment found in those who experience trauma.

The prevalence of childhood trauma and poor parent-child attachment are increasing mental health concerns and leading to behavioral difficulties from a young age due to altered or delayed neurological development. Spirituality is a potential buffer for empathetic development in distressed children. Literature has discovered the presence of spirituality aids in the development of altruism and genuine empathy (Campell, 2015; Huber & MacDonald, 2012; Lai,

Pathak, & Chaturvedi, 2017; Neugebauer et al., 2020; Saslow et al., 2013). Therefore, this study will focus on the individual's internal processing, prioritizing empathy and how attachment to God influences the development of cognitive and emotional empathy.

Background

Studies have found that moral disengagement and attachment style moderate the relationship between empathy and aggression (Grazia Lo Cricchio, et al., 2022; Wang, et al., 2017), while cognitive empathy mediates relational aggression and callous-unemotional traits (White, Gordon & Guerra, 2015). Trauma is linked to psychopathy, moral disengagement, attachment style, empathy, aggression, and callous traits for various neurobiological reasons. Namely, due to trauma's moderating effect on cortisol stress reactivity (Alexander, et al., 2018), the orbitofrontal cortex and amygdala (Bounoua, et al., 2020b), and inhibitory control related to anterior cingulate cortex activation (Zhai, et al., 2019). Several studies have addressed trauma and its association to moral disengagement. Trauma focused research includes: military and active combat (Giebels et al., 2020; McAlister et la., 2006), post-traumatic stress disorder (PTSD) (Ardino, 2012; Meffert et al., 2018), childhood trauma (D'Urso et al., 2018; Nazarov, et al., 2016), and complex trauma (Karatzias, 2017; Marshall et al., 2021).

Childhood trauma and complex trauma, encompass physical, emotional, and/or sexual abuse, exploitation, or any type of neglect (Dye, 2018). Complex trauma is defined as a trauma experienced repeatedly and cumulatively, often within a specific period of time, and may also escalate over time (Courtois, 2004). Cook et al. (2005) described complex trauma as not only prolonged, but acting as a developmentally adverse event, most often interpersonal in nature and occurs early on in the person's life.

In addition to the various types of traumas, poor parental attachment (often linked to childhood trauma or neglect), fosters the development of poor moral reasoning skills. Poor attachment (anxious, avoidant, or disorganized-a mix of anxious and avoidant tendencies) stem from various forms of trauma and have a lasting impact on a person's psychopathology from a neurological standpoint; impacting all forms of relationships (work, family, romantic, friends, etc.). Investigations concur, those who have anti-social traits come from "broken" homes, maltreatment, or neglect of some sort, including lack of emotional attachment **(**British Psychological Society, 2010; Fuchshuber, 2019; Heenan, et al., 2020; Jedd, et al., 2015; McRay, Yarhouse, & Butman, 2016; Paris, 2013; Tyrka et al., 2009). Lack of emotional development, as seen with trauma and anxious and avoidant attachment styles, can lead to an individual having limited, or zero, moral reasoning skills and decreased empathy. Decreased moral reasoning skills and lack of remorseful feelings are suspected to come from not having an adequate model to demonstrate empathetic responses. Complex childhood trauma and poor parent-child attachment impedes the neurological development of a child, resulting in lower empathetic abilities (Benetti, et al., 2010; Bounoua, et al., 2020a, Bounoua, et al., 2020b; Zhai, et al., 2019).

Neurological Findings

Research has shown that the amygdala and the prefrontal cortex, along with other regions of the brain, are altered when a person experiences a traumatic event(s) (Nazarov et al., 2016; Mefferet, et al., 2018). The impairment of these regions is also displayed in conduct disorders, anti-social personality disorder, and those showing psychopathic traits. In addition, the prefrontal cortex is needed in moral decision making (Dashtestani, et al., 2018; Fumagalli & Priori, 2012).

The human brain begins to develop in utero and finishes developing during the individual's twenty-fifth year, with the prefrontal cortex being the last region to finish

developing (Arain, et al., 2013; Hochberg & Konner, 2020). Critical neurological development occurs between the ages of zero to five, during adolescence, and again as a young adult. Traumatic experiences at any age may have a significant impact on an individual; however, traumatic events that occur during critical neurodevelopmental periods may have a greater effect on the individual's psychological well-being. These events may be processed in a way that has a lasting effect on the amygdala and alters the development of the prefrontal cortex. Cortisol plays a key role in this process.

Exposure to stressful events produces higher cortisol levels, and when this remains at a constant level, it will disrupt the emotional and cognitive behaviors and self-regulation (Preston et al., 2017; Sullivan, 2012) as well as increasing impulsivity. Sustained high levels of cortisol can cause damage to the amygdala, hippocampus, insula, and prefrontal cortex (Jedd et al., 2015; Preston, et al., 2017). Furthermore, those who experience trauma often struggle with memories of the events, persistent anxiety that it will happen to them again, and intrusive thoughts that make them feel as though they are reliving the event (Van Der Kolk, 2014). This prompts the human brain to produce chemicals as if the individual is continuing to experience the traumatic incident. Thus, disrupting the individual's brain development in multiple ways and making it difficult to demonstrate effective affect regulation. Siever and Weinstein (2009) have shown that those who are impulsive and aggressive have impaired amygdala reactivity and prefrontal inhibition.

The neurological functioning discussed in literature demonstrates the effect poor attachment has on decreased empathy. Bowlby suggested that an attachment bond between child and parent is a complex behavioral system, which encourages comfort during a stressful scenario, leading to reduced negative effects that aid in the child's ability to develop a healthy,

realistic, coherent sense of self (Levy, et al., 2015). The bond that develops between child and parent is the foundation of identity formulation, interpersonal attitudes, and intrapersonal regulation. It is during childhood that the ability to regulate emotions begins to develop, also known as affect regulation. Affect regulation, the development of anti-social traits, as well as moral reasoning is hindered when there is a disruption in brain development during youth. The social interactions with primary caregivers and the manner in which the caregivers stimulate the child, will begin to program the child's brain. Sullivan (2012) supports this concept in his study, which found early deprivation can hinder the formation of new attachment for the rest of the child's life. Adults that showed a secure attachment override their natural desire to be morally disengaged. Additionally, through "the mechanism of threat construal," a secure attachment hinders the impact of the desire to act in ways that classify them as morally disengaged (Chugh et al., 2014). Other studies have found a strong association between basic moral sensitivity and moral disengagement (Thornberg & Jungert, 2013) in addition to a link between childhood maltreatment and moral disengagement (Wang, et al., 2019).

Abnormalities in the amygdala, gyrus, insula, and lower gray matter result from those who encountered poor attachment experiences in early childhood (Benetti, et al., 2010; Levy et al., 2015, Zhai, et al., 2019). The findings that were addressed continue to suggest that individuals who are insecurely attached show behavioral dysregulation in conjunction with hypersensitivity to emotional cues and problems regulating those emotions on a neurological level. Neurological studies also propose that certain spiritual activities, such as prayer, may positively impact the prefrontal cortex and the amygdala (Barnby, 2015; McClintock, et al., 2019). Therefore, it is not only imperative to understand how events negatively impact brain

development, but how other events can positively influence neurodevelopment and can even reverse specific deficits that shape behaviors.

Biblical Worldview

There is limited research regarding the role spirituality and religiosity play in the treatment and prevention of morally disengaging behaviors and psychopathy. Yet, the Bible has an abundant amount of instruction to share in regard to morals and empathy (love). Moral disengagement and anti-social traits emerge as evil when looking through a biblical worldview. Judges 21:25 provides a moral scenario where everyone was doing what was right according to him or her, without any regard to God's moral standard. When individuals lose sight of His moral standard, it becomes easier to distort right and wrong. A common way to think about this is, an eye for an eye. Evil should not be subjective, yet it often becomes subjective because even a morally good person will seek justice, despite the fact that it often incites more evil. Moral justifications can come from the human desire to depersonalize those who are deemed evil. These individuals are no longer considered to be a normal human, frequently being viewed as a monster. Therefore, they are undeserving of receiving empathy. However, these people are not any different than any other individual, as all of mankind has been made in the image of God. God provided free-will, giving the option of choice. Free will requires significant self-control; this is due to the fact that free will gives every person the capability of good and evil. Without self-control, without morals grounded in Christ, it becomes easier to act evil because it is disguised as seeking justice. Sin and evil are factors in mental health because it changes neurological processing; thus, influencing human behaviors and lack of self-control. Lack of empathy then begins to develop along with other anti-social/psychopathy characteristic traits, such as callous, unemotional, and aggressive reactions. With these connections, research should

be done to show how even in a world of evil, when handled with Christ-like characteristics, instead of conforming to the world, people can limit the creation of evil and take part in nurturing and restoring hope for humanity. Just as Romans 12:2 teaches, "Do not conform to the pattern of this world, but be transformed by the renewing of your mind. Then you will be able to test and approve what God's will is—his good, pleasing and perfect will" (*New International Version, 2011*).

God created man to look after and care for His creation (Gen. 1:26) – this is a key responsibility in His plan for humanity. In order to manage His creation, humans are to demonstrate a significant amount of self-control. To maintain self-control, self-instructions are required; meaning there is enough self-awareness within an individual's internal dialogue that they are able to know what needs to change and how to change it. This is a major factor in behavioral therapies. Galatians 5:22 encourages this, along with many other pieces of Scripture that suggests mankind should reflect over self-control. Galatians focuses on the fruit of the Spirit and internal work. Similar to the following verses: "Let us examine our ways and test them, and let us return to the Lord" (NIV, 2011, Lamentations 3:40). 2 Corinthians 13:15 also tells us to examine ourselves and "see whether you are in the faith." Romans 12:2, also tells us not to conform to the pattern of this world, rather renew our minds. McGregor (2006) points out, integrating self-control from a secular view begins with the ability to develop a strategy and discover inner values. In other words, a person must be able to think for themselves and demonstrate morally appropriate problem-solving skills. This concept would be best achieved by looking through a Christian lens and letting the beauty of the Holy Spirit's work guide the scientific research that seeks to limit moral disengagement and lack of empathy.

Gaps in Literature

Current findings in literature suggest that there is no treatment for anti-social traits. Specifically, that there is no treatment for the lack of empathy and lack of remorse (which tends to be the driving factor in moral reasoning). Human behavior is a complex condition, as is the neurological functioning of the human brain. It is important that scientific data and biblical knowledge are utilized harmoniously when studying human behavior. Moral disengagement, spirituality, trauma, and empathy show a strong neurological connection by cause of two major regions – the prefrontal cortex and amygdala (Barnby, 2015; Helion & Oschner, 2018; Kolla, 2020; van Dongen, 2020; Yoder & Decety, 2014). Despite the relationship, prior research has neglected to adequately consider the role of spirituality in high moral disengagement, lack of empathy and remorse, and distorted moral justifications. Furthermore, research does not appear to acknowledge how spirituality may predict the severity to which one develops anti-social behaviors. Given that the prefrontal cortex plays a vital role in the development of moral reasoning skills, and trauma and spirituality have been shown to impact the functioning of the prefrontal cortex, there is reason to believe that spiritual development, or the relationship with Christ, will play a significant role in the development of moral disengagement and other anti-social behaviors.

Problem Statement

Since the September 11th terrorist attack, moral disengagement has been on the rise (McAlister, et al., 2006). Research has shown that moral development is impacted by various traumatic experiences during brain development (Campaert, et al., 2018; Chugh, et al., 2014; Hyde, Shaw, & Moilanen, 2010; Nazarov, et al., 2016; Taylor & Baker, 2007; Weinstein, et al., 2014). The human brain begins to develop in utero and finishes developing during the twenty-

fifth year of life (Arain, et al., 2013; Hochberg & Konner, 2020). Traumatic events that occur during critical neurodevelopmental periods affect the psychological well-being of an individual. Those who have experienced traumatic events display increased moral disengagement and are more likely to be diagnosed with, or display symptoms of, one or more mental health disorders within their lifetime (Courtois, 2004; Marshall et al., 2021; Su & Louise, 2020; Wamser-Nanney & Cherry, 2018; Zielinski, et al., 2015). The disorders include, but are not limited to, depression, anxiety, attention-deficit hyperactivity disorder (ADHD), oppositional defiant disorder (ODD), borderline personality disorder (BPD), anti-social personality disorder (ASPD), and narcissistic personality disorder (NPD) (Huh, et al., 2014; Place, Ling, & Patihis, 2016; Wolff & Shi, 2012).

Neuropsychologists have helped explain why these mental health disorders can stem from trauma. It has been found that the amygdala and the prefrontal cortex, along with other regions of the brain, are altered when an individual experiences trauma (Meffert, et al., 2018; Nazarov, 2016; Nogovitsyn, et al., 2020). Due to impairment in these regions, which heavily influences moral reasoning (Nazaro, 2016), these individuals are more likely to display anti-social/psychopathy traits, such as, callous and/or unemotional characteristics (Marshall, et al., 2021; Meffert, et al., 2018), aggression (NICHD Early Child Care Research Network, 2006; Rosell & Siever, 2015; Siever & Weinstein, 2009), lack of remorse/empathy (Konikkou, Kostantinou, & Fanti, 2020; Marshall, et al., 2021) and hostile rumination (Zielinski, et al., 2015). To date, there is no known treatment for lack of remorse and empathy, but trauma appears to be a factor.

The relationship between post-traumatic stress disorder (PTSD) symptoms as defined by the DSM-5 (Diagnostic and Statistical Manual of Mental Health Disorders, 5th edition) and spirituality, have been well researched. Researchers have attempted to better understand how

trauma may impact one's religious views after their experience(s) or in the treatment of PTSD to limit anxiety, depression, and shameful feelings (Chen et al., 2005; Sherman et al., 2018). Even more, neurological findings suggest spiritual activities positively impact the prefrontal cortex and the amygdala, (Barnby, 2015; McClintock, et al., 2019), which is often impaired by trauma; thus, distorting our moral reasoning.

Despite the neurological underpinnings of trauma, spirituality, and anti-social/psychopathy traits such as moral disengagement and lack of empathy (Barnby, 2015; Helion & Ochsner, 2018; Kolla, 2020; van Dongen, 2020; Yoder & Decety, 2014), prior research has failed to thoroughly consider the role of spirituality in the development of empathy, remorse, moral disengagement, and distorted moral justifications as it relates to psychopathy/anti-social personality disorder. In addition, it lacks to acknowledge how spirituality may predict the severity to which a person develops anti-social/psychopathy behaviors. Given that the prefrontal cortex is used in the process of moral reasoning/decision-making, and that trauma and spirituality have been shown to impact the functioning of the prefrontal cortex, it is suspected that attachment to God will act as a buffer in the development of moral disengagement and lower empathetic responses.

Purpose of the Study

The purpose of this quantitative correlational study was to investigate the relationship between attachment to God (anxious, avoidant, disorganized and secure) and empathy (cognitive and affective), in individuals between the ages of twenty-six and sixty-five. This study also investigated trauma as a potential predictor of lack of cognitive and emotional empathy and how secure attachment to God may act as a buffer for decreased cognitive and emotional empathy.

Research Question(s) and Hypotheses

Research Questions

RQ1: What is the relationship between attachment to God (anxious, avoidant, secure, disorganized) and empathy (cognitive and affective)?

RQ2a: What is the relationship between experienced trauma and empathy scores (cognitive and affective separately)?

RQ2b: What is the relationship between experienced trauma and combined empathy scores?

RQ3: Does attachment style (anxious, avoidant, secure, disorganized) to God moderate the relationship between combined empathy (cognitive and affective) and trauma (none, some, many, complex)?

Hypotheses

Hypothesis 1: Anxious, avoidant, and disorganized attachment styles to God will negatively correlate with high empathy scores. Secure attachment styles will positively correlate with high empathy scores.

Null Hypothesis 1: Anxious, avoidant, and disorganized attachment styles to God will positively correlate with high empathy scores. Secure attachment styles will negatively correlate with high empathy scores.

Hypothesis 2a: Increased trauma experiences prior to the age of 25 will have an inverse correlation with cognitive and emotional empathy scores.

Null Hypothesis 2a: Increased trauma experiences prior to the age of 25 will have a positive correlation with cognitive and emotional empathy scores.

Hypothesis 2b: Increased trauma experiences prior to the age of 25 will have an inverse relationship with combined empathy scores.

Null Hypothesis 2b: Increased trauma experiences prior to the age of 25 will have a positive correlation with combines empathy scores.

Hypothesis 3: Secure attachment to God will act as a buffer, or have a moderating effect, on the relationship between empathy and trauma.

Null Hypothesis 3: Secure attachment to God will have no moderating effect on the relationship between empathy and trauma.

Assumptions and Limitations of the Study

There are several potential limitations to this study. First, a potential limitation is that the sample size could be too small. The number of participants that will meet the eligibility requirement (age) and complete all answers to each assessment cannot be confirmed until data collection begins. Second, this study will not use any experimental manipulations, rather it will implement self-reporting measures, thereby allowing for skewed answers due to participant bias. A third limitation to this study is related to retrospective self-reports as a potential source of measurement error. Retrospective reports may be biased due to changes in the participant's memory over time. This may be from forgetting, redefining, or the participant's current mental state influencing the memory. In addition, subjectivity of trauma for each individual participant is a limitation. Subjectivity is due to differing definitions and interpretations, the number of trauma incidents experienced, and the level to which it impacts the individual. For example, one participant may consider the loss of a pet as a traumatic experience, while another participant may have experienced repeated sexual abuse throughout their childhood and into adolescence. The varying trauma events will result in different neurological and emotional impairments.

Qualifications to meet the definition of trauma will be implemented to help control for the subjectivity. Similarly, empathy will be self-reported by each individual participant, potentially allowing for skewed answers in attempt to avoid providing answers that may be thought of as socially unacceptable. A delimitation is also in place on this study. The research specifically requires participants to be aged twenty-six or older; this is due to brain maturation. Most developmentalist consider the prefrontal cortex fully developed during the twenty-fifth year of life. Therefore, this may dictate how firm one presents with morally disengaged behaviors and lack of empathy.

Theoretical Foundations of the Study

Attachment Theory

Attachment theory offers a foundation for explaining the variations in interpersonal interactions and interpersonal relationships. Bowlby's theory (1982) approaches the dynamic interaction of caregiving and how attachment influences a person's sense of security while simultaneously impacting prosocial behaviors (negatively or positively). Empirical studies show insecure attachment styles are linked to inhibited moral concerns; specifically for avoidant attachment (Koleva, et al., 2014). Attachment theory has been linked to morality due to social cognitive theory. According to social cognitive theory, multiple factors influence the moral conduct of an individual, including cognitive processes (Bandura, 1991). Moral identity has been found to predict prosocial behaviors (Patrick et al., 2018). Bandura (1999) explains, this process is defined by disengaging the moral self from inhuman behaviors with little to no self-condemnation. Those with high levels of moral disengagement demonstrate less prosocial behaviors (Bandura, 2002) and increased behaviors associated with anti-social personality

disorder (Hodge & Lonsdale, 2011) when compared to individuals with lower levels of moral disengagement.

Mikulincer and Shaver (2013) explain that theoretically, morality and attachment theory are interconnected due to the concept that values and standard practices promote human connection and wellness. Theoretical and empirical evidence suggests that those with secure attachment are less likely to disengage moral principles, even when their secure attachment is temporarily removed; thus, leading to continued prosocial tendencies such as helping and caring behaviors (Chugh, et al., 2014; Mikulincer & Shaver, 2005; Shi, et al., 2020). Attachment theory is the framework for understanding the human's ability to connect with other individuals while simultaneously predicting their empathetic abilities. This form of social cognitive model explains the many cognitive factors can lead to the development of anti-social/psychopathic behaviors, such as aggression and lack of empathy.

Theory of Mind

Working alongside attachment theory, Theory of Mind (ToM) contributes to the theoretical foundations of this study. In 1978, Premack and Woodruff coined the term Theory of Mind while studying monkeys and their ability to mentalize other minds of primates in terms of beliefs, desires, and intentions (Singer & Tusche, 2014). Due to the advancement in imaging techniques, the study of Theory of Mind has evolved from monkey to humans. Theory of Mind is associated with the concept of human social interaction and communication, or social cognition. Social cognition involves a range of interrelated skills and processes including emotional recognition and social awareness. Grove, et al. (2014) and Happe, et al. (2014) describe theory of mind as the ability to interpret and understand their own behavior, thoughts, and emotions.

Theory of Mind considers the neurodevelopment and neurological functioning of individuals and how it impacts cognitive processing and functioning (Isaksson, Neufeld, & Bolte, 2021). Theory of Mind is closely related to, and positively correlated with, the executive functioning (the higher cognitive processes involved with controlling thought, action, planning, inhibitory control, thought-shifting, and cognitive flexibility) (Isaksson, Neufeld & Bolte, 2021). It has consistently been found that the posterior superior temporal sulcus, temporoparietal junctions, the medial prefrontal cortex, and the temporal poles are involved with Theory of Mind (Singer & Tusche, 2014).

Biblical Foundation

Similar to Theory of Mind and attachment theory, the biblical components of lack of empathy also demonstrate neurological connections within the cognitive process, and symptoms such as impulsivity (lack of self-control). Free-will, being associated with self-control, is a key theme in psychopathy, moral disengagement, and empathy. Rogers (1951) and Maslow (1943) explain freedom, or free-will, is necessary to become a fully functioning human with self-actualization. Free-will encompasses many components including, God's original plan for humanity, sin, and the relationship between Christ and the individual. All of which require an understanding of the fruit of the spirit. The fruit of the Spirit exemplifies the way Jesus teaches humanity how to live in His image.

Self-control is one of nine parts of the fruit of the spirit, and is a critical factor within moral disengagement and psychopathy. "But the fruit of the Spirit is love, joy, peace, forbearance, kindness, goodness, faithfulness, gentleness, and self-control. Against such things there is no law" (Galatians 5:22-23, NIV, 2011). Scripture provides support on how goodness relates to self-control, and self-control to love and empathy. 2 Peter 1:5-7, "For this very reason,

make every effort to add to your faith goodness; and to goodness, knowledge; and to knowledge, self-control; and to self-control, perseverance; and to perseverance, godliness; and to godliness, mutual affection; and to mutual affection, love" (NIV, 2011). Stott (1968) notes that these nine attributes display the believer's attitude not only to God, but to themselves and others. As a result, an individual's stance on the fruit of the Spirit, and their ability to accept the Spirit into their life, can impact their worldview.

Sosler (2017) provides a perspective on the words of Jesus and His service to others; he goes on to share, service to others builds a foundation of love. Love can fuel empathy that is needed for human connectedness. The fruit of the Spirit encompasses nine separate attributes, yet maintain a foundation of love. Jesus teaches that the Greatest Commandment is to, "'Love the Lord your God with all your heart and with all your soul and with all your mind'" (Matthew 22:37). Which is then followed by, "'Love your neighbor as yourself'" (Matthew 22:39, NIV, 2011). Therefore, to live the image of Christ, the fruit of the Spirit must be nurtured. Maintaining relationships with the same mindset as Jesus requires the individual to humble themselves in servanthood.

Paul often speaks about living the fruit of the spirit: "Be completely humble and gentle; be patient, bearing with one another in love" (Ephesians 4:2, NIV, 2011). He [Paul] continues to focus on the fruit of the Spirit in Ephesians 5:8-9: "…Live as children of light (for the fruit of the light consists in all goodness, righteousness and truth)" (NIV, 2011). The fruit of the Spirit gives the ability to know the will of God and separate His will from desires of the flesh. Even more, when living as a child of light, the fruit of the Spirit further encourages gentleness, kindness, and love.

Similarly, Peter addresses that the fruit of the Spirit is not simply something of convenience, rather the nine attributes must be a part of a person's life in a continual process as the individual grows in the image of Christ. As opposed to focusing on earthly things (sin), such as that seen with Adam and Eve, the fruit of the spirit is not about power, the flesh, or personal gains, it is love driven with a desire to serve Christ and love in His image. The fruit of the spirit demonstrates a love that displays the love of God to humanity.

Scripture, along with the words of Peter and Paul, fit with the neurological debate about free-will. Some scientists believe free-will is obsolete, this stems from advancements in neuroscience. Current neurological findings are producing increased accurate explanations for everyday cognitive processing, and maintain the expectation that eventually all cognitive thoughts will be explained by neuroscience (Visala, 2020). By accepting this theory, humans would be considered a mechanism with physical parts, with actions being explained with low-level physical mechanisms. Meaning, humans do not have conscious action, rather they are a product of their environment with no control; behaviors are replaced by neuroscientific explanations, in other words excuses for negative behavior, as opposed to behaviors a person can change.

Argumentatively, philosopher Robert Kane explained, ultimate moral responsibility does not only require a person to act rationally in response to scenarios, but the individual themselves are responsible for shaping their own character (Visala, 2020). Kane continues with, the behavior is controlled by the individual when the action is a direct source of the individual's character, including beliefs, attitudes, and intentions – all of which are freely chosen. This requires an individual to shape their character in such a way that it is not determined by prior causes, rather they can develop and create virtues and vices of their own choice. In a meta-analysis, it was

found that participants' behaviors, who committed themselves to a future action, differed from those who did not make the same kind of commitment (Visala, 2020). Similar to the commitment Peter teaches about on the fruit of the Spirit in daily living. Spiritual activities are cultivated through commitment to a certain belief and behaviors associated with that belief.

While there has been a debate on the neurological role of free will and if humans truly have a choice in their behavior or if it is predetermined due to neurological wiring, Alfred Mele explained, actions such as motor behaviors (e.g., flexing a hand), which can be considered basic neurological instinct, are significantly different than the complex moral actions that require extensive thought processes (Visala, 2020). Therefore, even though neurological studies show humans lack conscious action in initiating simple motor behavior, does not determine the role of consciousness in complex moral processing (Visala, 2020).

Summary

Affective empathy has been found to develop before cognitive empathy (van Dongen, 2020). Attachment theory is associated with affective empathy. As Preston and de Waal (2002) and Salvadori, et al. (2021) explain, newborns first begin this process with mimicking facial expressions. Affective responding is automatic and present in early development. Whereas cognitive empathy, stemming from theory of mind, includes executive function and is linked to higher cognitive abilities. This develops later in life due to the brain maturation. The prefrontal cortex, the region used for emotional regulation, cognitive processes, and empathetic responding, does not fully develop until the age of twenty-six. By utilizing attachment theory and theory of mind, it is better explained how empathy begins to develop in early development and continues with the development of the executive function in the human brain. Theory of mind, attachment theory, and the Biblical component have a unique interplay with trauma, moral disengagement,

anti-social behaviors, and psychopathy. Each of these components have a neurological impact that aids in a better understanding of the internal processes of these critical behaviors and theories which inform cognitive and emotional empathetic responding.

Definition of Terms

The following is a list of definitions of terms that are used in this study.

Psychopathic/Psychopathy, Sociopathy, and Anti-Social Personality Disorder/Behaviors – Different terms use to described differing severities of a personality disorder characterized by lack of empathy and remorse, violence, criminal mind-set, pattern of lying, grandiosity, and impulsivity stemming from lack of self-control (APA, 2013).

Moral Disengagement – refers to the process where an individual distances him or herself from the normal ethical standards of behavior and become convinced that their unethical behaviors are justified due to perceived extenuating circumstances (The Oxford Review Encyclopedia of Terms, 2021)

Empathy – Empathy is a multidimensional construct composed of cognitive and affective empathy. *Cognitive empathy* refers to an individual's ability to predict and interpret another's emotions accurately. *Affective/Emotional empathy* describes the ability to share in another's emotions (Moore, et al., 2015).

Callous-Unemotional Traits - Callous-unemotional traits relate to individuals who lack guilt and remorse, display shallow affect, and are unconcerned about the negative consequences of their behaviors (Frick, Ray, Thornton, & Kahn, 2014).

Childhood Trauma – May refer to maltreatment, neglect, physical, emotional, or sexual abuse, resulting in bodily harm, psychological injury, or causing great distress for a child.

Complex Trauma – Exposure to multiple traumatic events, often interpersonal, with long-term psychological and neurological effects (Dye, 2018).

Prefrontal Cortex – A region of the human brain that plays a critical role in the regulation of complex cognitive, behavioral, and emotional executive functioning.

Amygdala – A region of the brain located in the medial temporal lobe, primarily associated with emotional processes.

Attachment Theory – A theory created by Bowlby and Ainsworth explaining positive parent-child attachment as a dyadic relationship, providing a secure base with respect to cognitive, social, and behavioral outcomes.

Attachment to God – refers to an individual's attachment style to God (secure, anxious, avoidant, disorganized), similar to the parent-child attachment theory provided by Bowlby and Ainsworth.

Social Cognitive Model - Social cognitive models are widely used to explain how interactions between individual personality traits and interpretations of social events or other cognitive factors can be associated to aggressive behavior.

Significance of the Study

Psychopathy and anti-social personality disorder are a collection of psychological symptoms that begin to develop in childhood. Lack of empathy and moral disengagement are two symptoms that can wreak havoc on interpersonal relationships, communities, and families. Empathy is not the only component which is why other factors are brought in. However, empathy is the common pathway to evil/moral disengagement, psychopathy, and anti-social personality disorder.

Due to the concept of plasticity, anti-social personality disorder and psychopathic traits, such as lack of empathy, could be treatable given the proper intervention. Nonetheless, treatment of empathetic deficits continues to be insufficiently investigated, leaving a major gap in the treatment and prevention research of anti-social/psychopathy traits. The study being presented will add to the current body of literature in neuropsychology, psychopathy, attachment, and empathy. Furthermore, it will be a step in the process of understanding the potential effects of attachment to God and those with high and/or low empathetic responses and moral decision making. Lastly, the information that is obtained will help set the foundation for further studies on creating an appropriate intervention that will address and decrease the lack of empathy in individuals; as a result, lessening the impact these individuals have on the world. Determining how attachment to God impacts the development and implementation of emotional and cognitive empathy, researchers and mental health clinicians will be able to better determine how spirituality needs be integrated into psychological treatment for varying personality disorders that display morally disengaging behaviors and lower empathetic abilities.

Summary

Moral disengagement and lack of empathy undeniably threaten humanity as a whole; thus, causing corruption and complex issues from a psychological perspective. Science demonstrates the complex psychological and neurological impact of trauma and how it leads to moral disengagement and lack of empathy. The only way to help correct this compounded problem is to continue to explore the scientific research currently provided while filling in the gaps with a biblical worldview. Science neglects to integrate the biblical lesson that God is with us through all of the evil suffering experienced on earth. “Fear not, for I am with you; be not

dismayed, for I am your God; I will strengthen you, I will help you, I will uphold you with my righteous right hand" (Psalm 107:13-16, NIV, 2011).

2 Timothy 3:16 explains, "All Scripture is given by inspiration of God, and is profitable for doctrine, for reproof, for correction, for instruction in righteousness." Building on what Scripture says, neurological studies show the effects of spiritual practices and its impact on similar brain regions that are impaired by trauma and poor attachment, such as the prefrontal cortex – a region also used in moral decision making and emotional and cognitive empathy.

With thoughtful use of biblical components and scientific knowledge, these two domains will illuminate the other, thereby adding knowledge to the treatment process of behaviors associated with psychopathy and moral disengagement. Contrarily, contemporary psychological health focuses on how an individual's experience deviates from society's current norms; with these "norms" being based off humans and not God. Therefore, mankind will continue to set moral standards based off other faulty humans as opposed to God. As a result, humans will continue to create emotional distance from each other, leading to increased impairment in the ability to empathize with strangers and those closest to them. Therefore, studying the current literature to better understand the impact is critical.

CHAPTER TWO: LITERATURE REVIEW

Overview

There is a complex interplay between moral disengagement, antisocial behaviors (personality disorder), empathy, and remorse. Many studies, in addition to the *Diagnostic and Statistical Manual of Mental Health Disorders, 5th edition (DSM-5)*, examine the concept that psychopathy and sociopathy can also be included in this group of terms (Campos, et al., 2022; DSM-5, 2013). For the purpose of this study, the terms are not the main focus, but rather the symptoms associated with these diagnoses. Nonetheless, it is essential to understand the correlation between these frequently used terms.

Current literature does not seem to agree on the interchangeability of anti-social behaviors, psychopathy, sociopathy, and moral disengagement. Nevertheless, there are many similarities in the comorbid disorders found alongside each, the symptoms displayed, and the characteristic traits of individuals who fit into one of the above categories. Furthermore, research has consistently shown a lack in potential treatment possibilities for psychopathic, sociopathic, and anti-social behaviors as well as similarities in the development of the behaviors and traits associated with these various mental health concerns (Pemment et al., 2012; Houser et al., 2015; Preston et al., 2017). There is special attention put on the lack of treatment for poor empathetic responses and decreased feelings of remorse. Black (2018) adds, treatment is difficult because of the distorted perceptions of these individuals which prevents them from seeing the way those around them view their behaviors.

Even more, there is a neurological connection that plays a critical role in linking these diagnoses, behaviors, lack of remorse and limited cognitive and emotional empathy. There are many regions of the human brain that can be considered within these mental health concerns;

impairment within the prefrontal cortex and amygdala being the most prevalent (Hyde, et al., 2014; Pardini, et al., 2014; Siever & Weinstein, 2009; Van Dongen, 2020).

Current scientific literature provides a key component to the analytic work that is needed to better understand the moral and empathetic decline in today's world. However, to gain a better understanding of increasing lack of empathy, the biblical component must be integrated within the gaps of scientific literature. A vital connection between the scientific literature to date and biblical instruction is the lack of treatment for deficiencies found in empathetic responses and feelings of remorse; yet, scripture provides multiple verses to teach lessons of compassion and love for all of humanity, even in the face of evil (e.g., anti-social behaviors, traumatic experiences). In addition, while research is limited, there is a connection within the theory of attachment, utilizing Christ as the attachment figure as opposed to the parental/caretaker role of an individual in childhood (Leman, et al., 2018).

Description of Search Strategy

The following literature review consists of more than two hundred original research articles, meta-analysis reviews, and published books. One research database, the Jerry Falwell Online Library from Liberty University, was used for the research articles and meta-analysis reviews. The search terms used include: empathy, moral disengagement, moral development, anti-social personality disorder, anti-social behaviors, psychopathy, and remorse. These terms were searched individually along with their relationship to each another. For example: moral disengagement as it relates to empathy and anti-social behaviors and its association to empathy, etc. Each of these terms were also searched in a way that investigated their relationship to trauma. Additionally, their relationship to spiritual and religious views were examined. Lastly,

neurological correlations between each term, and the relationships between the terms, were explored.

Delimitations and considerations on the studies that were implemented in this literature review include the following: 1) age of participants with regard to moral decision making and neurological connection – this is due to human brain growth and developmental stages. However, age of participants was disregarded in studies involving attachment theory and trauma to achieve adequate information on the impact adverse events have during major neurodevelopmental periods. This concept will be provided in detail in the following section, *neurological underpinning*; 2) Studies focusing on how trauma leads to borderline personality disorder and neglecting anti-social behaviors, psychopathy, or lack of empathy and remorse were excluded; and 3) Studies that focused on bullying online and/or within the school environment and how it relates to moral development and home life were also excluded. The Jerry Falwell Online Library database search was also utilized for the biblical literature found within this review. In addition to that, BibleGateway was a primary source for conducting word study. Specifically using the following terms: evil, moral, compassion, and love.

Review of Literature

Psychopathic, Sociopathic, and Anti-Social Personality Disorder

It is estimated that between .2% and 50% of people, depending on the demographic area (APA, 2013; Werner, Few, & Bucholz, 2015), have an uncorrectable disfigurement in character resulting in one's inability to experience remorse or demonstrate cognitive and/or emotional empathy. According to a meta-analysis, the general population accounts for approximately 4.5% of this estimation and more than 50% of the incarcerated population (APA, 2013; Garcia, et al., 2022). In other words, approximately one in twenty-five individuals of the world's general

population (or one out of two for those imprisoned) display psychopathic and/or anti-social tendencies (APA, 2013; Garcia, et al., 2021). To mental health clinicians, this behavior is a strong indicator of anti-social personality disorder (ASPD). Anti-social personality disorder is commonly referred to as psychopathy or sociopathy. According to the DSM-5, these two terms [psychopathic and sociopathic] have been comingled under ASPD. Despite the fact that these terms may reference the same disorder in some studies, many researchers continue to argue that these terms should have different clinical definitions (Hare, 1990; Van der Linden, 2017). Robert Hare (1990) claims that most psychopaths meet criteria for ASPD; yet, most individuals with ASPD are not psychopaths. To better understand this, a brief history of the development of the disorder is needed.

History/Development of Anti-Social Personality Disorder

Antisocial personality disorder dates back to the early 1800s when clinicians began making an attempt to understand the criminal minds of those who were thought to be insane, but the clinical presentation was not consistent with the recognized mental health disorders (British Psychological Society, 2010). J. C. Prichard formulated the term *moral insanity* in 1835, which at that time was considered a form of mental derangement. Meaning the intellectual abilities of an individual are not impaired; but instead, the moral principles of the individual's mind are corrupt. This leads to them being incapable of conducting themselves in a decent, and socially acceptable, way (British Psychological Society, 2010).

Furthermore, according to the clinical guidelines of the British Psychological Society, Maudsley argued this in 1874 by stating moral insanity is mental alienation that looks like crime, which most regard as an *unfounded medical invention*. Throughout the nineteenth century, the term or diagnosis of moral insanity was accepted in the courts of law across America and

Europe. However, once replaced with the term *psychopathic inferiority*, the sympathy for these individuals lessened. This was caused by the works of Koch in 1891. Koch believed the abnormal behavior from these individuals was due to an acquired inferiority of brain constitution. In 1905, Kraeplin created the classification known as personality disorder, and soon after (1923), Schneider determined psychopathy is a fundamental disorder of personality.

By 1939, Henderson created the foundation needed for antisocial personality disorder including those who were defined as psychopathic. He also stated that these individuals show conduct disorder throughout their lives and may conduct themselves in an antisocial *or* social nature (British Psychological Society, 2010). Cleckley (1941) and McCord and McCord (1956) also played a role in establishing psychopathic traits and the core symptomology with regard to antisocial personality disorder. Many experts slowly helped guide the development of antisocial personality disorder – the diagnosis of that exact term was not presented until the development of the DSM-II. This concept was still known as sociopathy in the DSM-I.

Symptoms of Anti-Social Personality Disorder – According to the DSM-5

Antisocial personality disorder is frequently assumed to mean that individuals are in fact antisocial; however, this is a common misconception. It is not just about behavior-based symptoms, but personality characteristics as well. Some are quite charming, which aids in their ability to be deceitful to others in order to get what they are seeking. They may be arrogant, believing ordinary work is beneath them, or perhaps cocky and use technical jargon that might impress someone who is unfamiliar with that particular topic (APA, 2013). Hatchett (2015) states, “Contrary to popular misconceptions, many individuals who meet diagnostic criteria for ASPD are not recidivist criminals (p 16).” While the economic and social class can encourage the development of anti-social personality disorder, not all of those impacted by the disorder live

in poverty. Crimes are not always tied to murder or burglary; it could be embezzlement or manipulation used to gain political or financial power – the focus is on their inability to feel remorse for these actions, or demonstrate empathy for those who are negatively impacted by the offender's actions.

A diagnosis of ASPD cannot be given prior to age of eighteen, but as mentioned previously, symptoms are displayed much earlier. Common diagnoses that lead into a diagnosis of ASPD are, oppositional defiant disorder (ODD), attention-deficit/hyperactivity disorder (ADHD), and other conduct disorders found in children between the ages of five and seventeen (Marshall, 2021). Additionally, the DSM-5 mentions that most often those who have developed anti-social personality disorder were diagnosed with a conduct disorder prior to the age of ten (APA, 2013). An individual's chances of developing a conduct disorder increases when there has been child abuse, neglect, erratic parenting, or even inconsistent parental discipline. The conduct disorder, if gone untreated, then develops into antisocial personality disorder (APA, 2013). This is found to be true due to how the human brain is wired, or developed, in childhood. This concept will be addressed further in the following sections, covering attachment theory and trauma.

ASPD is often confused with other personality disorders, specifically narcissistic personality disorder. According to the 2013 Diagnostic and Statistical Manual of Mental Health Disorders, 5th edition, anti-social personality disorder can be separated from other personality disorders by one main indicator – a lack of remorse, or conscience. This is usually accompanied with impulsiveness and lowered empathetic abilities.

Psychopathy as it Relates to Anti-Social Personality Disorder

Psychopathy, sociopathy, and anti-social are considered to fall under the same category according to the DSM-5 from the American Psychological Association. On the contrary, it was also communicated that some researchers, such as Robert Hare (1990) have argued against this concept. Hare, who is considered to be an expert in psychopathy and developed the Psychopathy Checklist-Revised (PCL-R), best explains the differences in these terms. Sociopathy is considered to be the result of the individual's environment, as opposed to genetics. Hare believes genetics and many other factors (cognitive, psychological, emotional, and neuropsychological) play a role in psychopathy. Sociopathy, Hare believes, does not cover all the traits found within the DSM-IV diagnosis of Anti-Social Personality Disorder; thereby making them different diagnoses. Robert Hare also reports that ASPD covers much more of the population than psychopathy and those with ASPD tend to carry out more violent crimes due to less emotional control. Those that meet psychopathic criteria are usually thought to have a high intellectual ability. They demonstrate more control and are able to mimic social norms while appearing charming, as opposed to ASPD or sociopathy where they lead antisocial lives and do not adhere to social norms – this is where the DSM-5 and Robert Hare show differences and why the DSM-5 includes all within one term (ASPD) and Hare continues to separate the diagnoses.

Regardless of Hare's descriptions or those found within the *Diagnostic and Statistical Manual of Mental Health Disorders,* a common factor found within each of these terms/diagnoses is the lack of empathy and remorse felt by those who meet sociopathy, psychopathy, or anti-social personality disorder traits and behaviors. The intensity of the crimes or manipulation as well as the environment and upbringing of the individual is a main focus for differentiating these terms. For the purpose of this review and study, anti-social personality disorder and psychopathy will be separate terms. However, this is not the cornerstone for this

review, rather it is the lack of empathy and moral disengagement found within both anti-social and psychopathy groups that is the central focus and concern. Regardless of the crime or diagnoses, it is imperative to better understand how and why these individuals are unable to experience empathy or remorse. Therefore, the brief history and symptomology provided above is critical to the foundational work of moral disengagement and empathy.

Moral Disengagement

Moral disengagement is a common theme that has been found within psychopathy, sociopathy, and anti-social personality disorder regardless of being separate diagnoses or one diagnosis. Current scientific literature and clinical descriptions, at times, can exclude moral reasoning skills within the research of anti-social personality disorder or anti-social traits and behaviors. Morally disengaging behaviors and anti-social behaviors refer to two separate concepts. Nonetheless, the definition of both remains relevant due to their connection with one another.

Moral disengagement also tends to refer to an individual's cognitive processes and has been found to be an important prediction of violent behaviors (Espejo-Siles et al., 2020). Moral emotions are associated with the concept that high, or well-developed, moral emotions will help to prevent aggressive behaviors. Furthermore, moral emotions are a motivating factor in prosocial behaviors and moral self-concept (Christner et al., 2020); deficits in both [prosocial behaviors and moral self-concept] are common for those with anti-social and/or psychopathic traits.

A lack in moral development is further defined as a cognitive mechanism, such as moral justification, dehumanization, attribution of blame, and moral justification, that allow the individual to act on immoral behaviors without guilt (Fang et al., 2020). Additionally, the

individual can detach and engage in anti-social behaviors without invoking any feelings of remorse or discomfort (Moore, 2015; Thornberg, Pozzoli & Jungert, 2015). Moral disengagement will be used to refer to an individual that, 1) attempts to, or is willing to attempt to, create moral justifications as defined in chapter one; and/or 2) demonstrates a lack of remorse; which frequently includes callous-unemotional traits, lower cognitive and/or emotional empathy, distorted moral views, increased violent urges, narcissistic traits, and manipulative tendencies.

Moral Disengagement: Bandura's Model of Moral Justification

Zych and Llorent (2019) further explained Bandura's Moral Justification Model. Bandura (1996), provides different rationalizations that individuals use to justify transgressions and reframe them as valued purposes. First, euphemistic language can make harmful behavior sound less serious, such as stealing is simply borrowing. Advantageous comparison is used to compare immoral acts – stealing is not that bad considering others kill people. Displacement of responsibility is when an individual will blame someone else for why they *had* to act in an immoral way. Similarly, the diffusion of responsibility happens when an individual minimizes their own contribution to an immoral act, also known as the bystander effect (e.g., not helping an individual that is hurting because there are others who are also not helping).

Distorting consequences is another moral justification described by Bandura as minimizing the harm caused, such as hitting someone may be reframed as, "at least I did not murder them." Dehumanization is perceiving an individual as maintaining few human qualities, such as lack of emotions or empathetic abilities. Lastly, Attribution of blame, similar to diffusion of responsibility, considers that an immoral act is the victim's fault (e.g., they deserved what happened to them) (Bandura, 1996; Lych & Llorent, 2019).

While scarce, research has found morally disengaged justifications moderate the link between psychopathic traits (Gini et al., 2015). Positive associations were found between callous-unemotional traits and both proactive and reactive aggression, emphasizing that individuals displaying lack of empathy, remorse, and morality are more likely to engage in aggressive behaviors for their personal gain or justifications (Fanti et al. 2009; Glenn and Raine 2009; Kokkinos, et al., 2022; Salmivalli et al. 2005).

Moral Disengagement: Empathy and Callous-Unemotional Traits

The process of moral disengagement may act as the mental expression of anti-social personality disorder. Similarly, psychopathy characteristic traits (lack of empathy) may mimic moral disengagement. Moral disengagement that follows anti-social behaviors and psychopathic traits is often assumed to accompany criminal behavior or violent acts. However, it has also been found that criminal and violent acts do not always have to be present. Van der Linden (2017) discovered psychopathy strengthened the relationship between moral disengagement as well as violent and non-violent antisocial behaviors. Although, most studies have focused on how it [immorality] relates to callous-unemotional traits and aggression or violence. For instance, aggression in adolescents within the school environment was found to predict higher scores on moral disengagement (Falla, et al., 2021; Kokkinos, et al., 2022; Thornberg, et al., 2019).

The social-cognitive theory helps to further explain the relationship between morals and aggression as well as morality and empathy. This theory suggests that moral disengagement is a cognitive process that activates the internal inhibition controls which aid in specific forms of anti-social conduct (Bandura, 1986; Bandura, 2002). An inverse relationship has been detected between moral disengagement and empathy, both cognitive and emotional (Haddock & Jimerson, 2017). Wang et al. (2017) shared similar results in that moral disengagement partially

mediated the influence empathy has on aggression while moral disengagement moderated the negative correlation of aggression and empathy. Furthermore, neurological studies have demonstrated the interconnection between morality and empathy (Chen et al., 2018; Detert et al., 2008).

Callous-unemotional traits and aggression is also moderated by moral disengagement (Gini et al., 2015) in addition to low empathy and anti-social behaviors (Hyde, Shaw, & Moilanen, 2010). High moral disengagement increases the strength of the link between callous-unemotional traits and aggressive behaviors (Kokkinos et al., 2022) and self-serving cognitive distortions found within immorality is associated with decreased empathy scores (Barriga et al., 2009); while maturity in moral judgement has been found to be associated with increased empathetic abilities (Barriga et al., 2009). In other words, high moral development will lead to lower callous-unemotional traits and well-developed empathetic responses.

Empathy

Similar to moral emotions, or moral disengagement, empathy is a key factor for prosocial behaviors (Decety et al., 2016), but empathy does not function automatically (Yan et al., 2020). Empathy is best described as a multidimensional construct, making it a complicated term, which encompasses emotional/affective empathy and cognitive empathy (Batanova & Loukas, 2014; Yan, Hong, Liu, & Su, 2019). Emotional empathy refers to how an individual experiences the emotions of others, while cognitive empathy relates to the person's ability to identify and understand others emotional state (Reniers et al., 2011). Cognitive empathy is related to a higher cognitive process, such as executive function (Yan, et al., 2019). Executive functioning includes the prefrontal cortex and is defined as "a series of high-level cognitive abilities that underpin the conscious control of thought and action" (Yan et al., 2020, p 35).

Lack of empathy is a primary trait of individuals classified as callous-unemotional. Due to lack of empathy/unemotional traits, youth and adolescents have been found to frequently justify their harmful or immoral actions (Risser & Eckert, 2016), making them more inclined to create or participate in aggressive behaviors (Kokkinos et al., 2022). While lack of empathy has been found as a predictor of violence in youth, the relationship between low empathy and violence is stronger as the age of participants increase (McPhedran, 2009), these individuals are also at greater risk for psychopathy in adulthood (Chialant, Edersheim, & Price, 2016). Those that display high levels of psychopathy showed the strongest deficits in emotional empathy (Turner et al., 2019).

While decreased emotional and cognitive empathy is linked to increased anti-social behaviors, many studies have discovered higher cognitive empathy for those with increased psychopathy scores (Aaltola et al., 2014; Campos et al., 2022; Domes et al., 2013; Owens et al., 2017), this is possibly due to the individual being free of emotional bias and their ability to conform for social norms for higher manipulation success. However, for those with limited psychopathy traits and increased anti-social behaviors, a deficit in emotional and cognitive empathy has been detected (Campos et al., 2022). Low empathy has also been associated with greater recidivism in anti-social individuals (Espejo-Siles et al., 2020).

Empathy, both cognitive and emotional, has been a topic for neuropsychiatric studies (Bosnjakovic & Radionoy, 2018; Chialant, Edersheim, & Price, 2016; Meyza, 2018). The findings suggest that affective empathy will activate specific brain regions including the amygdala, and cognitive empathy will activate the prefrontal cortex (van Dongen, 2020). Empathy is foundational to less aggressive behaviors, lower callous-unemotional traits, and increased connection and relatability to other individuals. Therefore, the empathetic development

is critical and begins at an early age. The social interactions with primary caregivers and how the caregivers stimulate the child, begins to program the child's brain. Sullivan (2012) states that even with proper nutrition and care, when an infant is unable to experience an affectionate social interaction, the brain's development will be compromised. Additionally, Sullivan says this early deprivation can limit the formation of new attachments for the rest of the individual's life.

Empathy is a strong predictor of moral disengagement; and according to Hyde, Shaw, and Moilanen (2010), the quality of early parenting contributes to the development of empathy, or lack thereof. This will then greatly impact the later development of moral disengagement. Deficits in empathy occur from childhood trauma and poor attachment development. Children mimic their caregivers' responses to emotional ques and situations involving a variety of their own emotions as well as the emotions of other individuals. Attachment theory demonstrates the imperative nature of parenting and how the first five years of a child's life will influence his entire neurological development and characteristic traits in adolescents and adulthood.

Attachment Theory

Moral disengagement is known to have a positive relationship with callous traits, aggression, and lower empathetic development (Bussey, Quinn, & Dobson, 2015; Kokkinos & Kipritsi, 2017). Therefore, lack of emotional development (empathy) can be expected to lead to increased moral disengagement. An individual's personality is shaped in childhood by a variety of factors. These factors (environmental, genetics, etc.) impact the neural pathways. Our neural pathways – which determine habits and behaviors – begin to form as a fetus in utero and throughout the first five years of life, with the first three years being the most critical. Neural pathways formed during these years are foundational to attachment theory. There is a biological instinct within children to seek parental attachment regardless of the parent's caring/uncaring

attributes. Children from loving and caring parents or distant and abusive parents seek some form of attachment in order to have their emotional and physical needs met. Children will then develop a coping style based on their attempt to have any portion of their needs met (Van Der Kolk, 2014).

As stated previously, significant relationships were found between anti-social behaviors and low levels of cognitive and emotional empathy. One study went further to also explore how this relationship is associated with parenting style. It discovered permissive, maternal parenting style was linked to decreased empathy and increased likelihood of developing antisocial behaviors (Schaffer, Clark, & Jeglic, 2009) more than authoritative parenting style. One possible reason for this is because the child does not have a healthy attachment figure to model genuine empathetic responses; therefore, the individual will not learn and will lack the ability to demonstrate authentic empathy in adulthood.

Bowlby suggested that an attachment bond between child and parent is a complex behavioral system, which encourages comfort during a stressful scenario, leading to reduced negative effects that aid in the child's ability to develop a healthy, realistic, coherent sense of self (Levy et al., 2015). The bond that develops between a child and their parent is the foundation of identity formulation, interpersonal attitudes, and intrapersonal regulation. Even more, abnormalities in the amygdala, gyrus, insula, as well as lower gray matter, have been detected in the brain of those who developed anxious or avoidant attachments in early childhood (Levy et al., 2015). These results suggest that individuals who are insecurely attached, show behavioral dysregulation as well as hypersensitivity to emotional cues and problems regulating those emotions on a neurological level.

From approximately nine weeks at gestation, through infancy, and into kindergarten (age five), a caregiver is either aiding in a healthy attachment and appropriate brain development or disrupting the development and creating an anxious or avoidant attachment that leads to high risk of moral disengagement. The inconsistent parenting and/or abuse impacts the child's neurological functioning promoting conduct disorder that is likely to develop into antisocial personality disorder by young adulthood. Problems with conduct disorder, minor criminal activities, psychopathy, and anti-social behaviors are consistently found in studies related to empathy, moral disengagement, anxious/avoidant attachment styles, and multiple types of traumas.

Trauma

Childhood maltreatment is a problem around the world with long-term negative effects on the psychological development of individuals. Various forms and severities of child abuse, including lack of attachment, can play a crucial role in the development of psychopathy traits and the lack of development in empathy. Research has revealed that interpersonal events – such as complex trauma (childhood maltreatment, anxious and avoidant attachment styles, etc.), significantly influence an individual's empathetic processing (Cheng et al., 2017).

Studies have argued that exposure to traumatic events contribute to the development of callous and unemotional traits; thus, leading to moral disengagement. Meffert (2018), explains that previous studies have found prior trauma predicts callous and unemotional traits in boys and abused children under the age of eleven years old. Physical maltreatment in childhood is more likely to activate moral disengagement in adulthood; and the more experiences an individual has with physical maltreatment as a child, the higher the chances they will display moral disengagement (Fang et al., 2020; Jin et al, 2017; Sun et al., 2017). When investigating the

relationship between childhood physical maltreatment and callous-unemotional traits, as well as the relationship between childhood physical maltreatment and moral disengagement, both were moderated by empathy. In addition, it was determined that callous-unemotional traits mediated the relationship between childhood psychological maltreatment and moral disengagement (Fang et al., 2020). Exposure to trauma before the age of ten was significantly associated with higher parent rated psychopathy traits (Marshall, et al., 2021).

These stressors can be a chaotic home, abuse, lack of emotional attachment, or other traumatic events. Damage to the brain from high levels of cortisol can be seen in the amygdala, hippocampus, and prefrontal cortex – all these regions of the brain are also shown to be abnormal when children are exposed to maltreatment, with special interest being shown to the amygdala (Jedd et al., 2015).

When the immature brain processes this abuse, or trauma, it can create an underlying effect that could be hidden but will later appear as mental health issues in early adolescence (Sullivan, 2012). Trauma that occurs during the prime attachment phase is processed in a way that has a dramatic and lasting impact on the amygdala; this part of the brain centers on emotion and fear. Studies have shown prolonged exposure to these stressful events produces higher cortisol levels, and when this remains constant, it disrupts the emotions and cognitive behaviors required for self-regulation (Preston, et al., 2017; Sullivan, 2012). Therefore, the neurological component of this topic is critical.

Neurological Underpinnings

Children who are exposed to trauma, including inadequate attachment in childhood, are more likely to have neuropsychiatric problems such as conduct disorders and anti-social behaviors (Ludy-Dobson & Perry, 2010). Neuropsychological studies have shown chaotic

homes, anxious or avoidant attachment, physical, sexual, or emotional abuse, and other forms of trauma alter the chemical production within the human brain; namely, norepinephrine and cortisol (Fogelman & Canli, 2018). Both [norepinephrine and cortisol] impair neural connections, lead to abnormalities in the hippocampus (Bromis et al., 2018), and disrupt the executive functioning of the amygdala (Jedd et al., 2015; Suarez-Jimenez, 2019) and prefrontal cortex (Suarez-Jimenez et al., 2019). It has been determined, individuals who are impulsive and aggressive, such as those with antisocial personality disorder or increased psychopathic traits, have excessive amygdala reactivity (Hyde, et al., 2014), prefrontal inhibition (Hyde et al., 2014; Siever & Weinstein, 2009) as well as lower grey matter volume in multiple areas of the brain.

Grey Matter Volume

Functional magnetic resonance images (fMRI) on the human brain, show those with attachment disorder have reduced grey matter volume in the left lateral orbitofrontal cortex (Benetti, et al., 2010). The orbitofrontal cortex plays a major role in the cognitive decision-making process. This finding is critical when injunction with research on individuals with anti-social personality disorder, as it has been discovered they show a reduction of the volume in the middle temporal and orbitofrontal gyri. The gyrus (pl. gyri) are the ridges located on the frontal cortex. Similarly, children who have been exposed to maltreatment/childhood trauma have significantly lower grey matter volumes in the orbitofrontal, middle temporal, and superior temporal gyri (Bounoua et al., 2020a; Busso et al., 2017; Lim, Radu, & Katya, 2013). Decreases in grey matter extend to the amygdala and insula when considering childhood maltreatment (Lim, Radu & Katya, 2013), this is similar to the structural anomalies found in psychopathy. High psychopathy traits are associated with decreased grey matter in the amygdala (Pardini et al., 2014; Vieira et al., 2015), hippocampus (Contreras-Rodriguez, 2015), and the prefrontal cortex,

including the orbitofrontal cortex (Ermer et al., 2012), dorsomedial prefrontal cortex (Leutgeb et al., 2015), and the ventromedial and lateral prefrontal cortex (Contreras-Rodriguez, 2015). Lastly, decreased grey matter has been observed in the superior temporal gyri (Muller, 2008) and middle temporal gyri (Contreras-Rodriguez, 2015).

The prefrontal cortex, in addition to processing emotions, is involved in planning and implementing moral decisions (Hu & Jiang, 2014). When the functionality of the prefrontal cortex is impaired, it can lead to impulsivity and aggression associated with anti-social personality disorder (Oliva et al., 2021) and psychopathy (Gregory et al., 2012). Lower grey matter volume and the misfiring of neural circuits also inhibits emotional processing and limits empathetic ability (Decety & Moriguchi, 2007; Eres, et al., 2015), while simultaneously increasing morally disengaging behaviors.

Neurological Circuits/Executive Function as it Relates to Empathy and Moral Reason

A neurological link between morality and empathy has been established (Chen et al., 2018; Deter et al., 2008). The orbitofrontal cortex involves a sense of morality and aids in stopping morally wrong or inappropriate behaviors. The amygdala, hippocampus, gyrus, and insula are known to play a key role in processing and understanding emotions as well as regulating behaviors. These regions, along with the prefrontal cortex, also contribute to empathetic reasoning and understanding social emotions (Kanel et al., 2019). Their work individually is equally as important as how they communicate together, also known as executive functioning. The higher the cortisol levels (as seen in trauma), the lower the performance of an individual's executive function (Ouanes & Popp, 2019).

The neural circuits involved in moral reasoning and cognitive and emotional empathy are interconnected. Abnormalities in the insula, amygdala, superior temporal gyrus and orbitofrontal

cortex are closely linked to increased psychopathy due to poor integration between the functional networks (Espinoza et al., 2018; Miskovich et al., 2018). It is not uncommon for those who present with psychopathy or anti-social personality disorder (e.g. limited to zero empathetic ability and moral disengagement) to have a history of one or more forms of trauma (avoidant or anxious attachment; physical, sexual, or emotional abuse; childhood neglect). These shared experiences amongst these individuals impairs the above-mentioned brain regions, thereby hindering empathetic development and aiding in moral disengagement.

One study attempted to build on the functional and structural interhemispheric connectivity deficits in individuals with psychopathy and anti-social personality disorder. The findings determined that right to left connectivity was significantly impacted, whereas the left to right connectivity remained intact (Hoppenbrouwers, et al., 2014), meaning the left hemisphere inadequately processes input from the right hemisphere. This evidence suggests a deficit in approach and withdraw behavior. Behavior directed at the attainment of a self-fulfilling rewards is considered approach behavior and entails use of the left prefrontal cortex. Withdrawal behavior is associated with the right prefrontal cortex and is described as behavior intended to avoid punishment (Harmon-Jones, 2003). Due to the weakening in interhemispheric connectivity in individuals with psychopathy, once these individuals initiate approach (goal-directed) behavior, they struggle to redirect their attention and modify their behavior based on the new peripheral information that has been received.

Corpus Callosum

Interhemispheric connectivity is the process in which an exchange and integration of information occurs between the two cerebral hemispheres. The corpus callosum plays a role in this process as it is a pathway which connects the brain’s two hemispheres. Research suggests

the corpus callosum has significant impairments in individuals with psychopathy and is associated with callous-unemotional behaviors, lack of empathy and disregard for others' feelings. Deficits in facial emotion recognition has also been found in individuals with agenesis of the corpus callosum (Bridgman et al., Meyza, 2018). Neglect, maltreatment, and childhood trauma are all strong factors that have been associated with impairments in the corpus callosum when comparing healthy individuals and those with a history of trauma (Jackowski, et al., 2008; Linder, et al., 2016; Teicher, et al., 2004).

Furthermore, an abnormality in the myelination process (stemming from childhood trauma) involves overutilization of oligodendrocytes in the production of the myelin sheath and can partially explain the callosal abnormalities found in psychopathy (Raine, et al., 2003). MRI results showed there was less branching of the fibers in the corpus callosum for individuals with anti-social and/or psychopathy behaviors as compared to healthy individuals (Linder, et al., 2016; University of Birmingham 2019). Consequently, the reduced retraction of inhibitory callosal fibers and increased myelination of axons, compromise the human brain's interhemispheric connectivity.

Unresolved disorganized attachment has been found to be positively correlated with increased functional connectivity between the left amygdale, the left lateral occipital cortex, and precuneus, while also having an inverse relationship with the left amygdala-medial frontal cortex connectivity (Van Hoof, et al., 2019). Anxious, avoidant, and disorganized attachments can aid in many neurological deficits, with evidence of the left hemisphere being heavily impacted. Thus, connecting the difficulty individuals with anti-social or psychopathy traits have with interhemispheric connectivity.

Neurobiology of Spirituality

Scientific literature does not adequately address spirituality's impact on the corpus callosum or grey matter volume. However, a neurological study utilizing MRI scans determined an intimate relationship with God is associated with increased volume of the right middle temporal cortex (known to be impaired in psychopathy). In addition, Gao, et al. (2020) compared non-religious chanting to religious chanting, and observed increased brain activity in several brain regions, including the prefrontal cortex, gyrus, left parietal lobe, and amygdala. Most importantly, significantly more activity had been noted in the left than the right amygdala during religious chanting, as well as hemispheric asymmetries in the hippocampus, thalamus, and cerebellum. Preforming repetitive, internal, religious mantas may increase brain activity in response to stimuli with adverse meaning (Gao, et al., 2020). Religious mantras may structurally lateralize multiple regions of the brain that are involved in affective processing, making this a potential key component in improving lack of emotional empathy in psychopathy or anti-social personality disorder. Functional results have suggested that religious chanting helps to form a positive schema which counterbalances negative emotions (Gao, et al., 2020).

Likewise, a study on religious experiences and belonging showed adequate support for elements of religion and spirituality being linked to beneficial changes in the orbitofrontal cortex. Significantly less atrophy in the left orbitofrontal cortex was found (Hayward, et al., 2011). No significant relationship was observed within the right orbitofrontal cortex. Yet, this remains as a key element because lack of empathy in morally disengaged individuals have impairment in the interhemispheric connectivity from right to left – suggesting impairment in the left orbitofrontal cortex.

Prayer and expressing love or gratitude to a loved one showed activation in the medial prefrontal cortex and posterior cingulate, with prayer being linked to more emotional arousal than love (Neubauer, 2014). The medial prefrontal cortex (found to be impaired in psychopathy and activated in empathetic actions) works to regulate cognition, emotion, and behavior. When employing prayer or expressing love and gratitude, the medial prefrontal cortex showed elevations above the baseline (Neubauer, 2014). Similarly, these same elevations were discovered in the posterior cingulate; a region that is not completely understood but hypothesized to play a central role in supporting internal cognition (Buckner, et al., 2008), planning for the future (Mason, et al., 2007), and regulating focus and attention (Hahn, et al., 2007). Potentially controlling internal and external focused thought. Research also found prayer, both high- and low-structured, can stimulate the dopaminergic reward systems. When prayer was compared to secular recitals as well as in a study involving nuns, findings suggest prayer led to increased activation in the medial prefrontal cortex (Beauregard & Paquette, 2006; Schjodt, et al., 2008) temporoparietal junction, and the precuneus (Schjodt, et al., 2008). The precuneus works with the left prefrontal cortex in executive functioning. In reference to the study on nuns whose prayers aimed at being in union with God, multiple regions showed activation including: the right and left medial orbitofrontal cortex, right middle temporal cortex, right inferior and superior parietal lobes, left cingulate cortex, left insula, and left inferior parietal lobe (Beauregard & Paquette, 2006).

Meditation and other mindfulness practices may also contribute to decreasing the neurological concern with psychopathy and increasing empathetic ability. Mindful meditation has been found to decrease amygdala size and lower fear response, in return being a wonderful option for increased anxiety and those struggling with PTSD symptoms. However, one area that

does not appear to be addressed is the potential conflict these activities may have in psychopathy. Psychopathic individuals already have decreased amygdala volume due to a lack in fear response. Which leads to the question – can this aid in psychopathy for individuals who have already been diagnosed with this concern, or will it have zero impact on their already altered amygdala?

Despite this potential conflict, mindfulness meditation can positively alter brain functioning in a way that may hinder psychopathy traits. The insula, posterior cingulate cortex, anterior cingulate cortex, prefrontal cortex, and hippocampus all show increased thickness or grey matter density (Holzel, et al., 2011; Tang, Friston, & Tang, 2020) which impacts one's ability to have more cognitive flexibility and emotional regulation. With the hippocampus contributing to regulating emotions and moderating cortical arousal, the significant structural changes from meditation and mindfulness are imperative to research in psychopathy. While the insula also plays a role in empathetic responses, its structural changes from mindfulness become even greater in psychopathy. When comparing meditators versus non-meditators, thicker prefrontal cortex and anterior insula has been observed (Lazar et al., 2005), as well as increased grey matter density in the orbitofrontal cortex and right hippocampus (Luders et al., 2009) and right anterior insula, left interior temporal gyrus, and right hippocampus (Holzel et al., 2008). Lastly, increased grey matter concentration was discovered in the left hippocampus, posterior cingulate cortex, temporo-parietal junction, and the cerebellum after an eight-week mindful meditation program (Holzel et al., 2011).

A key component to neurological research and attachment to God, has been the discovery that experiencing an intimate relationship with God (associated with behaviors such as prayer) is positively correlated with cortical volume at the middle temporal gyrus, extending to the

temporal pole (Kapogiannis, et al., 2009). However, experiencing fear of God's anger was negatively correlated with cortical volume at the precuneus and orbitofrontal cortex (Kapogiannis, et al., 2009). This suggests that a secure intimate relationship with Christ can positively impact our neurological structure, while fearing His anger (insecure attachment) can show similar structural anomalies as trauma.

These studies do not offer direct association to psychopathic individuals, nor do they account for those with impairment in empathy. Despite this, they can be used in consideration for how to counteract impairment of grey matter and other neurological deficits found in psychopathy, moral disengagement, lack of empathy, and anti-social personality disorder.

Summary of Neurological Underpinnings

It has been established that anxious or avoidant attachment and/or various forms of trauma will hinder the neurological development of the prefrontal cortex, amygdala, gyrus, insula, and hippocampus. These findings demonstrate a positive relationship with psychopathy and anti-social personality disorder. Particularly, the interpersonal and affective symptoms (lack of empathy and moral disengagement), are associated with the above-mentioned structural abnormalities. Miskovich et al. (2018) explains that the neurodevelopment abnormalities appear to underlie the atypical brain functioning in the regions responsible for emotional processing and cognitive control. In other words, neurological impairment from childhood trauma is linked to the presence of decreased cognitive and/or emotional empathy and lack of moral processing skills. Similarly, disrupted neurodevelopment as a fetus (prolonged chaotic stress where the mother produces excess cortisol that is then passed to the fetus) can also cause deficits in neural connectivity, altered cerebral growth patterns, impairment in the corpus callosum, hippocampus, and parietal-occipital (Anderson, Northam & Wrennall, 2019). This increases the likelihood that

an individual will develop delays in cognitive skills, socio-emotional difficulties, lower IQ, and slower processing speeds.

Positive attachment is a key factor in an individual's development of self-regulating behaviors due to the impact it has on neurodevelopment within childhood. Secure attachment "overrides" an individual's natural desire to act in morally disengaging ways (Chugh, et al., 2014), as a result, a secure attachment creates a solid foundation for cultivating empathetic ability. Without a secure attachment, callous-unemotional traits are more likely to be present. Javakhishvili & Vazsonyi (2022) found that early quality socialization and secure attachment positively predicts empathy and self-control, while negatively predicting callous-unemotional traits during adolescents. Thereby suggesting, empathy is foundational for moral disengagement.

Biblical Literature

Despite scientific literature consistently suggesting there is not a therapeutic treatment for specific symptoms (moral disengagement, lack of empathy/remorse) related to psychopathy and anti-social personality disorder, it must be acknowledged that the Bible acts as the ultimate guide in loving one another as well as showing compassion and empathy. Scripture provides direction for establishing morals that are grounded in Christ instead of other faulty (sinful) human beings.

Examining the relationship between spirituality and empathy is difficult due to the process of operationally defining and conceptualizing spirituality. Currently there are multiple variations of the term *spirituality*. First, literature questions the relationship between spirituality and religiosity. Second, it continues to be debated if personality traits are distinct from spirituality or if it is a feature of an individual's character. Third, research continues to argue the universality of spirituality. Past studies suggest cultural uniqueness prevents universal conceptualization (Belzen & Lewis, 2010; Rich & Cinamon, 2007), while more recent literature

states, cross-culturally, spirituality may be a comparable construct (Silva, et al., 2017; Lopez, et al., 2017). However, literature has reached the consensus that spirituality is multi-dimensional, but the number of dimensions involved is still debated (MacDonald, 2009; Hill & Parament, 2003; Stewart and Lawrence, 2020).

Nonetheless, science has demonstrated that the spiritual component makes a significant impact on psychological research. Trauma and disorganized/anxious attachment styles have been found to distort a person's worldview. Courtois and Ford (2009) explain this further using the learning brain (child without trauma) and survival brain (child with trauma) have the same capability and core processes; even such, the way the core processes are utilized are different. Research tells us meditation and spiritual activities, such as prayer, impact the brain regardless of whether it is a learning or survival brain. 1 Peter 3:8-9 conveys this same concept – "Finally, all of you, be like-minded, be sympathetic, love one another, be compassionate and humble. Do not repay evil with evil or insult with insult…" (NIV, 2011). Individuals are all unique, yet each one was made in God's image, giving us the capability to have a tender heart and humble mind. Mankind has been blessed with the choice to allow the fruits of the spirit to guide their empathetic ability despite how the environment has impacted their neurological functionality; "The fruit of the Spirit is love, joy, peace, forbearance, kindness, goodness, faithfulness, gentleness, and self-control. Against such things, there is no law" (Gal 5:22-23, NIV, 2011).

God's Original Plan for Humanity

Mankind was created with the intention of living abundantly. Growth, fruitfulness, additional creation, stewardship, were all part of His intended purpose of creation. With this, God expected us to manage and care for His creation. To have dominion over His creation requires implementation of the fruits of the spirit – love, compassion, kindness, goodness,

faithfulness, gentleness, and self-control. Even more, each fruit of the spirit is needed to cultivate and maintain fulfilling and deep relationships with Him and all of His creation. God created mankind for relationships; relationships with one another as well as with Him. As He says in Genesis, it is not good for man to be alone.

Scripture tells more about His plan for humanity in Galatians 5:13, “You, my brothers and sisters, were called to be free. But do not use your freedom to indulge the flesh; rather, serve one another humbly in love” (NIV, 2011). Free will is excluded in the current process of behaviorism from a psychological science perspective. Behaviorism, also known as behavior modification, highlights that mankind is the way they are due to environmental factors. Research shows environment does play a role, and God knows this, but science neglects to consider a person’s ability to make their own choice – it discounts free will. 1 Corinthians 10:13 further explores this concept: “No temptation has overtaken you except what is common to mankind. And God is faithful; He will not let you be tempted beyond what you can bear. But when you are tempted, He will also provide a way out so that you can endure it” (NIV, 2011). Romans 12:2 adds, "Do not conform to the pattern of this world, but be transformed by the renewing of your mind. Then you will be able to test and approve what God's will is—his good, pleasing and perfect will" (NIV, 2011).

Science has shown how the environment can neurologically and emotionally impact all of mankind. God tells us He knows the environment is a temptation. Scripture teaches that it is a person’s choice in how they respond to the environment. There is a choice to response with compassion and empathy, or maintain limited self-control and respond with evil.

So long as His people remained faithful to Him, it was expected that God was to provide all they needed, including leadership. Yet, the moral situation in Judges 21:25, this is not what

happens. Instead of doing right through Christ's eyes, everyone acts according to their own preferences without any regard to God's moral standard. Resulting in evil, chaos, judgement from God, repentance, and a continuous repeat of the pattern (Judges 2:16-19, NIV, 2011). In 1 Samuel 8:19-22, God then allows the people to suffer the consequences of demanding a king that they can follow instead of trusting in the Lord's leadership. Adam and Eve also struggled to trust in God's leadership, as they let the Serpent guide them instead; in return, this led to the Fall.

The Fall

The Fall of mankind, or the result of the original sin stemming from Adam and Eve's choice in the Garden of Eden, has plagued our current world and humanity as a whole. Scripture teaches us that psychology, while a more recent discovery has actually been a part of His creation from the beginning. Philippians 4:6-7 states, "Do not be *anxious* about anything, but in every situation, by prayer and petition, with thanksgiving, present your requests to God. And the peace of God, which transcends all understanding, will guard your hearts and your minds in Christ Jesus" (NIV, italics added, 2011). Anxiety and the peace of one's mind, or our mental health, is not a new concept, it is simply a more widely discussed concern.

When mentioning "the fall," the most common initial thoughts involve how Adam and Eve disobeyed God, being banished from the Garden of Eden, or the Serpent and development of sin. However, there is so much more found in this part of theological history. There are four major points to review. First, the eyes of Adam and Eve were instantly opened, they realized they were naked and became uncomfortable. This can be described as shameful or feelings of embarrassment. They felt the need to cover themselves with leaves when they realized they were naked. The fall is where insecurities begin; insecurities can be found within most individuals, thereby impacting mental health and overall feelings of peace. Second, Adam and Eve's first

instinct was to hide from God. This can be compared to the fight, flight, or freeze concept that is frequently seen in individuals who have experienced traumatic events, or even within relationships for those with poor attachment styles.

Third, mankind frequently blames God, our Creator of good, for mankind's choice to pursue evil and sinful ways. Instead of taking responsibility for choices, individuals blame Him and even others. This is shown in the story of Adam and Eve. Adam blaming Eve – "The women you put here with me – she gave me some fruit from the tree" and Eve then blaming the serpent – "The serpent deceived me" (Gen 1:12-13, NIV, 2011). There was no true ownership of the choices *they*, and they alone, made. Wolters (2005) states, humans have an "ingrained streak" in their thinking which blames God's handiwork "for the ills and woes of the world we live in" (p. 61). This is a common theme in our world today, not everyone blames Him, but too often someone is blamed for a choice made by a different individual.

Lastly, but probably the most important consideration when discussing the fall – self-control. Humans lack self-control. Satan can only "wreak havoc on the good earth by first controlling mankind" (Wolters, 2005, p. 67). God created us as managers of His good creation, with Satan in control of mankind, the earth cannot be good. Wolters (2005) helps to show how the fall has severely strained family, healthy attachment, and care during the developmental stages of childhood; "disruptive forces of a materialistic society in which parents often neglect the interests of their children" for their own sake (p. 54). This concept can be seen within the development of poor parent-child attachment styles. God, however, does not neglect our interest. Rather, He shows himself in joy and in suffering, providing us with the opportunity to create a secure relationship with Him. He will never leave or forsake us (Joshua 1:5, NIV, 2011).

While humans have the “capacity to control and discipline their own behaviors” (McMinn & Campbell, 2007, p. 29), they often do not exercise this type of control. In return, this leads to sinful ways. Colossians 3:2 tells us, “Set your minds on things above, not on earthly things” (NIV, 2011). Scripture verifies just how long psychology and certain behaviors have been around. While the fall impacts the world and all that is in it, mankind must take responsibility for the condition humanity is in. It is the responsibility of each person to stop questioning God and the evil and allow faith and hope to be nurtured in a world that is suffering. Minds must be set on the heavenly things above and not on the sinful ways or earthly things, such as Adam and Eve did with the apple.

Sin and Evil

The original sin and the fall of mankind has led humanity to its suffering and displaying evil behavior as acceptable. Even more, mankind continuously chooses to live in evil ways, often disguised as justice or righteousness, by way of moral justifications. Sin and evil are factors in mental health due to how it changes our neurological processing; thus, influencing our behaviors and lack of self-control, decreased empathy, and increased moral disengagement. Adam and Eve demonstrated a scientific example of neurological processing known as fight or flight. Adam and Eve chose to hide from God after eating from the tree of knowledge. They then decide to blame rather than accept their lack of self-control.

Adam and Eve were equipped to lead God’s creation with the knowledge and skill provided to them from the beginning. As leaders, Adam and Eve were to “come up with ideas, new policies, and methodologies that satisfied the needs of creation” (McKinley, 2016, p 11). Earth was to remain the way God intended, to “be on a continuum of growth and development moving creation forward” (McKinley, 2016). Instead, Adam and Eve became more concerned

with things of Earth, and chose to move away from things of God. In return, sin occurred. Humans have now begun to question God's love, often sounding like, "Why would He allow evil?" With the accepting of this question as normal and natural, a disconnect begins to form in faith and trust in God, leading to divine struggles. Divine struggles predict an increase in mental and emotional health (Wilt, et al., 2016). This can lead to lack of empathy, increased moral disengagement, and greater likelihood that an individual will take justice into their own hands.

When a person loses sight of His morals, they often start to see things from the concept, an eye for an eye. Evil varies depending on if it is considered from a religious or philosophical perspective. Even more, what is considered evil in one society or culture, may be considered an acceptable alternative way of living in another. Religious and spiritual views, just as each individual, can have different perspectives of what defines evil. As mentioned previously, evil often becomes subjective because even an individual with increased morals may seek justice, even though justice can lead to more acts of evil. The moral justifications that accompany this are thought to stem from human's desire to depersonalize those who are deemed evil. They are defined as something separate from humanity. Nevertheless, they are similar to the rest of His creation because all individuals were created in His image and provided the option of choosing morally disengaging behaviors. This is because God allows for free will, free will requires significant self-control; every person is capable of good and evil. Without self-control, without morals grounded in Christ, it becomes easier to act evil because it is disguised as seeking justice or righteousness.

Righteousness, as defined by Scripture, can take many forms (Groenwald, 2019). When looking at righteousness, as defined by Oxford Dictionaries (2021), one will find the following, "the quality of being morally right or justifiable." But what does morally right or justifiable

mean? This is a subjective term, defined by more subjective terms. Oxford Dictionaries will go on to define moral as being "concerned with the principles of right and wrong behavior and the goodness or badness of human character." This continues to allow for subjective ideas of what is good and what is bad. The current state of the fallen world involves many ways of justifying bad behaviors as good. Thus, leading to lack of empathy, moral disengagement, confusion on what is right and wrong or good and bad, and distorted views on what righteousness is according to His word and law. To achieve a full understanding of how righteousness can lead to evil and cause turmoil within all of humanity; as well as how this divides the individual and Christ in their attempt to achieve a divine relationship, God's role in evil must be addressed.

God's Role in Evil

God's role in evil has been discussed in length by those who classify themselves as believers and non-believers. Some individuals take the stance that God suffers alongside mankind, while others argue that the suffering we experience is for a higher purpose – a purpose that God has already planned out. Regardless of the reason, an individual's relationship with God amid evil (as victim or offender) comes down to the individual and their unique relationship with God. His responsibility in evil is related to His promise to continue being in our presence. By showing Himself in human suffering, He is able to provide each person with hope. Hope leads to healing. Even more, God himself has become a victim of evil so that He and man might be "victors over evil" (Erickson, 2013). This serves as a reminder that He is in this battle with all of humanity. God must suffer with us, like any good Father (or parent), they suffer when their children suffer, yet simultaneously provide them with a secure space in those times of hurt.

If God was to intervene in the evil that occurs, He would also take away our free will to choose a divine relationship with Him. God has provided options necessary for human freedom,

which entails options that allow for sin. God cannot prevent the occurrence of sin, or even the possibility of sin, because this would take away mankind's choice to serve Him and maintain a divine relationship. God is not seeking to control mankind and force individuals into a relationship with Him.

"God's righteousness can be revealed as his mercy or as his liberating activity" (Schroter, 2017). This helps us to understand that we cannot simply seek to do better and be more like God; it is also about receiving His mercy and allowing our relationship (attachment to Him) to be nurtured through His mercy. There is a moral significance to love, as this signifies approval. Showing love illuminates His light from within while simultaneously serving in His mission. In return this will limit the cycle of evil and suffering and potentially increase empathy and moral engagement. When bringing in the biblical component to trauma, it must be asked, if parental attachment and interaction sets the foundation for empathy and moral development, then attachment to God, the one Father, is likely to contribute greatly to this foundation.

Attachment and God

God created mankind as relational beings, with intent to maintain a relationship with Him and others. God states in Genesis 2:18 that it is not good for man to be alone. Attachment theory was originally researched and applied for the purpose of the parent-child relationship. It is now being considered in other types of relationships, such as attachment to God. Secure attachment is described as feelings of love and closeness towards attachment figures. Contrastingly, avoidant attachment is observed as distant and unloving; and anxious attachment is associated with inconsistency (Ainsworth, 1978). More recently, a fourth style (disorganized attachment), has been established. This is when one displays a "push/pull," or inconsistent trait, which appears as a mixture of anxious and avoidant attachment styles.

Research suggests that spirituality positively correlates with a variety of mental health factors. One study predicted that attachment to God was a unique predictor of mental health within the traditional Jewish community. Not only did their study confirm this, but attachment to God was also a predictor for less traditional non-Orthodox Jews (Pirutinsky, Rosmarin, and Kirkpatrick, 2019). Findings suggest that both avoidant and anxious attachment to God are inversely related to overall trust in strangers and those closest to us (Bradshaw, et al., 2019). Trust is essential for empathetic development. Even more, research has shown that avoidant attachment to God is negatively associated with agreeableness and anxious attachment is positively associated with negative affect and neuroticism (Rowatt and Kirkpatrick, 2002). Further examination of attachment to God has demonstrated that secure attachment enhances emotional regulation (Rowatt & Kirkpatrick, 2002) in an addition to providing encouragement in stressful times (Ellison, Bradshaw, Kuyel, & Marcum, 2012).

Spiritual and religious writings often describe God as a parental figure and imply that a divine relationship with Him utilizes attachment characteristics. Kirkpatrick (1998) believes the attachment to God may act as a restorative, or compensative, attachment figure for those with a history of insecure or disorganized attachment styles (Pirutinsky, Rosmarin, and Kirkpatrick, 2019). This suggests that the relationship style between an individual and God may have similar emotional regulating effects as the parent-child attachment. This has been supported with neurological findings that show those who report an intimate relationship with God and engage in religious behaviors show increased volume of the right middle temporal cortex. While experiencing a fear of God was associated with lower volume in the left orbitofrontal cortex (Kapogiannis, et al., 2009) – this is an area that has been found to have decreased volume in

those displaying anti-social and psychopathic traits, as well as those who display morally disengaging behaviors. In addition, the orbitofrontal cortex is used in empathetic responding.

Attachment to God highlights the importance of divine struggles for psychosocial outcomes. Regardless of a persons reported beliefs about the character of the divine, the individual's emotional expression towards God may impact how they feel about themselves, how they perceive and understand others, as well as how they treat others (Bradshaw, et al., 2019).

Although more research is needed, the overall findings suggest that attachment to God is associated with multiple psychological traits and characteristics as well as prosocial behaviors. Empathy is generally developed from secure attachments. God is used as a compensating attachment figure when there are attachment deficiencies in other relationships (Granqvist 2002; Kirkpatrick 2005). On account of this, it is expected that attachment to God will correlate with cognitive empathy and emotional empathy.

Spirituality and Empathy

Increased mental well-being and a strong connection to community/humanity share a positive relationship. As stated previously, humans are social beings, created for relationships with each another as well as Christ. Companionship is part of God's original plan for creation, requiring empathetic engagement with others. The way individuals engage in social relationships greatly depends on their ability to understand and accept others worldview, thoughts, and emotions. Empathy is what helps individuals understand each other, predict others' behaviors, and achieve a successful social interaction. Empathy is a characteristic trait that makes mankind social beings (Bosnjakovic & Radionov, 2018) and plays a critical role in emotional and social interactions. Empathy is a prerequisite for healthy coexistence, connection to all of humanity, and personal well-being.

Non-current research, while brief, suggests that many religions emphasize prosocial behavior, by such means, religion encourages values related to empathy and compassion (Baston, Anderson, & Collins, 2005; Saroglou, 2006). This could be due to parables found within Scripture, such as the helping behavior embodied in the Good Samaritan. Huber and MacDonald (2012) suggest that spiritual traditions and achieving spiritual awareness are associated with empathetic traits (Stewart & Lawrence, 2020). Despite well founded theoretical connections between empathy and spirituality, the empirical research is not as direct, or easily accomplished.

Internally-focused dimensions of intrinsic spirituality have been found to have a greater positive relationship with empathy than spiritual dimensions considered to be externally focused, while extrinsic religiosity showed a negative relationship with empathy (Bradley, 2009; Francis, Croft, & Pyke, 2012; Giordano, et al., 2014; Paek, 2006; Stewart & Lawrence, 2020; Watson, Hood, & Morris, 1985). Furthermore, research adds that the specific church affiliation, attendance, and denomination is not directly related to the persons empathetic stance (Schieman, Bierman, & Upenieks, 2019). Rather, connections between various spiritual dimensions (i.e., altruism, empathy, forgiveness, volunteerism) are significant across religious denominations, nationality, and culture (Saroglou & Cohen, 2013). Lastly, findings show that an image of a judging God led to lower empathy (Francis, Croft, & Pyke, 2012).

Empathy may be less effective without understanding empathy from God’s perspective. No amount of human inquiries and options are the best antidotes for the problem of evil, unless evil or a solution to evil, is looked at from God's perspective. Appropriately, considering the style of attachment an individual maintains with Christ, may reveal their relationship with evil (lack of empathy).

Summary of Biblical Literature

Varying perspectives on the image of God can affect how people engage with the rest of humanity. This concept can be difficult to conceptualize due to spiritual beliefs being multidimensional. The existence of evil presents itself as a concern for believers in Christ due to the false dichotomies. These include: 1) God must fix or intervene with all of evil, or He also must be evil; and 2) God cannot be all-powerful if He does not intervene or punish all those who are evil. However, these assumptions are not the problem with evil. The Bible acknowledges evil and how God opposes evil. Even more, Scripture provides guidance in how to solve the problem of evil. With clear instructions, God encourages us to choose heavenly things over earthly things. He has provided the option of spiritual growth to aid in the process. Genesis 3:15 speaks of God's plan to make all things right and end our suffering with evil.

If God intervenes in the manner in which man expects Him, to rid the world of all sinners, mankind would be destroyed because all humans are sinners. Instead, God promised to join His children in suffering, provide strength, and walk with man through their suffering. Being able to identify predictors of divine struggles is a key component in evil because an individual's beliefs about suffering is associated with their mental health (Wilt, et al., 2016). God gave man free will, in return, mankind became focused on earthly things which promoted evil. By choosing a divine relationship, evil acts can be limited. Loving God does not take away pain, rather it transforms it (Swinton, 2007). As Plantinga says in Gould's text, "To create creatures capable of moral good, therefore, he must create creatures capable of moral evil; and he cannot leave these creatures free to perform evil and at the same time prevent them from doing so," (Gould, 2018, p 149).

Betenson (2016) states that the problem with evil, is the problem humans have reconciling belief in a good powerful God with a sincere recognition of the evil in the world. The ability to reconcile belief in a good God with recognition of the evil in the world requires good emotional regulation. A person's ability to effectively regulate their emotions is influenced by spiritual activities (Power, et al., 2007). The everyday relationship between spiritual experiences, such as serving God and others, has been found to act as a buffer against the negative impact of perceived stress (Power, et al., 2007; Whitehead & Bergeman, 2012), including traumatic encounters. Another study presented findings that add to this by showing participants who preform spiritual interventions lowered their level of reported stress (Letvak, 2006). Labbe & Forbes (2009) added, participants with high levels of self-reported spiritual enlightenment have increased affect regulation when exposed to a controlled stress variable.

Summary

Due to the varying diagnostic criteria, anti-social personality disorder and psychopathy are different diagnoses, yet share similar attributes. Specifically, for the purpose of this review, they both present with a lack of empathy/remorse, moral disengagement, and both show impairment within similar brain regions. Only a small percentage of those with anti-social personality disorder in the general population meet the criteria for psychopathy. This number increases with the incarcerated population. However, it remains to be debated if psychopathy and anti-social personality disorder are the same diagnoses or remain separate issues.

As discovered from current scientific literature, individuals begin to develop a unique set of morals, or values, at a very young age. This is influenced by the adults that interact most with the child. Currently, there are numerous counts of child abuse, sexual exploitation, neglect, emotional, physical, and sexual abuse, drug and alcohol exposure, and many other forms of what

most would classify as morally wrong behavior. A key problem is, for the many individuals that partake in this, they can justify their actions. These moral justifications, or excuses, are passed down from generation to generation, causing increased moral disengagement. As stated previously, moral disengagement is defined as individuals who can convince themselves that ethical standards do not apply to them for various reasons. Often resulting in limited to no empathy/remorse for their wrongdoing because of the justification; thereby, making them exempt from the basic moral standard.

The social brain is a key component in effectively navigating social environments and relationships; it guides the interaction between individuals. Social abilities (utilized with maturation of the executive functioning), facilitates the complex interplay between empathy and morality. Chen, Martinez, and Cheng (2018) explain empathy and morality are fundamental components of human nature and shape the social lives of individuals. The various elements of empathy include emotional sharing, empathetic concern, perspective taking, and components of morality (Chen, Martinez, & Cheng, 2018). The social brain is associated with attachment theory, contributing to the basic, and early, development of empathy and morality from a neurological standpoint.

Empathetic responding is a complex human skill and a multidimensional process, requiring emotional and cognitive empathy. The ability to utilize both cognitive and emotional empathy leads to prosocial behaviors. Empathy allows an individual to view the world from another's perspective. Trauma impairs a person's worldview (Dye, 2018) and inhibits their capacity to empathize with another's worldview. The structural and functional neurological components of emotional and cognitive empathy can be shown through imaging, such as fMRI. Developmental trajectories can inhibit the maturation of the structural bases of the human brain,

thereby, impairing the functionality. Empathy encourages connection, mutual understanding, and compassion, while simultaneously inhibiting aggression; it is the foundation for morality.

Scientific studies consistently demonstrate the connection between attachment in childhood and development of empathetic responses, morals, and mental health issues throughout the lifespan. Yet, it fails to incorporate how an individual's attachment to God can also be a strong indicator of empathetic development such as that seen in anti-social personality disorder and psychopathy. Personality disorders, specifically those that encompass anti-social behaviors (criminal behavior, lack of empathy, and inability to experience remorse), have been found to be linked to an individual's neurological functioning.

In recent decades, large amounts of research have been produced on the relationship between religious/spiritual engagement (which has been broadly defined) and psychological well-being. The majority of these studies have found that religious or spiritual engagement improves physical and mental health. Individuals who engage in spiritual practices are more likely to be optimistic and satisfied with their lives, and are less likely to engage in aggression. Due to the concept of plasticity, anti-social traits should be treatable given the proper intervention. However, this continues to go unexplored, leaving a major gap in the treatment and prevention research of lack of empathy. It is with this, a study on attachment to God and empathy will be proposed.

CHAPTER 3: RESEARCH METHODS

Overview

This chapter reviews the research questions and hypotheses for the intended study as well as the participant's eligibility requirements. In addition, it will provide and explain various methodologies that will be implemented in gathering data that is needed for analyzing the relationship between attachment to God, empathy, and trauma. A description of the following statistical analyses will be provided: A one-way multivariate analysis of variance (MANOVA) with follow up univariate analysis of variance (ANOVA), a one-way MANOVA and a one-way ANOVA, and a two-way ANOVA with follow up pairwise comparisons for simple and main effects of the moderating variable. All variables will be operationally defined, and the validity of each instrument that will be utilized will undergo test of internal reliability (Cronbach's α). These include the Questionnaire of Cognitive and Affective Empathy (measuring primary and secondary psychopathy), Attachment to God Inventory, and The Levenson Self-Report Psychopathy Scale.

Research Questions and Hypotheses

Research Questions

RQ1: What is the relationship between attachment to God (anxious, avoidant, secure, disorganized) and empathy (cognitive and affective)?

RQ2a: What is the relationship between experienced trauma and empathy scores (cognitive and affective separately)?

RQ2b: What is the relationship between experienced trauma and combined empathy scores?

RQ3: Does attachment style (anxious, avoidant, secure, disorganized) to God moderate the relationship between total empathy (cognitive and affective) and trauma (none, some, many, complex)?

Hypotheses

Hypothesis 1: Anxious, avoidant, and disorganized attachment styles to God will negatively correlate with high empathy scores. Secure attachment styles will positively correlate with high empathy scores.

Null Hypothesis 1: Anxious, avoidant, and disorganized attachment styles to God will positively correlate with high empathy scores. Secure attachment styles will negatively correlate with high empathy scores.

Hypothesis 2a: Increased trauma experiences prior to the age of 25 will have an inverse correlation with cognitive and emotional empathy scores.

Null Hypothesis 2a: Increased trauma experiences prior to the age of 25 will have a positive correlation with cognitive and emotional empathy scores.

Hypothesis 2b: Increased trauma experiences prior to the age of 25 will have an inverse relationship with combined empathy scores.

Null Hypothesis 2b: Increased trauma experiences prior to the age of 25 will have a positive correlation with combines empathy scores.

Hypothesis 3: Secure attachment to God will act as a buffer, or have a moderating effect, on the relationship between empathy and trauma.

Null Hypothesis 3: Secure attachment to God will have no moderating effect on the relationship between empathy and trauma.

Research Design

This study used a correlational research design to determine the relationship between multiple variables (attachment to God, trauma, psychopathy, and empathy). The correlational design provides specific trends and patterns within the data, that can then be interpreted. Furthermore, by determining the prevalence and relationships among these variables, the findings may be able to predict certain psychopathology, while providing a potential component for treatment of impaired psychopathology (more specifically, lack of empathy). The statistical relationship of attachment to God, trauma, and empathy and psychopathy are casual and are not, and cannot, be manipulated in this study. In other words, the variables are at their natural state; therefore, a correlational design was best suited for the purpose of this study.

Participants

Participants in the study are at least twenty-six years of age. This age group is chosen because of the neurological underpinnings of the study; by age twenty-six the human brain is fully developed. Participants are not over the age of 65 due to Institutional Review Board (IRB) regulations. All participants self-reported as either male or female (gender assigned at birth). Participants were recruited by using the researcher's personal social media page (Facebook). The language used for the social media post, link, and information page for participants was reviewed and approved by IRB prior to use, ensuring all communication was within regulation. This included the purpose of the study, eligibility requirements and a link to Qualtrics for access to the assessments required to complete this study. Please see Appendix D for recruitment materials.

Study Procedures

After each participant's age and gender was provided, the individuals were asked two questions and then completed three assessments. The questions are self-reported to determine if the participant has experienced trauma, which is assessed on the following scale: participant has not experienced trauma within their lifetime, participant has experienced one to two traumatic events within their lifetime, participant has experience three or more traumatic events within their lifetime, or participant has experienced complex trauma (prolonged exposure during developmental stages). The second question was used to determine if the participant has ever been incarcerated during their lifetime. The first assessment was another self-reported form that scored the participant's style of attachment to God (Attachment to God Inventory). This put each participant in one of the following groups: secure attachment, anxious attachment, disorganized attachment, or avoidant attachment. The second assessment measured the participant's empathy (Questionnaire of Cognitive and Affective Empathy). It was a self-reported inventory that provided a separate score on both cognitive empathy and affective empathy. The final assessment covered primary and secondary psychopathy (Levenson's Self-Report Psychopathy Scale).

The approved Facebook post and link with the above-mentioned questions and assessments was approved by the IRB and was posted on the researcher's personal Facebook page. The post explained the age restraints and overall purpose of the study. For those who met the age requirement and agree to participate, followed the link to the necessary material. Prior to answering questions, a consent form reviewing the study, its purpose, and confidentiality was provided and the participant had to agree to having read the form prior to gaining access to the assessments. In addition, information was provided for the participant to contact the researcher,

Liberty University, and/or the Institutional Review Board for any reason the potential participant sees fit. Please see Appendix E for a copy of the consent form.

Data Collection Protocol

All assessments were provided through Qualtrics. A link to obtain these assessments were provided through the researcher's personal Facebook page. Once the individual was able to verify their eligibility (being between the age of 26 and 65 years old), fully completed all the required forms (three assessments, demographic questions, and trauma self-report question), the researcher was able to obtain only the participant's answers in Qualtrics. The data that was collected was then exported to SPSS for further statistical analyses. For all assessments provided, the answers were be scored as per the necessary statical measures to obtain an overall score. These scores were then added to the SPSS software dataset with the participant's corresponding age, sex, number of trauma experiences, empathy scores, psychopathy scores, and attachment style to God category before running the ANOVAs and MANOVAs to interpret significantly statistic findings between the studied variables.

Instrumentation and Measurement

Each instrument used provided directions at the top of the assessment and were accessed through a link to Qualtrics. All assessments were based on a Likert scale, and demographic information was fill in the blank or had a yes/no or male/female option, which was entered by the participant in a confidential setting of their choosing. All corresponding data/answers were provided to the researcher without knowledge of which participant provided the answers, this was done in order to maintain confidentiality. To be included in the study, each participant must fill out all answers to the demographic questions and complete all Likert based questions to all

the provided assessments. Any participant with one or more unanswered questions was removed from the final dataset.

Questionnaire of Cognitive and Affective Empathy (QCAE)

Empathy was measured using the Questionnaire of Cognitive and Affective Empathy (QCAE) (Reniers, et al., 2011). The QCAE is a self-report, multidimensional, measure of both cognitive empathy and affective (emotional) empathy; it was derived from well-established empathy assessments including, the EQ (Baron-Cohen & Wheelwright, 2004), Hogan Empathy Scale (Hogan, 1969), Empathy subscale of the Impulsiveness-Venturesomeness-Empathy Inventory (Eysenck & Eysenck, 1978), and the Interpersonal Reactivity Index (Davis, 1983). Based off factor analysis, in an attempt to produce two coherent scales of cognitive and affective empathy, Reniers, et al. (2011) pooled all items in the above inventories and developed two subscales for cognitive and affective empathy. Together the subscales consist of a total of 31 statements that participants rate on a 4-point Likert scale (4 = strongly agree, 3 = agree, 2 = disagree, 1 = strongly disagree).

To assess for cognitive and affective empathy, the QCAE is a five-factor model that utilizes perspective taking (10 items), such as, “I can easily work out what another person might want to talk about” and online simulation (9 items, one with reverse scoring), such as, “Before criticizing somebody, I try to imagine how I would feel if I was in their place.” The perspective taking and online simulation items are used to produce a valid score on cognitive empathy. To calculate a score on affective empathy the following subcomponents are assessed, emotional contagion (4 items), including questions similar to, “I am happy when I am with a cheerful group and sad when the others are glum,” proximal responsivity (4 items), including, “It pains me to

see young people in wheelchairs," and peripheral proximity (4 items, 3 with reverse scoring), an example being, "I usually stay emotionally detached when watching a film."

By use of confirmatory factor analysis (CFA), the five-factor model proved to be consistent across gender in both cognitive and affective empathy. Convergent and construct validity were also examined and found to be in line with theoretical expectation as well as previous research (Reniers, et al., 2011). Reniers, et al. (2011) discovered the cognitive and affective scales were moderately related to each other but had a strong correlation with the subscales. Thus, suggesting a relationship between cognitive and affective empathy while simultaneously emphasizing, and accounting for, the differences between both types of empathy. In addition, it was found that the cognitive scale was associated with secondary psychopathy (Reniers et al., 2011), meaning it can show anti-social behavioral traits. Items 1, 2, 17 and 29 are reversed scored. See Appendix A. Scores for each participant were calculated for each subscale (perspective taking, online simulation, emotional contagion, proximal responsivity, and peripheral proximity), scores were then populated for both total cognitive empathy and total affective empathy, lastly a total empathy score (cognitive and affective empathy combined) for each participant was assigned.

Attachment to God Inventory

Empirical and theoretical research by Kirkpatrick and others has demonstrated that the relationship an individual has with God can be described as an attachment bond. However, due to a lack of sound psychometric scaling, the operational definition of attachment to God is difficult to construct.

A comparison of the Attachment to God Inventory (AGI) with attachment measures within adults appears to correspond between working models of romantic relationships and God

(Beck & McDonald, 2004). Beck and McDonald (2004) found that the AGI subscales of avoidance of intimacy and anxiety about abandonment displayed adequate factor structure, internal consistency, and construct validity.

Attachment to God will be measured with a scale developed by Beck and McDonald (2004). This is a 28-item instrument that yields two subscales measuring the degree of the participants self-reported experience with God that correlate with avoidant or anxious attachment styles. Items are rated on a 7-point Likert scale, which range from 1 = Disagree Strongly, 2 = Disagree, 3 = Disagree Slightly, 4 = Neutral/Mixed, 5 = Agree Slightly, 6 = Agree, 7 = Agree Strongly. This instrument includes items such as, “I fear God does not accept me when I do wrong” and “I often worry about whether God is pleased with me” on the anxious scale and “I am uncomfortable with emotional displays of affection to God” and “I am uncomfortable allowing God to control every aspect of my life” on the avoidant scale. The following items are reversed scored, 4, 8, 13, 18, 22, 26, and 28. See Appendix B.

Each participant had a total score for anxious attachment and avoidant attachment. The median score was used for assigning an attachment style to each participant. The median score for both anxious and avoidant questions was 49. If a participant’s avoidant score was 49 or greater, they were assigned avoidant group. Similarly, if a participant’s anxious score was 49 or above, they were assigned to the anxious group. If both the anxious and avoidant scores were 49 or higher, they were classified under the disorganized attachment style, which is a mixture of anxious and avoidant tendencies. If both scores were below 49, the participant was assigned to the secure attachment group.

The Levenson Self-Report Psychopathy Scale

The Levenson Self-Report Psychopathy Scale (LSRP) (Levenson, Kiehl, & Fitzpatrick, 1995) is a widely used, brief, 26-item, self-report instrument used to measure psychopathy in noninstitutionalized samples and was introduced in the mid-1990s (Salekin, 2014; Tsang, et al., 2018). Two factors are used in this inventory, primary psychopathy, and secondary psychopathy. The primary scale focuses on manipulation, callous traits, and selfishness. Initial factor analysis showed 16 items assess for manipulative and uncaring demeaner of primary psychopathy, with the remaining 10 items measuring impulsivity and anti-social behaviors/lifestyle associated with secondary psychopathy (Tsang, et al., 2018). The secondary factor measures symptoms closely associated with antisocial personality disorder, such as impulsivity and criminal mindset. A unique feature of the LSRP is that the statements presented do not explicitly reference antisocial behavior. This is not because it is not considered to be part of the psychopathy construct; rather, it helps with the evaluation associated with anti-social behavior because it limits criterion contamination and avoids the risk of skewed data in community samples (Garofalo, et al., 2018).

Levenson, Kiehl, and Fitzpatrick's (1995) theoretical expectations consistently correlated with the two factors of the LSRP. The three main hypotheses were supported (1. Psychopathy scores were related to antisocial behaviors; 2. Psychopathy scores are not related to fearlessness or adventurousness; and 3. State anxiety is positively related to secondary psychopathy while unrelated to primary psychopathy) (Levenson, et al., 1995; Garofalo, et al., 2018). Further findings on the validity and reliability of the LSRP shows minimal differential item function between genders (Tsang, et al., 2018) and shows adequate construct validity for the two factors (Salekin, 2014; Tsang, et al., 2018). The Levenson Self-Report Psychopathy Scale is modeled after the Psychopathy Checklist – Revised (PCL-R) (Hare, 2003), with each item scored on a 4-

point Likert scale (1 = strongly disagree, 2 = somewhat disagree, 3 = somewhat agree, 4 = strongly agree). Items 10, 12, 14, 15, and 16 are reverse scored in the primary psychopathy questions. Items 3 and 7 are reversed scored in the secondary psychopathy questions. See Appendix C.

Each participant had a total primary psychopathy score, total secondary psychopathy score, and a total combined psychopathy score (primary and secondary). Participants were then assigned to one of three groups: non-psychopathic, mixed group, or psychopathic group. Levenson's Self-Report Psychopathy scale uses the following criteria to assign an individual to one of the groups: a score of 48 or below is considered non-psychopathic, a score of 49-57 is placed in the mixed group, and a score of 58 or higher is assigned to the psychopathic group.

Trauma

Trauma will be self-reported on an ordinal scale with the following criteria: exposure to actual or threatened death (including military and first responders), serious injury, sexual violence, and childhood neglect/maltreatment). Prolonged childhood trauma will be categorized as complex trauma. The individual either directly experienced the event or witnessed the event in real life (not through movies, news, video games, or stories heard by others). Participants will report the number of trauma events they have experienced prior to the age of 25: (1 = no reported trauma, 2 = 1-2 trauma events experienced, 3 = 3 or more trauma events experienced, 4 = complex trauma).

Covariates

Covariates include three self-reported demographic characteristic traits: age (measured in years), gender assigned at birth (1 = male, 2 = female), and if the participant has been previously incarcerated (1=yes, 2=no).

Operationalization of Variables

Attachment to God – Variable one is a categorical variable and will be measured by the Attachment to God Inventory (Beck and McDonald, 2004). This is a self-report measure that will provide a score for each participant. The score will then be used to categorize the individual into one of four groups (anxious, avoidant, disorganized (anxious and avoidant) or secure).

Empathy – Variable two is a ratio variable that will be measured with the Questionnaire of Cognitive and Affective Empathy (Reniers, et al., 2011). The QCAE is a self-report measure and will provide three scores for each participant, one for cognitive empathy, one for affective empathy, and a total empathy score combining both cognitive and affective scores.

Trauma – Variable three, is a nominal variable and must meet the following criteria, using the DSM-5 as guidance: exposure to actual or threatened death (including military and first responders), serious injury, sexual violence, and childhood neglect/maltreatment). Prolonged childhood trauma will be categorized as complex trauma. This variable will be measured by participant's self-report and categorized as the following: 1 = no trauma, 2 = 1-2 trauma events, 3 = 3+ trauma events, 4 = complex trauma.

Demographic – The participant's age will be a fill in the blank question and measured in years. Gender will be determined by one of two categories from which the participant is asked to choose from: Male or Female. Gender is considered to be the sex one was assigned at birth. Lastly, participants will be asked if they have ever been incarcerated (yes/no format).

Data Analysis

The statistical analyses of data was conducted by coding the variables and applying the following statistical tests using IBM SPSS 25 (Statistical Package for Social Science) software.

A one-way multivariate analysis of variance (MANOVA) was performed to determine the relationship between attachment to God and empathy. In addition, a follow up univariate analysis of variance was utilized. Attachment to God will be the independent variable with four subgroups: anxious, avoidant, disorganized, and secure. Empathy will be the dependent variable with two subgroups: cognitive empathy and affective empathy. The ANOVA aimed to test the different scores on empathy while comparing the score to each attachment style separately, thus, aiding in determining a correlation between the independent and dependent variables.

The second research question required a one-way MANOVA and a one-way ANOVA to be implemented separately. The MANOVA assessed the participant's cognitive empathy score (dependent variable) and affective empathy score (dependent variable) and if the participant has experienced past trauma (independent variable). The second one-way ANOVA, for part two of the second research question analyzed the correlation between the participant's total empathy score (dependent variable) and whether or not they have experienced a traumatic event. Both analyses provided the information needed to determine any correlation between empathy scores and the impact trauma has on each type of empathy.

The last statistical measure that will be performed is a two-way analysis of variance. This analysis aimed to study the role of attachment to God and its moderating effect on the relationship between trauma and empathy. Attachment to God (independent variable) had four categories coded as the following, 1 = anxious, 2 = avoidant, 3 = secure, 4 = disorganized; empathy (dependent variable #1) had two categories coded as the following, 1 = cognitive, 2 = affective, and trauma (dependent variable #2) had three categories coded as the following, 1 = none (0 trauma experiences), 2 = some (1-2 trauma experiences), 3 = many (3 or more experiences), 4 = complex trauma (prolonged exposure).

Additional tests, not related to the research questions were run. The first was a Chi-Square Test to examine the association between attachment to God and trauma. The second test was a one-way ANOVA to examine the relationship between attachment to God and combined empathy. The final test was a one-way Welch ANOVA to determine any associations between psychopathy scores and empathy scores.

Delimitations, Assumptions, and Limitations

There are several potential limitations to this study. To begin, the sample size could be too small, the number of participants that will meet the eligibility requirements and complete all answers to each assessment cannot be confirmed until data collection begins. Second, this study will not use any experimental manipulations, rather it implemented self-reporting measures. Retrospective self-reports are a potential source of measurement error. Retrospective reports may be biased due to changes in the participant's memory over time. This may be from forgetting, redefining, or the participant's current mental state influencing the memory.

In addition, subjectivity of trauma for each individual participant is a limitation. This is due to differing definitions and interpretations, meaning the number of trauma incidents experienced and the level to which it impacts the individual may be skewed. For example, one participant may consider the loss of a pet as a traumatic experience, while another participant may have experienced repeated sexual abuse throughout their childhood and into adolescence. This will result in different neurological and emotional impairments. To help control for this, certain defining factors utilizing the DSM-5 were used to help participants determine trauma. Similarly, empathy and psychopathy were self-reported by each individual participant, potentially allowing for skewed answers in attempt to avoid providing answers that may be

thought of as socially unacceptable. For the purpose of this study, it was assumed each participant gave truthful answers, as to not skew the data.

A delimitation was also place on this study, the research specifically required participants to be aged twenty-six or older; this is due to brain maturation. Most developmentalists consider the prefrontal cortex fully developed by the age of 26. Therefore, this may dictate how firm one presents with morally disengaged behaviors and lack of empathy. The study intended to include both general population and incarcerated populations for the data collection process. However, due to restrictions, only the general population was used, therefore, it could limit the findings. As psychopathy and lack of empathy is more prominent in incarcerated populations. Furthermore, it will be unknown to what extent these findings might apply to clinically diagnosed adults.

Summary

Utilizing a correlational research design, this study aimed to explore the relationship between attachment to God, empathy, and trauma. To be included in the study, each participant must complete all answers to each inventory (QCAE, AGI, LSRP) and report their number of trauma experiences. It is hypothesized that specific patterns will emerge showing a positive correlation to secure attachment to God and empathy scores, and an inverse relationship between anxious, avoidant, and disorganized attachment to God and empathy scores. Therefore, with further analysis, utilizing a multivariate ANOVA, it is expected that attachment to God will have a moderating effect on the relationship between empathy and trauma.

Attachment to an emotionally unavailable or physically unavailable parent can cause great neurological impact. Therefore, the attachment to the one Father is assumed to be critical for proper neurodevelopment or for the prevention/treatment of re-wiring of the psychopathy, unempathetic, brain. It is with faith, that even in a world of suffering, hope can be nurtured. This

often comes in the form of compassion and empathy. Therefore, this study seeks to add to the literature covering lack of empathy and its impact on humanity.

CHAPTER 4: RESULTS

Overview

The purpose of this quantitative correlational study was to investigate the relationship between attachment to God (anxious, avoidant, secure, and disorganized) and empathy (cognitive and affective), in individuals between the ages of 26 and 64. This study also investigated trauma's role in attachment and empathy. Lastly, it attempted to determine if secure attachment to God may act as a buffer (moderator) for decreased cognitive and affective empathy.

This study used a correlational research design to determine the relationship between multiple variables (attachment to God, trauma, psychopathy, and empathy). The correlational design provided specific trends and patterns within the data, that could then be interpreted. Furthermore, by determining the prevalence and relationships among these variables, the findings were able to predict certain psychopathology, while providing a potential component for treatment of impaired psychopathology. The statistical relationship of attachment to God, trauma, and empathy are casual and were not, and cannot, be manipulated in this study. In other words, the variables are at their natural state; therefore, a correlational design was best suited for the purpose of this study.

Participants were required to be at least 26 years of age. This is due to the neurological underpinnings of the study; by age 26 the brain is fully developed. Participants were under the age of 65 due to the Institutional Review Board regulations on protected populations. Participants were recruited using Facebook. The link for the surveys was posted on the researchers personal Facebook page, which was shared by others and reached individuals from the following areas in the United States: Texas, Illinois, Virginia, California, Washington, Massachusetts, Oregan, Montana, Ohio, Florida, Missouri, Kentucky, New York, Iowa,

Arkansas, Georgia, Arizonia, Washington, New Hampshire, Tennessee, Utah, Alabama, Minnesota, Pennsylvania, Michigan, Kentucky, Washington DC, New Jersey, Colorado, South Carolina, North Carolina, Indiana, Nevada, West Virginia, Wyoming, Idaho, Oklahoma, Maine, Kansas, Louisiana, Wisconsin, Nebraska, New Mexico, Vermont, Nebraska, Connecticut, and Alaska. In addition, responses were also obtained from areas in Canada, England, Great Britain, United Kingdom, Siberia, Ireland, Australia, Brazil, South Africa, Namibia, Netherlands, Thailand, New Zealand, France, Mexico, Spain, Sweden, and Malaysia. Data was collected through Qualtrics and maintained anonymity, as no identifying factors were obtained. Once a participant completed each assessment and the demographic questions, the results were secured in Qualtrics data collection. When the participant level reached 1,148, the survey was closed and data was exported to SPSS to begin various analyses.

The research questions guiding this study are as follows:

RQ1: What is the relationship between attachment to God (anxious, avoidant, secure, disorganized) and empathy (cognitive and affective)?

RQ2a: What is the relationship between experienced trauma and empathy scores (cognitive and affective separately)?

RQ2b: What is the relationship between experienced trauma and combined empathy scores?

RQ3: Does attachment style (anxious, avoidant, secure, disorganized) to God moderate the relationship between combined empathy (cognitive and affective) and trauma (none, some, many, complex)?

Descriptive Results

The current study is a quantitative analysis of data collected from 1,148 participants. All participants were between the ages of 26 and 65 (M = 43.57, SD = 9.13). 397 participants were

removed for incomplete surveys and 30 were removed for not fitting the age requirements, leaving a total of 721 participants (697 female; 24 male). Of the 721 participants, 22 reported being incarcerated at some point in their life. 169 participants reported no trauma, 184 reported some trauma (1-2 events), 114 reported many traumas (3 or more), and 254 reported complex trauma (prolonged repeated exposure). Participants were not compensated for their involvement in the study and all assessments remained confidential. This study was approved by the Institutional Review Board (IRB #FY22-23-799).

Study Findings

Cronbach's alpha was used to determine how much the items on the scale were measuring the same underlying dimension. Before any analyses were run, each assessment underwent the test of Cronbach's alpha to determine reliability. Questionnaire of Cognitive and Affective Empathy showed an alpha of .929 (M= 53.70, SD= 13.422). Levenson's Self-Reported Psychopathy assessment revealed an alpha of .934 for primary psychopathy (16 of the 26 questions) (M = 20.56, SD= 7.324); and the secondary psychopathy (the remaining 10 questions) showed an alpha of .817 (M= 16.79, SD=5.191). The Attachment to God Inventory measured two parts to determine attachment style. Odd numbered questions (14), measured anxious attachment and produced an alpha of .916 (M= 24.93, SD= 12.459), while the even numbered questions (14) measured avoidant attachment style and revealed an alpha of .929 (M= 81.64, SD= 16.975). All assessments used in this study produced adequate internal reliability.

Research Question 1: What is the relationship between attachment to God (secure, anxious, avoidant, and disorganized) and empathy (cognitive and affective)?

A one-way multivariate analysis of variance (MANOVA) was run to determine the relationship between a participant's attachment style to God and their empathy. Two measures of

empathy were assessed: cognitive empathy and affective empathy. Each participant was assigned an attachment style depending on their assessment scores. There were four groups: secure attachment, anxious attachment, avoidant attachment, and disorganized attachment. Preliminary assumption checking revealed the following:

Univariate outliers were found, as assessed by boxplot. Univariate outliers can have a large effect on results due to their large influence on mean and standard deviation for specific groups, which can affect the statistical test results. However, these are typically influential on smaller sample sizes. For the sample size in this study (n = 721), the outliers do not show significant changes in the statistical analysis that has been utilized. Multivariate outliers were detected by running Mahalanobis distance ($P < .001$). The critical value cut off is 13.82. The seven outliers were: 13.85, 27.87, 16.26, 18.27, 21.87, 27.87 and 25.46. Due to the overall number of participants, no significance was found in results when the outliers were removed, suggesting a MANOVA can continue without skewing statistical results.

Shapiro-Wilk test of significance shows data is not normally distributed ($P < .001$). However, Shapiro Wilk test will flag minor deviations from normality as statistically significant making it less significant for sample sizes over 50. Due to the large data set in the study, Normal Q-Q-Plot can provide a more accurate outcome. Normal Q-Q-Plot shows slight deviations, which is likely contributed to the outliers previous found. There is a linear relationship between cognitive empathy and affective empathy in each attachment group as assessed by scatterplot, suggesting the original data set will continue to produce accurate statistical results. Due to the classification of the groups (secure, anxious, avoidant, and disorganized), it was expected that the groups would not be normally distributed (n= 31, n= 20, n= 645, n= 25, respectively). Similarly, due to the varying group sizes of attachment, the box test of equality of covariance (P

< .001) and Levene's test of equality of error variances ($P < .001$), both showed a violation in assumption of homogeneity of variance-covariance matrices. There was no multicollinearity found, as assessed by Pearson's correlation ($r = .478$, $p < .001$), indicating a moderate to strong correlation between the two variables (cognitive empathy and affective empathy).

It was determined removing the outliers did not significantly change the statistical outcome of the findings, therefore the original data set was used to analyze the first hypothesis: anxious, avoidant, and disorganized attachment styles to God will negatively correlate with high empathy scores.

Participants in the avoidant attachment group and the disorganized attachment group displayed lower affective empathy scores ($M = 22.81$, $SD = 5.974$; $M = 25.56$, $SD = 7.456$, respectively) than those in the secure attachment and anxious attachment groups ($M = 26.48$, $SD = 6.049$; $M = 31.30$, $SD = 11.649$, respectively). Similarly, participants in the secure and anxious attachment groups ($M = 36.61$, $SD = 1.545$; $M = 45$, $SD = 1.923$, respectively) had higher cognitive empathy scores than those in the avoidant and disorganized groups ($M = 29.51$, $SD = .339$; $M= 34.16$, $SD = 1.720$, respectively; Figure 1). Wilks' Lambda is the most commonly used test for MANOVA's, however Pillai's Trace is more robust and is recommended when sample sizes are unequal and data shows a statistical significance in Box's M results. There is a statistically significant difference between the attachment groups on the combined variables, $F(6, 1434) = 15.014$, $p < .001$; Pillai's Trace = .118; partial $\eta^2 = .059$ (Figure 2).

To determine which dependent variable is contributing to the statistically significant MANOVA, follow-up univariate ANOVAs for each dependent variable was analyzed through the Tests of Between-Subjects Effects (Figure 3). The follow-up univariate ANOVAs showed that both affective empathy scores ($F(3, 717) = 16.036$, $p < .001$; partial $\eta^2 = .063$) and cognitive

empathy scores ($F(3, 717) = 28.503$, $p < .001$; partial $\eta^2 = .107$) were statistically different between the attachment groups, using Bonferroni adjusted α level of .025.

Tukey post-hoc test showed that for cognitive empathy scores, participants from the secure attachment group had statistically significantly higher mean scores than participants in the avoidant attachment group ($p < .001$). Tukey post-hoc test revealed affective empathy scores in participants from the secure attachment group had statistically significantly higher mean scores than participants in the avoidant attachment group ($p = .008$). Those in the anxious attachment group had statistically significantly higher mean scores than those in the avoidant group ($p < .001$), the disorganized group ($p = .012$) and the secure group ($p = .037$).

Figure 1: Descriptive Statistics

	Attachment Style	Mean	Std. Deviation	N
Affective Empathy	Anxious	31.30	11.649	20
	Avoidant	22.81	5.974	645
	Secure	26.48	6.049	31
	Disorganized(anxious/avoidant)	25.56	7.456	25
	Total	23.30	6.441	721
Cognitive Empathy	Anxious	45.00	18.431	20
	Avoident	29.51	7.760	645
	Secure	36.61	13.025	31
	Disorganized(anxious/avoidant)	34.16	10.641	25
	Total	30.40	9.080	721

Figure 2: Multivariate Tests[a]

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Intercept	Pillai's Trace	.819	1614.657[b]	2.000	716.000	<.001	.819
	Wilks' Lambda	.181	1614.657[b]	2.000	716.000	<.001	.819
	Hotelling's Trace	4.510	1614.657[b]	2.000	716.000	<.001	.819
	Roy's Largest Root	4.510	1614.657[b]	2.000	716.000	<.001	.819
Attachment Style	Pillai's Trace	.118	15.014	6.000	1434.000	<.001	.059
	Wilks' Lambda	.882	15.494[b]	6.000	1432.000	<.001	.061
	Hotelling's Trace	.134	15.973	6.000	1430.000	<.001	.063
	Roy's Largest Root	.134	32.013[c]	3.000	717.000	<.001	.118

a. Design: Intercept + Attachment Style

b. Exact statistic

c. The statistic is an upper bound on F that yields a lower bound on the significance level.

Figure 3: Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	Affective Empathy	1878.219[a]	3	626.073	16.036	<.001	.063
	Cognitive Empathy	6325.824[b]	3	2108.608	28.503	<.001	.107
Intercept	Affective Empathy	91012.906	1	91012.906	2331.225	<.001	.765
	Cognitive Empathy	170478.620	1	170478.620	2304.464	<.001	.763
Attachment Style	Affective Empathy	1878.219	3	626.073	16.036	<.001	.063
	Cognitive Empathy	6325.824	3	2108.608	28.503	<.001	.107
Error	Affective Empathy	27992.263	717	39.041			
	Cognitive Empathy	53041.918	717	73.978			
Total	Affective Empathy	421187.000	721				
	Cognitive Empathy	725906.000	721				
Corrected Total	Affective Empathy	29870.483	720				
	Cognitive Empathy	59367.742	720				

a. R Squared = .063 (Adjusted R Squared = .059)
b. R Squared = .107 (Adjusted R Squared = .103)

Research Question 2: What is the relationship between experienced trauma and empathy scores?

A one-way multivariate analysis of variance was run to determine the relationship of a participant's experienced trauma and cognitive empathy scores and affective empathy scores. Each participant was assigned a level of trauma based off their self-reported answers in the survey. The four groups were: none (0 events), some (1-2 events), many (3+ events), complex (ongoing trauma throughout prime neurodevelopmental stages). Preliminary assumption checking revealed the following:

Univariate outliers were found, as assessed by boxplot. Univariate outliers can have a large effect on results due to their large influence on mean and standard deviation for specific

groups, which can affect the statistical test results. However, these are typically influential on smaller sample sizes. For the sample size in this study (n = 721), the outliers do not show significant changes in the statistical analysis that has been utilized. Multivariate outliers were detected by running Mahalanobis distance ($p < .001$). The critical value cut off is 13.82. The seven outliers are as follows: 13.85, 27.87, 16.26, 18.27, 21.87, 27.87, and 25.46. Due to the overall number of participants, no significance was found in results when the outliers were removed, suggesting a MANOVA can continue without skewing statistical results.

Shapiro-Wilk test of significance shows data is not normally distributed ($p < .001$). However, Shapiro Wilk test will flag minor deviations from normality as statistically significant making it less significant for sample sizes over 50. Due to the large data set in the study, Normal Q-Q-Plot can provide a more accurate outcome. Normal Q-Q-Plot shows slight deviations, which is likely contributed to the outliers previously found. There is a linear relationship between cognitive empathy and affective empathy in each trauma group as assessed by scatterplot, suggesting the original data set will continue to produce accurate statistical results. Due to the classification of the trauma groups (none, some, many, and complex), it was expected that the groups would not be normally distributed (n = 169, n = 184, n = 114, n = 254, respectively). There was homogeneity of variance-covariances matrices, as assessed by Box's test of equality of covariance matrices ($p = .189$). There was homogeneity of variances, as assessed by Levene's Test of Homogeneity of Variance ($p > .05$). There was no multicollinearity found, as assessed by Pearson's correlation ($r = .478$, $p < .001$), indicating a moderate to strong correlation between the two variables (cognitive empathy and affective empathy). It was determined removing the outliers did not significantly change the statistical outcome of the findings, therefore the original

data set was used to analyze the second research question: What is the relationship between experienced trauma and empathy scores?

Participants with no reported trauma scored higher on cognitive empathy (M = 31.38, SD = 9.59) than those who reported some experienced trauma, many trauma experiences, and complex trauma (M = 31.32, SD = 9.19; M = 29.88, SD = 8.09; M = 29.33, SD = 8.98, respectively). The differences between experienced trauma on the combined dependent variables was not statistically significant, $F(6, 1434) = 1.423$, $p = .202$; Pillai's Trace = .012; partial η^2 = .006. Participants with no reported trauma scored higher on affective empathy (M = 23.95, SD = 6.55) than those who reported some experienced trauma, many trauma experiences, and complex trauma (M = 23.55, SD = 2.26; M = 23.04, SD = 6.34; M = 22.80, SD = 6.52, respectively). The differences between experienced trauma on the combined dependent variables was not statistically significant, $F(6, 1434) = 1.423$, $p = .202$; Pillai's Trace = .012; partial $\eta^2 = .006$. (Figure 4 and 5).

With these findings, a one-way analysis of variance (ANOVA) was run to determine the relationship between a participant's experienced trauma and total empathy score (cognitive and affective empathy scores combined). There was homogeneity of variances, as assessed by Levene's test for equality of variances ($p = .869$). Data was not normally distributed for each group (as expected), as assessed by Shapiro-Wilk test ($p < .05$). Due to this, Kruskal-Wallis H test was run (results will follow the ANOVA findings).

Participant's total empathy score was higher in the groups that reported no trauma (n= 169, M = 53.33, SD = 14.53) and some trauma (1-2 events) (n = 184, M = 54.88, SD = 13.33) than those that reported experiencing many traumatic events (3 or more events) (n = 114, M = 52.91, SD = 12.36) and those that reported complex trauma (n = 254, M = 52.12, SD = 13.02).

Participant's combined empathy score was statistically significantly different amongst the four trauma groups, $F(3, 717) = 2.624$, $p = .05$; partial $\eta^2 = .011$. Tukey post hoc did not reveal statistically significant results between groups. However, the group means were statistically significantly different ($p = .05$), therefore, the null hypothesis can be rejected and the alternative hypothesis is accepted (Figure 6 and Figure 7).

Due to data within the groups not being normally distributed, a Kruskal-Wallis H test was run to determine if there were differences in combined empathy scores between the four trauma groups: "no" ($n = 169$), "some (1-2)" ($n = 184$), "many (3+)" ($n = 114$), and "complex" ($n = 254$). Distributions of the empathy scores were similar for all groups, as assessed by visual inspection of a boxplot. Median empathy scores were statistically significantly different between groups, $X^2(3) = 9.089$, $p = .028$ (Figure 8).

Figure 4: Descriptive Statistics

	Trauma	Mean	Std. Deviation	N
Affective Empathy	None	23.95	6.554	169
	Some	23.55	6.264	184
	Many	23.04	6.344	114
	Complex	22.80	6.524	254
	Total	23.30	6.441	721
Cognitive Empathy	None	31.38	9.594	169
	Some	31.32	9.191	184
	Many	29.88	8.091	114
	Complex	29.33	8.980	254
	Total	30.40	9.080	721

Figure 5: Multivariate Tests[a]

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Intercept	Pillai's Trace	.939	5523.114[b]	2.000	716.000	<.001	.939
	Wilks' Lambda	.061	5523.114[b]	2.000	716.000	<.001	.939
	Hotelling's Trace	15.428	5523.114[b]	2.000	716.000	<.001	.939
	Roy's Largest Root	15.428	5523.114[b]	2.000	716.000	<.001	.939
Trauma	Pillai's Trace	.012	1.423	6.000	1434.000	.202	.006
	Wilks' Lambda	.988	1.425[b]	6.000	1432.000	.202	.006
	Hotelling's Trace	.012	1.426	6.000	1430.000	.201	.006
	Roy's Largest Root	.011	2.746[c]	3.000	717.000	.042	.011

a. Design: Intercept + Trauma

b. Exact statistic

c. The statistic is an upper bound on F that yields a lower bound on the significance level.

Figure 6: Tests of Between-Subjects Effects

Dependent Variable: Total Empathy

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	1406.980[a]	3	468.993	2.624	.050	.011
Intercept	1925472.136	1	1925472.136	10774.717	<.001	.938
Trauma	1406.980	3	468.993	2.624	.050	.011
Error	128129.908	717	178.703			
Total	2208817.000	721				
Corrected Total	129536.888	720				

a. R Squared = .011 (Adjusted R Squared = .007)

Figure 7: Independent-Samples Kruskal-Wallis Test Summary

Total N	721
Test Statistic	9.089[a]
Degree Of Freedom	3
Asymptotic Sig.(2-sided test)	.028

a. The test statistic is adjusted for ties.

Figure 8: Hypothesis Test Summary

	Null Hypothesis	Test	Sig.[a,b]	Decision
1	The distribution of Total Empathy is the same across categories of Trauma.	Independent-Samples Kruskal-Wallis Test	.028	Reject the null hypothesis.

a. The significance level is .050.
b. Asymptotic significance is displayed.

Research Question 3: Does attachment style (anxious, avoidant, secure, disorganized) to God moderate the relationship between combined empathy (cognitive and affective) and trauma (0, 1-2, 3+, complex)?

A two-way analysis of variance was conducted to examine the effects of attachment and trauma on combined empathy scores. Residual analysis was preformed to test for the assumptions of the two-way ANOVA. There were several outliers found as assessed by inspection of a boxplot. Shipiro-Wilk test for normality was violated. However, this test is designed more specifically for smaller sample sizes of less than 50. Due to the participant size (*n* = 721), slight variations in group distribution are expected. Kolmogorov-Smirnov test of normality for sample sizes more than 50, showed less variations in distribution than the Shipiro-Wilk test. Regardless, ANOVAs are considered to be “robust” to deviations from normality (Maxwell and Delaney, 2004). Therefore, with large sample sizes, even skewed distributions,

may not cause concern for final results. The assumption of homogeneity of variances was violated, as assessed by Levene's test for equality of variances, $p < .001$. The researcher chose not to transform data and to continue with original data set. If the group sizes are approximately equal and large, it is acceptable to run the two-way ANOVA (Jaccard, 1998). It is possible to cause a decrease in power, however, a significant value was found, therefore the violation in homogeneity of variances was not significant enough for the large groups to manipulate the results to cause a lack of significance. There was a statistically significant interaction between empathy and trauma for attachment style to God, $F(9, 705) = 3.123$, $p = .001$, partial $\eta^2 = .038$ (Figure 9).

All pairwise comparisons were run for each simple main effect with reported 95% confidence intervals and *p*-values Bonferroni-adjusted within each simple main effect (Figure 10, Figure 11, Figure 12, Figure 13, and Figure 14). There was a statistically significant difference in combined empathy between attachment style to God for those who reported no trauma, $F(3, 705) = 20.002$, $p < .001$, partial $\eta^2 = .078$. For anxious attachment style and avoidant attachment style with no reported trauma, mean total empathy scores for anxious attachment was 90.71 ($SD = 26.893$) and 53.50 ($SD = 11.632$) for avoidant attachment, a statistically significant mean difference of 37.218, 95% CI [24.48, 49.96]. For anxious attachment style and secure attachment style with no reported trauma, mean total empathy scores for anxious attachment was 90.71 ($SD = 26.893$) and 56.92 ($SD = 13.086$) for secure attachment, a statistically significant mean difference of 33.791, 95% CI [18.36, 49.23]. For anxious attachment style and disorganized attachment style with no reported trauma, mean total empathy scores for anxious attachment was 90.71 ($SD = 26.893$) and 56 ($SD = 2.828$) for disorganized attachment, a statistically significant

mean difference of 34.714, 95% CI [8.32, 61.11]. There was not a statistically significant difference in any other group comparisons.

There was a statistically significant difference in combined empathy between attachment style to God for those who reported some trauma (1-2 events), $F(3, 705) = 9.581$, $p < .001$, partial $\eta^2 = .039$. For secure attachment style and avoidant attachment style with some reported trauma (1-2 events), mean total empathy scores for secure attachment was 68.70 ($SD = 17.932$) and 53.27 ($SD = 11.580$) for avoidant attachment, a statistically significant mean difference of 15.432 ($SD = 4.053$), 95% CI [4.71, 26.16]. For anxious attachment style and avoidant attachment style with some reported trauma, mean total empathy scores for anxious attachment was 74.80 ($SD = 23.721$) and 53.27 ($SD = 11.580$) for avoidant attachment, a statistically significant mean difference of 21.532 ($SD = 5.649$) 95% CI [6.59, 36.48]. There was not a statistically significant difference in any other group comparisons.

There was a statistically significant difference in combined empathy between attachment style to God for those who reported many traumas (3 or more events), $F(3, 705) = 2.865$, $p = .036$, partial $\eta^2 = .012$. For disorganized attachment style and avoidant attachment style with many reported traumas, mean total empathy scores for disorganized attachment was 65.86 ($SD = 16.926$) and 51.87 ($SD = 11.656$) for avoidant attachment, a statistically significant mean difference of 13.985 ($SD = 8.587$), 95% CI [1.12, 26.85]. There was not a statistically significant difference in any other group comparisons.

There was a statistically significant difference in combined empathy between attachment style to God who reported complex trauma, $F(3, 705) = 8.350$, $p < .001$, partial $\eta^2 = .034$. For anxious attachment style and avoidant attachment style with reported complex trauma, mean total empathy scores for anxious attachment was 67.50 ($SD = 34.419$) and 51.09 ($SD = 11.124$)

for avoidant attachment, a statistically significant mean difference of 16.409 (*SD* = 5.146), 95% CI [2.80, 30.02]. For secure attachment style and avoidant attachment style with reported complex trauma, mean total empathy scores for secure attachment was 72.20 (*SD* = 23.221) and 51.09 (*SD* = 11.124) for avoidant attachment, a statistically significant mean difference of 21.109 (*SD* = 5.625), 95% CI [6.23, 36]. There was not a statistically significant difference in any other group comparisons.

There was a statistically significant difference in combined empathy between trauma and attachment style to God at the secure $F(3, 705) = 2.959$, $p = .032$, partial $\eta^2 = .012$ and anxious $F(3, 705) = 5.929$, $p < .001$, partial $\eta^2 = .025$ attachment styles. There was not a statistically significant difference at the disorganized $F(3, 705) = .895$, $p = .444$, partial $\eta^2 = .004$ and avoidant $F(3, 705) = 1.554$, $p = .199$, partial $\eta^2 = .007$ attachment styles.

Participants with an anxious attachment who reported no trauma had a higher mean combined empathy score by 34.714, 95% CI [-3.364, 35.193] than those who reported many traumas, a statistically significantly difference, $p = .003$. Participants with an anxious attachment who report no trauma had a higher mean combined empathy score by 23.214, 95% CI [4.897, 41.532] than those who reported complex trauma, a statistically significantly difference, $p = .005$.

There was no statistically significant main effect in combined empathy scores for trauma groups, $F(3, 705) = 1.276$, $p = .281$, partial $\eta^2 = .005$. However, there was a statistically significant main effect of attachment to God, $F(3, 705) = 19.610$, $p < .001$, partial $\eta^2 = .077$ (Figure 9).

Figure 9: Tests of Between-Subjects Effects

Dependent Variable: Total Empathy

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	20360.548[a]	15	1357.370	8.765	<.001	.157
Intercept	366213.302	1	366213.302	2364.802	<.001	.770
Trauma	592.911	3	197.637	1.276	.281	.005
Attachment Style	9110.631	3	3036.877	19.610	<.001	.077
Trauma * Attachment Style	4353.245	9	483.694	3.123	.001	.038
Error	109176.340	705	154.860			
Total	2208817.000	721				
Corrected Total	129536.888	720				

a. R Squared = .157 (Adjusted R Squared = .139)

Figure 10: Univariate Tests

Dependent Variable: Total Empathy

Trauma		Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
None	Contrast	9292.344	3	3097.448	20.002	<.001	.078
	Error	109176.340	705	154.860			
Some	Contrast	4451.030	3	1483.677	9.581	<.001	.039
	Error	109176.340	705	154.860			
Many	Contrast	1330.923	3	443.641	2.865	.036	.012
	Error	109176.340	705	154.860			
Complex	Contrast	3879.272	3	1293.091	8.350	<.001	.034
	Error	109176.340	705	154.860			

Each F tests the simple effects of Attachment Style within each level combination of the other effects shown. These tests are based on the linearly independent pairwise comparisons among the estimated marginal means.

Figure 11: Descriptive Statistics

Dependent Variable: Total Empathy

Trauma	Attachment Style	Mean	Std. Deviation	N
None	Anxious	90.71	26.893	7
	Avoidant	53.50	11.632	147
	Secure	56.92	13.086	13
	Disorganized(anxious/avoidant)	56.00	2.828	2
	Total	55.33	14.526	169
Some	Anxious	74.80	23.721	5
	Avoidant	53.27	11.580	164
	Secure	68.70	17.932	10
	Disorganized(anxious/avoidant)	60.00	16.416	5
	Total	54.88	13.333	184
Many	Anxious	56.00	14.142	2
	Avoidant	51.87	11.656	102
	Secure	56.00	12.000	3
	Disorganized(anxious/avoidant)	65.86	16.926	7
	Total	52.91	12.359	114
Complex	Anxious	67.50	34.419	6
	Avoidant	51.09	11.124	232
	Secure	72.20	23.221	5
	Disorganized(anxious/avoidant)	56.36	15.331	11
	Total	52.12	13.021	254
Total	Anxious	76.30	28.533	20
	Avoidant	52.32	11.464	645
	Secure	63.10	17.097	31
	Disorganized(anxious/avoidant)	59.72	15.236	25
	Total	53.70	13.413	721

Figure 12: Pairwise Comparisons

Dependent Variable: Total Empathy

Trauma	(I) Attachment Style	(J) Attachment Style	Mean Difference (I-J)	Std. Error	Sig.[b]	95% Confidence Interval for Difference[b] Lower Bound	Upper Bound
None	Anxious	Avoidant	37.218*	4.814	<.001	24.481	49.955
		Secure	33.791*	5.834	<.001	18.356	49.226
		Disorganized (anxious/avoidant)	34.714*	9.978	.003	8.316	61.112
	Avoidant	Anxious	-37.218*	4.814	<.001	-49.955	-24.481
		Secure	-3.426	3.601	1.000	-12.953	6.100
		Disorganized (anxious/avoidant)	-2.503	8.859	1.000	-25.942	20.935
	Secure	Anxious	-33.791*	5.834	<.001	-49.226	-18.356
		Avoidant	3.426	3.601	1.000	-6.100	12.953
		Disorganized (anxious/avoidant)	.923	9.452	1.000	-24.085	25.931
	Disorganized (anxious/avoidant)	Anxious	-34.714*	9.978	.003	-61.112	-8.316
		Avoidant	2.503	8.859	1.000	-20.935	25.942
		Secure	-.923	9.452	1.000	-25.931	24.085
Some	Anxious	Avoidant	21.532*	5.649	<.001	6.585	36.479
		Secure	6.100	6.816	1.000	-11.933	24.133
		Disorganized (anxious/avoidant)	14.800	7.870	.363	-6.023	35.623
	Avoidant	Anxious	-21.532*	5.649	<.001	-36.479	-6.585
		Secure	-15.432*	4.053	<.001	-26.156	-4.707
		Disorganized (anxious/avoidant)	-6.732	5.649	1.000	-21.679	8.215
	Secure	Anxious	-6.100	6.816	1.000	-24.133	11.933
		Avoidant	15.432*	4.053	<.001	4.707	26.156
		Disorganized (anxious/avoidant)	8.700	6.816	1.000	-9.333	26.733
		Anxious	-14.800	7.870	.363	-35.623	6.023

	Disorganized (anxious/avoidant)	Avoidant	6.732	5.649	1.000	-8.215	21.679
		Secure	-8.700	6.816	1.000	-26.733	9.333
Many	Anxious	Avoidant	4.127	8.885	1.000	-19.381	27.635
		Secure	-3.553E-15	11.360	1.000	-30.055	30.055
		Disorganized (anxious/avoidant)	-9.857	9.978	1.000	-36.255	16.541
	Avoidant	Anxious	-4.127	8.885	1.000	-27.635	19.381
		Secure	-4.127	7.290	1.000	-23.414	15.159
		Disorganized (anxious/avoidant)	-13.985*	4.862	.025	-26.849	-1.121
	Secure	Anxious	3.553E-15	11.360	1.000	-30.055	30.055
		Avoidant	4.127	7.290	1.000	-15.159	23.414
		Disorganized (anxious/avoidant)	-9.857	8.587	1.000	-32.577	12.863
	Disorganized (anxious/avoidant)	Anxious	9.857	9.978	1.000	-16.541	36.255
		Avoidant	13.985*	4.862	.025	1.121	26.849
		Secure	9.857	8.587	1.000	-12.863	32.577
Complex	Anxious	Avoidant	16.409*	5.146	.009	2.796	30.023
		Secure	-4.700	7.535	1.000	-24.637	15.237
		Disorganized (anxious/avoidant)	11.136	6.316	.470	-5.573	27.846
	Avoidant	Anxious	-16.409*	5.146	.009	-30.023	-2.796
		Secure	-21.109*	5.625	.001	-35.991	-6.228
		Disorganized (anxious/avoidant)	-5.273	3.840	1.000	-15.433	4.886
	Secure	Anxious	4.700	7.535	1.000	-15.237	24.637
		Avoidant	21.109*	5.625	.001	6.228	35.991
		Disorganized (anxious/avoidant)	15.836	6.712	.111	-1.922	33.594
	Disorganized (anxious/avoidant)	Anxious	-11.136	6.316	.470	-27.846	5.573
		Avoidant	5.273	3.840	1.000	-4.886	15.433
		Secure	-15.836	6.712	.111	-33.594	1.922

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Bonferroni.

Figure 13: Univariate Tests

Dependent Variable: Total Empathy

Attachment Style		Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Anxious	Contrast	2754.471	3	918.157	5.929	<.001	.025
	Error	109176.340	705	154.860			
Avoidant	Contrast	722.093	3	240.698	1.554	.199	.007
	Error	109176.340	705	154.860			
Secure	Contrast	1374.887	3	458.296	2.959	.032	.012
	Error	109176.340	705	154.860			
Disorganized (anxious/avoidant)	Contrast	415.637	3	138.546	.895	.444	.004
	Error	109176.340	705	154.860			

Each F tests the simple effects of Trauma within each level combination of the other effects shown. These tests are based on the linearly independent pairwise comparisons among the estimated marginal means.

Figure 14: Pairwise Comparisons

Dependent Variable: Total Empathy

Attachment Style	(I) Trauma	(J) Trauma	Mean Difference (I-J)	Std. Error	Sig.[b]	95% Confidence Interval for Difference[b] Lower Bound	Upper Bound
Anxious	None	Some	15.914	7.287	.176	-3.364	35.193
		Many	34.714*	9.978	.003	8.316	61.112
		Complex	23.214*	6.923	.005	4.897	41.532
	Some	None	-15.914	7.287	.176	-35.193	3.364
		Many	18.800	10.412	.428	-8.746	46.346
		Complex	7.300	7.535	1.000	-12.637	27.237
	Many	None	-34.714*	9.978	.003	-61.112	-8.316
		Some	-18.800	10.412	.428	-46.346	8.746
		Complex	-11.500	10.161	1.000	-38.382	15.382
	Complex	None	-23.214*	6.923	.005	-41.532	-4.897
		Some	-7.300	7.535	1.000	-27.237	12.637
		Many	11.500	10.161	1.000	-15.382	38.382
Avoidant	None	Some	.228	1.413	1.000	-3.511	3.968
		Many	1.624	1.604	1.000	-2.619	5.867
		Complex	2.406	1.312	.402	-1.065	5.877

	Some	None	-.228	1.413	1.000	-3.968	3.511
		Many	1.396	1.569	1.000	-2.756	5.548
		Complex	2.178	1.270	.520	-1.181	5.537
	Many	None	-1.624	1.604	1.000	-5.867	2.619
		Some	-1.396	1.569	1.000	-5.548	2.756
		Complex	.782	1.478	1.000	-3.129	4.694
	Complex	None	-2.406	1.312	.402	-5.877	1.065
		Some	-2.178	1.270	.520	-5.537	1.181
		Many	-.782	1.478	1.000	-4.694	3.129
Secure	None	Some	-11.777	5.234	.149	-25.626	2.072
		Many	.923	7.971	1.000	-20.165	22.011
		Complex	-15.277	6.549	.120	-32.603	2.049
	Some	None	11.777	5.234	.149	-2.072	25.626
		Many	12.700	8.192	.729	-8.973	34.373
		Complex	-3.500	6.816	1.000	-21.533	14.533
	Many	None	-.923	7.971	1.000	-22.011	20.165
		Some	-12.700	8.192	.729	-34.373	8.973
		Complex	-16.200	9.088	.451	-40.244	7.844
	Complex	None	15.277	6.549	.120	-2.049	32.603
		Some	3.500	6.816	1.000	-14.533	21.533
		Many	16.200	9.088	.451	-7.844	40.244
Disorganized (anxious/avoidant)	None	Some	-4.000	10.412	1.000	-31.546	23.546
		Many	-9.857	9.978	1.000	-36.255	16.541
		Complex	-.364	9.566	1.000	-25.673	24.945
	Some	None	4.000	10.412	1.000	-23.546	31.546
		Many	-5.857	7.287	1.000	-25.136	13.421
		Complex	3.636	6.712	1.000	-14.122	21.394
	Many	None	9.857	9.978	1.000	-16.541	36.255
		Some	5.857	7.287	1.000	-13.421	25.136
		Complex	9.494	6.017	.690	-6.425	25.412
	Complex	None	.364	9.566	1.000	-24.945	25.673
		Some	-3.636	6.712	1.000	-21.394	14.122
		Many	-9.494	6.017	.690	-25.412	6.425

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Bonferroni.

Additional Findings

Chi-Square Test – Attachment to God and Trauma

A chi-square test was conducted to examine the association between attachment to God and trauma. Most expected cell frequencies were greater than 5 (4 out 16 cells had an expected count under 5). There was not a significant statistic association between attachment style to God and trauma, $X^2(1) = 16.703$, $p = .054$*;* However, Likelihood Ratio reported a significance level of $p = .048$ (Figure 15). As assessed by visual inspection of Attachment Style * Trauma Crosstabulation (Figure 16), participants in the secure attachment group were more likely to report no trauma (*n*=13) than the other groups: some (*n*=10), many (*n*=3), complex (*n*=5). Those in the avoidant attachment group were more likely to report complex trauma (*n*=232) than those in the other groups: none (*n*=151), some (*n*=147), and many (*n*=164). Participants in the disorganized attachment group were more likely to report complex trauma (*n* =11), as opposed to those in the other groups: none (*n* =2), some (*n*=5) and many (*n*=7). Those in the anxious attachment group did not appear to have a significant difference as assessed by visual inspection: none (*n*= 7), some (*n*=5), many (*n*=2), and complex (*n*=6).

Figure 15: Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	16.703[a]	9	.054
Likelihood Ratio	17.072	9	.048
Linear-by-Linear Association	.366	1	.545
N of Valid Cases	721		

a. 4 cells (25.0%) have expected count less than 5. The minimum expected count is 3.16.

*Figure 16: Attachment Style * Trauma Crosstabulation*

			Trauma				
			None	Some	Many	Complex	Total
Attachment Style	Anxious	Count	7	5	2	6	20
		Expected Count	4.7	5.1	3.2	7.0	20.0
		% within Attachment Style	35.0%	25.0%	10.0%	30.0%	100.0%
		% within Trauma	4.1%	2.7%	1.8%	2.4%	2.8%
		Adjusted Residual	1.2	-.1	-.7	-.5	
	Avoidant	Count	147	164	102	232	645
		Expected Count	151.2	164.6	102.0	227.2	645.0
		% within Attachment Style	22.8%	25.4%	15.8%	36.0%	100.0%
		% within Trauma	87.0%	89.1%	89.5%	91.3%	89.5%
		Adjusted Residual	-1.2	-.2	.0	1.2	
	Secure	Count	13	10	3	5	31
		Expected Count	7.3	7.9	4.9	10.9	31.0
		% within Attachment Style	41.9%	32.3%	9.7%	16.1%	100.0%
		% within Trauma	7.7%	5.4%	2.6%	2.0%	4.3%
		Adjusted Residual	2.5	.9	-1.0	-2.3	
	Disorganized (anxious/avoidant)	Count	2	5	7	11	25
		Expected Count	5.9	6.4	4.0	8.8	25.0
		% within Attachment Style	8.0%	20.0%	28.0%	44.0%	100.0%
		% within Trauma	1.2%	2.7%	6.1%	4.3%	3.5%
		Adjusted Residual	-1.9	-.6	1.7	.9	
Total		Count	169	184	114	254	721
		Expected Count	169.0	184.0	114.0	254.0	721.0
		% within Attachment Style	23.4%	25.5%	15.8%	35.2%	100.0%
		% within Trauma	100.0%	100.0%	100.0%	100.0%	100.0%

One-Way ANOVA – Attachment to God and Psychopathy

Similar to previous analyses run in this study, there were outliers as assessed by inspection of boxplot. These were not removed in order to prevent altering the original data set.

Distribution of normality was violated, as assessed by Shapiro-Wilk's test ($p < .05$). Again, due to the larger sample size and ANOVAs considered to be robust, the researcher proceeded with the analysis without transforming the original data. The assumption of homogeneity of variances was violated, as assessed by Levene's test for equality of variances ($p < .001$). Due to this a Welch ANOVA was run: Welch's $F(3, 39.986) = 9.533$, $p < .001$. A participant's psychopathy score was statistically significantly different for the various attachment styles, $F(3, 717) = 40.044$, $p < .001$. Participant's psychopathy scores decreased from the anxious attachment style ($M = 59.30$, $SD = 27.538$), disorganized attachment style ($M = 45.60$, $SD = 14.465$), secure attachment style ($M = 42.48$, $SD = 15.332$), and avoidant attachment style ($M = 36.10$, $SD = 8.994$). Tukey's post hoc and Games-Howell post hoc were run to determine multiple comparisons (Figure 17).

Figure 17: Multiple Comparisons

Dependent Variable: Total Psychopathy Score

	(I) Attachment Style	(J) Attachment Style	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
Tukey HSD	Anxious	Avoidant	23.202*	2.377	<.001	17.08	29.32
		Secure	16.816*	3.003	<.001	9.08	24.55
		Disorganized(anxious/avoidant)	13.700*	3.141	<.001	5.61	21.79
	Avoidant	Anxious	-23.202*	2.377	<.001	-29.32	-17.08
		Secure	-6.386*	1.925	.005	-11.34	-1.43
		Disorganized(anxious/avoidant)	-9.502*	2.134	<.001	-15.00	-4.01
	Secure	Anxious	-16.816*	3.003	<.001	-24.55	-9.08
		Avoidant	6.386*	1.925	.005	1.43	11.34
		Disorganized(anxious/avoidant)	-3.116	2.814	.685	-10.36	4.13
	Disorganized (anxious/avoidant)	Anxious	-13.700*	3.141	<.001	-21.79	-5.61
		Avoidant	9.502*	2.134	<.001	4.01	15.00
		Secure	3.116	2.814	.685	-4.13	10.36
Games-Howell	Anxious	Avoidant	23.202*	6.168	.007	5.87	40.53
		Secure	16.816	6.745	.084	-1.66	35.29
		Disorganized(anxious/avoidant)	13.700	6.803	.208	-4.91	32.31
	Avoidant	Anxious	-23.202*	6.168	.007	-40.53	-5.87
		Secure	-6.386	2.776	.120	-13.92	1.15
		Disorganized(anxious/avoidant)	-9.502*	2.915	.016	-17.53	-1.48
	Secure	Anxious	-16.816	6.745	.084	-35.29	1.66
		Avoidant	6.386	2.776	.120	-1.15	13.92
		Disorganized(anxious/avoidant)	-3.116	3.994	.863	-13.71	7.48
	Disorganized(anxious/avoidant)	Anxious	-13.700	6.803	.208	-32.31	4.91
		Avoidant	9.502*	2.915	.016	1.48	17.53
		Secure	3.116	3.994	.863	-7.48	13.71

*. The mean difference is significant at the 0.05 level.

One-Way ANOVA – Attachment and Combined Empathy

A one-way ANOVA was run to examine the relationship between combined empathy (cognitive and affective) and attachment style. Outliers were found, as assessed by inspection of boxplot. Distribution of normality was partially violated, as assessed by Shapiro-Wilk's test (p = .052, p < .001, p = .002, p= .088). Due to the large sample size, the researcher proceeded with the analysis without transforming the original data. The assumption of homogeneity of variances was violated, as assessed by Levene's test for equality of variances (p < .001). Due to this a Welch ANOVA was run: Welch's $F(3, 40.307) = 10.040$, p < .001. A participant's total empathy score was statistically significantly different for the various attachment styles, $F(3, 717) = 31.521$, p < .001. Participant's total empathy scores decreased from the anxious attachment style (M= 76.30, SD= 28.533), secure attachment style (M= 63.10, SD= 17.097), disorganized attachment style (M= 59.72, SD= 15.236), and avoidant attachment style (M= 52.32, SD= 11.464). Tukey post hoc and Games-Howell post hoc were run to determine multiple comparisons (Figure 18).

Figure 18: Multiple Comparisons

Dependent Variable: Total Empathy

	(I) Attachment Style	(J) Attachment Style	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
Tukey HSD	Anxious	Avoidant	23.984*	2.868	<.001	16.60	31.37
		Secure	13.203*	3.623	.002	3.87	22.53
		Disorganized(anxious/avoidant)	16.580*	3.790	<.001	6.82	26.34
	Avoidant	Anxious	-23.984*	2.868	<.001	-31.37	-16.60
		Secure	-10.780*	2.323	<.001	-16.76	-4.80
		Disorganized(anxious/avoidant)	-7.404*	2.575	.022	-14.04	-.77
	Secure	Anxious	-13.203*	3.623	.002	-22.53	-3.87
		Avoidant	10.780*	2.323	<.001	4.80	16.76
		Disorganized(anxious/avoidant)	3.377	3.396	.753	-5.37	12.12
	Disorganized(anxious/avoidant)	Anxious	-16.580*	3.790	<.001	-26.34	-6.82
		Avoidant	7.404*	2.575	.022	.77	14.04
		Secure	-3.377	3.396	.753	-12.12	5.37
Games-Howell	Anxious	Avoidant	23.984*	6.396	.007	6.02	41.95
		Secure	13.203	7.081	.266	-6.13	32.54
		Disorganized(anxious/avoidant)	16.580	7.070	.112	-2.75	35.91
	Avoidant	Anxious	-23.984*	6.396	.007	-41.95	-6.02
		Secure	-10.780*	3.104	.008	-19.20	-2.36
		Disorganized(anxious/avoidant)	-7.404	3.080	.102	-15.88	1.07
	Secure	Anxious	-13.203	7.081	.266	-32.54	6.13
		Avoidant	10.780*	3.104	.008	2.36	19.20
		Disorganized(anxious/avoidant)	3.377	4.326	.863	-8.09	14.85
	Disorganized(anxious/avoidant)	Anxious	-16.580	7.070	.112	-35.91	2.75
		Avoidant	7.404	3.080	.102	-1.07	15.88
		Secure	-3.377	4.326	.863	-14.85	8.09

*. The mean difference is significant at the 0.05 level.

One-Way ANOVA – Empathy and Psychopathy

A one-way Welch ANOVA was conducted to examine the relationship between psychopathy scores and empathy scores. Homogeneity of variances was violated, as assessed by Levene's Test of Homogeneity of Variance ($p < .001$). Data was normally distributed in the psychopathic group ($p = .747$) and mixed group ($p = .113$), but not the non-psychopathic group ($p < .001$) as assessed by Shapiro-Wilk test. Participants were classified in three psychopathy groups: non-psychopathic ($n = 651$), mixed group ($n = 34$), and psychopathic group ($n = 36$). Total empathy was statistically significantly different between psychopathy groups, Welch's $F(2, 47.896) = 36.253$, $p < .001$. Total empathy scores increased from the non-psychopathic group ($M = 51.88$; $SD = 10.954$), mixed group ($M = 59.97$; $SD = 11.913$), and psychopathic group ($M = 80.67$; $SD = 22.167$). Games-Howell post hoc analysis revealed that the mean increase from the mixed group to the non-psychopathic group (8.09, 95% CI [2.98, 13.19]) was statistically significant ($p <.001$), as well as the increase from non-psychopathic group to the psychopathic group (28.783, 95% CI [19.69, 37.88], $p < .001$), and the increase from mixed group to the psychopathic group (20.696, 95% CI [10.52, 30.87], $p < .001$) (see Figure 19).

Figure 19: Multiple Comparisons

Dependent Variable: Total Empathy

	(I) Psychopathy Group	(J) Psychopathy Group	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Tukey HSD	Non Psychopathy Group	MixedGroup	-8.087*	2.075	<.001	-12.96	-3.21
		PsychopathicGroup	-28.783*	2.019	<.001	-33.53	-24.04
	MixedGroup	NonPsychopathyGroup	8.087*	2.075	<.001	3.21	12.96
		PsychopathicGroup	-20.696*	2.820	<.001	-27.32	-14.07
	Psychopathic Group	NonPsychopathyGroup	28.783*	2.019	<.001	24.04	33.53
		MixedGroup	20.696*	2.820	<.001	14.07	27.32
Games-Howell	Non Psychopathy Group	MixedGroup	-8.087*	2.088	.001	-13.19	-2.98
		PsychopathicGroup	-28.783*	3.719	<.001	-37.88	-19.69
	MixedGroup	NonPsychopathyGroup	8.087*	2.088	.001	2.98	13.19
		PsychopathicGroup	-20.696*	4.222	<.001	-30.87	-10.52
	Psychopathic Group	NonPsychopathyGroup	28.783*	3.719	<.001	19.69	37.88
		MixedGroup	20.696*	4.222	<.001	10.52	30.87

*. The mean difference is significant at the 0.05 level.

Summary

Overall, the following significant findings were determined: participants in the avoidant attachment style and the disorganized attachment groups displayed lower affective empathy scores than those in the secure attachment and anxious attachment style groups. It was determined both affective empathy and cognitive empathy scores were statistically significantly different between the four attachment groups. Cognitive empathy scores from the secure attachment group were statistically significantly higher than participants in the avoidant group. Affective empathy scores were also significantly statistically higher in the secure group than the avoidant group. However, those in the anxious attachment group had statistically significantly

higher scores than those in the avoidant, the disorganized, and the secure attachment groups. The possible reasons for this will be addressed in chapter 5.

Participants with no trauma scored higher on cognitive empathy than those who reported some trauma, many traumas, and complex trauma. However, the differences between experienced trauma on the combined dependent variables was not statistically significantly different. Participants with no reported trauma scored higher on affective empathy than those who reported some trauma, many traumas, and complex trauma. However, the differences between experienced trauma on the combined dependent variables was not statistically significant. A participants combined empathy scores (affective and cognitive) was higher in the groups that reported no trauma and some trauma, than those who reported experiencing many traumatic events or complex trauma. The combined empathy score was statistically significantly different amongst the amount of reported experienced trauma.

For those with no trauma, anxious attachment had higher mean combined empathy scores than those in the secure, avoidant, and disorganized groups. Participants who reported some trauma, in the secure attachment group and anxious attachment group had statistically significantly higher mean combined empathy scores than those in the avoidant group. Participants who reported experiencing many traumatic events and demonstrating a disorganized attachment style had statistically significantly higher mean scores than those in the avoidant group. Participants that reported complex trauma, with anxious attachment and secure attachment had significantly higher mean empathy scores than those in the avoidant group. There was a statistically significant difference in combined empathy scores and attachment style to God at the secure and anxious level. Participants with an anxious attachment who reported no trauma had higher mean combined empathy scores than those who reported many traumas or complex

trauma. There was not a statistically significant main effect in combined empathy scores from trauma groups, however there was a statistically significant main effect of attachment to God.

In addition to the research questions, the research also observed the following: participants in the secure attachment group were more likely to report no trauma, while those in the avoidant group were more likely to report complex trauma. Participants in the disorganized group were more likely to report complex trauma, and those in the anxious group did not appear to have a correlation in reported frequency of trauma. Furthermore, those with disorganized and anxious attachment had higher mean psychopathy scores than those in the avoidant and secure attachment. Anxious attachment showed the highest mean psychopathy scores and highest combined empathy scores, while those with avoidant attachment displayed the lowest mean psychopathy scores and the lowest mean empathy scores. Secure attachment participants revealed lower mean psychopathy scores than those in the anxious and disorganized groups, but higher mean combined empathy scores than the avoidant and disorganized groups. Lastly, those with higher psychopathy scores had statistically significantly higher empathy scores, which is consistent with prior research and will be addressed in chapter 5 discussions along with the above mentioned results.

CHAPTER 5: DISCUSSION

Overview

The purpose of this quantitative correlational study was to investigate the relationship between attachment to God (anxious, avoidant, disorganized and secure) and empathy (cognitive and affective), in individuals between the ages of twenty-six and sixty-five. This study also investigated trauma as a potential predictor of lack of cognitive and emotional empathy and how secure attachment to God may act as a buffer for decreased cognitive and emotional empathy. The findings from the following research questions were used to guide the discussion on implications and future research that will be discussed in this chapter.

RQ1: What is the relationship between attachment to God (anxious, avoidant, secure, disorganized) and empathy (cognitive and affective)?

RQ2a: What is the relationship between experienced trauma and empathy scores (cognitive and affective separately)?

RQ2b: What is the relationship between experienced trauma and combined empathy scores?

RQ3: Does attachment style (anxious, avoidant, secure, disorganized) to God moderate the relationship between combined empathy (cognitive and affective) and trauma (none, some, many, complex)?

After a brief summarization of the key findings, including significant associations found outside of the original research questions will be discussed first. The statistical findings and what the data means, as well as how they compare to the literature review provided in chapter two will be addressed, this includes both the scientific and biblical components. Next, the implications of the presented findings and any limitations the study had during the process of data collection and

running the statistical analyses will be presented. Lastly, suggestions for future research will be discussed.

Summary of Findings

It was determined both affective empathy and cognitive empathy scores were statistically significantly different between the four attachment groups. Participants in the avoidant and disorganized attachment groups displayed lower affective empathy than those in the secure and anxious attachment groups, while those in the secure attachment group showed higher cognitive empathy scores than those in the avoidant group. The anxious attachment group had the highest combined empathy (cognitive and affective) scores amongst the four attachment styles. However, the anxious attachment group also displayed the highest psychopathy scores when compared to the four attachment styles.

Participants with no trauma scored higher on cognitive empathy and affective empathy as separate scores than those who reported some trauma, many traumas, and complex trauma. However, the differences between experienced trauma on the combined dependent variables was not statistically significantly different. A participants combined empathy scores (affective and cognitive) was higher in the groups that reported no trauma and some trauma, than those who reported experiencing many traumatic events or complex trauma. The combined empathy score was statistically significantly different amongst the amount of reported experienced trauma. For those with no trauma, anxious attachment had higher combined empathy scores than those in the secure, avoidant, and disorganized groups. Participants who reported some trauma, in the secure attachment group and anxious attachment group had higher combined empathy scores than those in the avoidant group. Participants who reported experiencing many traumatic events and demonstrating a disorganized attachment style had higher combined empathy scores than those

in the avoidant group who also reported experiencing many traumatic events. Those reporting complex trauma, with anxious attachment and secure attachment had higher empathy scores than those in the avoidant group.

Participants with an anxious attachment who reported no trauma had higher combined empathy scores than those who reported many traumas or complex trauma. There was not a statistically significant main effect in combined empathy scores from trauma groups, however there was a statistically significant main effect of attachment to God.

In addition to the research questions, analyses also found the following: participants in the secure attachment group were more likely to report no trauma, while those in the avoidant group were more likely to report complex trauma. Participants in the disorganized group were more likely to report complex trauma, and those in the anxious group did not appear to have a correlation in reported frequency of trauma. Furthermore, those with disorganized and anxious attachment had higher mean psychopathy scores than those in the avoidant and secure attachment. While those with avoidant attachment displayed the lowest mean psychopathy scores and the lowest mean empathy scores. Secure attachment participants revealed lower mean psychopathy scores than those in the anxious and disorganized groups, but higher mean combined empathy scores than the avoidant and disorganized groups. Overall, those with higher psychopathy scores had significantly higher empathy scores.

Discussion of Findings

Trauma and Empathy

Participants who reported no experienced trauma showed higher cognitive empathy and affectively empathy than those who reported experiencing some, many, or complex trauma. While there was a mean difference, the difference was not considered statistically significant.

However, even the slight difference is consistent with previous literature. Various forms and severities of trauma, including lack of attachment, can play a role in lack of empathy. Research has found that interpersonal events, such as complex trauma, can significantly influence an individual's empathetic processing (Cheng et al., 2017). The current study did find, when cognitive and affective empathy scores were combined for a total empathy score, there was a statistically significant difference amongst the four trauma groups, with those reporting no trauma a statistically significantly higher mean combined empathy score.

This could be due to the neurological consequences of trauma. While the amygdala, gyrus, insula, and prefrontal cortex, are known to play a key role in the processing and understanding of emotions, as well as regulating behaviors, they also contribute to empathetic reasoning and understanding social emotions (Kanel et al., 2019). These regions are important individually, but the way they communicate and work together is equally as important – this is knowns as executive functioning. When exposed to trauma, cortisol levels will increase while simultaneously lowering the performance of an individual's executive functioning (Ouanes & Popp, 2019). Thereby, potentially providing neurological evidence that trauma can impact empathetic ability.

From a Biblical standpoint, mankind too often blames God for the evil in the world. However, it is with mankind's choice to pursue evil and sinful ways [causing trauma], that evil continues to persist in the world. As mentioned previously, lack of accountability began with Adam and Eve: Adam blaming Eve – "The women you put here with me – she gave me some fruit from the tree" and Eve then blaming the serpent – "The serpent deceived me" (*NIV,* 2011, Gen 1:12-13). There was no true ownership of the choices *they,* and they alone, made. Wolters (2005) states, humans have an "ingrained streak" in their thinking which blames God's

handiwork “for the ills and woes of the world we live in” (p. 61). This is a common theme in our world today; not everyone blames Him, but too often someone is blamed for a choice made by a different individual, this is also seen with generational trauma.

Attachment and Empathy

Early parenting contributes to the development of empathy, or lack thereof (Hyde, Shaw, and Moilanen, 2010). As research has shown, deficits in empathy occur from childhood trauma and poor attachment development. Attachment theory provides an explanation of how children mimic their caregivers’ response to emotional situations involving a variety of their own emotions and the emotions of others, as well as how this can influence the neurological development and traits throughout adolescences and into adulthood.

This study found that participants who scored in the avoidant attachment group and the disorganized attachment group displayed lower affective empathy scores as well as lower cognitive empathy scores than those who scored in the secure and anxious attachment groups. This suggests those who have a secure attachment or anxious attachment are statistically more likely to have higher cognitive and affective empathy scores than those who display a disorganized attachment or avoidant attachment to God. God created mankind as relational beings, with intent to maintain a relationship with Him and others. God states in Genesis 2:18 that it is not good for man to be alone. Divine struggles predict an increase in mental and emotional health (Wilt, et al., 2016). Divine struggles could look like an insecure attachment, or lack of relationship, with God, potentially leading to lack of empathy.

Attachment as a Moderating Effect on Trauma and Empathy

There was a statistically significant interaction found between empathy and trauma for attachment style to God. For those who reported no trauma, there was a statistically significant

difference in combined empathy scores for the four attachment groups. Anxious attachment showed the highest empathy scores, followed by secure, with disorganized and avoidant styles having the lowest combined empathy scores. Participants who reported experiencing some trauma (1-2 events) showed similar results as those who reported no trauma. Those in the secure and anxious attachment style had higher combined empathy scores than those who showed avoidant attachment.

Individuals who reported experiencing many traumatic events (3 or more events) only found one significant simple effect – those with disorganized attachment displayed higher empathy scores than those who showed an avoidant attachment style. There was also a statistically significant difference for those who reported complex trauma, both anxious and secure attachment styles showed higher combined empathy scores than those who showed an avoidant attachment. While there was not a statistically significant main effect in combined empathy scores for trauma, there was a significant main effect of attachment to God. Meaning, attachment style to God showed to have a moderating effect on the relationship between trauma and empathy.

Empathy, both cognitive and emotional, has been a topic for neuropsychiatric studies (Bosnjakovic & Radionoy, 2018; Chialant, Edersheim, & Price, 2016; Meyza, 2018). The findings suggest that affective empathy will activate specific brain regions including the amygdala, and cognitive empathy will activate the prefrontal cortex (van Dongen, 2020). Empathy is foundational for lowered callous-unemotional traits, and increased connection and relatability to other individuals. Despite scientific literature consistently suggesting there is not a therapeutic treatment for specific symptoms (lack of empathy/remorse) related to psychopathy and anti-social personality disorder, it must be acknowledged that the Bible acts as the ultimate

guide in loving one another as well as showing compassion and empathy. Scripture provides direction for establishing morals that are grounded in Christ instead of other faulty (sinful) human beings. In other words, establishing a secure attachment to God could be a buffer for those who have experienced trauma and/or display lower empathic abilities, as seen in the above findings on this presented study.

Additional Findings

While anxious attachment had the highest cognitive and affective empathy scores, the avoidant attachment having the lowest, anxious attachment also had the highest mean psychopathy scores. Those with a secure attachment had lower psychopathy mean scores than those who showed anxious and disorganized styles, but also had higher combined empathy scores than those with avoidant and disorganized attachment styles. It appears that psychopathy and combined empathy scores were positively correlated. Decreased affective and cognitive empathy is linked to increased anti-social behaviors, however, many studies have found that higher cognitive empathy is possible for those with increased psychopathy scores (Aaltola, 2014; Campos et al., 2022, Domes et al., 2013; Owens et al., 2017). This is possibly due to the psychopathic individual being free of emotional bias and their ability to conform to social norms for increased manipulation success. For those with lower psychopathic traits and increased anti-social characteristics, a deficit in both affective and cognitive empathy can be found (Campos et al., 2022).

In addition, participants in the secure attachment group were more likely to report no trauma than those in the anxious, avoidant, or disorganized groups. While those in the avoidant and disorganized attachment styles were more likely to report complex trauma than those in the other attachment groups. Lastly, individuals in the anxious attachment group did not appear to

have a significant difference in reported trauma. Considering previous research, it is to be expected that the more trauma an individual experiences, the more likely they will develop an attachment style that is not secure. The social interactions a child has with their primary caregivers, as well as how they stimulate the child, beings to program the child's brain. Even with proper nutrition, if an infant is withheld from experiencing affectionate social interaction, their brain development will be compromised (Sullivan, 2012). In addition, he [Sullivan, 2012] says that this early deprivation can limit the formation of new attachments for the rest of the person's life, suggesting that trauma may impair not only how an individual is able to build a healthy and secure attachment to others, but also to God.

Furthermore, Bowlby suggested that the attachment bond is a complex behavioral system, encouraging comfort during stressful scenarios, thus, leading to reduced negative effects that aid in the child's ability to develop a healthy, realistic, coherent sense of self (Levy, et al., 2015). The parent-child bond is foundational to the child's formation of identity, interpersonal attitudes, and intrapersonal regulation. Even more, abnormalities in the amygdala, gyrus, insula, as well as lower gray matter, have been detected in the brain of those who developed anxious or avoidant attachments in early childhood (Levy et al., 2015). These results suggest that individuals who are insecurely attached, show behavioral dysregulation as well as hypersensitivity to emotional cues and problems regulating those emotions on a neurological level. This could be why the present study found that combined empathy scores were lower for those who displayed disorganized and avoidant attachment styles, as opposed to those who displayed a secure attachment style. However, the anxious attachment style did not display lowered empathy scores. This will be addressed in the limitations of the study.

Implications

The findings produced in this study help show the impact trauma has on attachment to God as well as the impact attachment to God has on an individual's cognitive and affective empathy. Spirituality positively correlates with a variety of mental health factors. Kirkpatrick believes the attachment to God may act as a restorative, or compensative, attachment figure for those with a history of insecure or disorganized attachment styles (Pirutinsky, Rosmarin, and Kirkpatrick, 2019). The findings of the study currently being presented helps demonstrate the potential moderating effects of a secure attachment style to God and how it positively relates to the relationship between trauma and empathy. In addition, another study predicted that attachment to God was a unique predictor of mental health within the traditional Jewish community. Attachment to God was also a predictor for less traditional non-Orthodox Jews (Pirutinsky, Rosmarin, and Kirkpatrick, 2019). Further examination of attachment to God has demonstrated that secure attachment enhances emotional regulation (Rowatt & Kirkpatrick, 2002) in an addition to providing encouragement in stressful times (Ellison, Bradshaw, Kuyel, & Marcum, 2012). Emotional regulation is imperative because this [emotional regulation] is needed for the ability to reconcile belief in a good God with recognition of evil in the world. Betenson (2016) states that the problem with evil, is the problem humans have reconciling this belief.

Emotional regulation can be encouraged with spiritual activities (Power, et al., 2007). The everyday relationship between spiritual experiences, such as serving God and others, has been found to act as a buffer against the negative impact of perceived stress (Power, et al., 2007; Whitehead & Bergeman, 2012), including traumatic encounters. Another study presented findings that add to this by showing participants who preform spiritual interventions lowered their level of reported stress (Letvak, 2006). Labbe & Forbes (2009) added, participants with

high levels of self-reported spiritual enlightenment have increased affect regulation when exposed to a controlled stress variable.

Science has shown how the environment can neurologically and emotionally impact all of mankind. God tells us He knows the environment is a temptation. Scripture teaches that is a person's choice in how the respond to the environment. There is a choice to respond with compassion and empathy, or show a lack of self-control and respond with more evil. 1 Peter 3:8-9 conveys this same concept – "Finally, all of you, be like-minded, be sympathetic, love one another, be compassionate and humble. Do not repay evil with evil or insult with insult…" (*NIV, 2011*). Individuals are all unique, yet each one was made in God's image, giving us the capability to have a tender heart and humble mind. Mankind has been blessed with the choice to allow the fruits of the spirit to guide their empathetic ability despite how the environment has impacted their neurological functionality; "The fruit of the Spirit is love, joy, peace, forbearance, kindness, goodness, faithfulness, gentleness, and self-control. Against such things, there is no law" (Gal 5:22-23).

With trauma and insecure attachment styles distorting a person's worldview, using spiritual interventions can have a positive neurological and emotional impact on one's view of their relationship with God, others, themselves, and the overall concept of empathy. Empathy does not have to be viewed as a fixed trait (something we have or we do not), rather it is a skill set that needs to be nurtured and can potentially be best nurtured through spiritual activities. Similar to other skillsets humans have, it can take practice, and spiritual intervention may help grow one's empathic ability and relational skills with God, themselves, and others.

Despite well founded theoretical connections between empathy and spirituality, the empirical research is not as direct. However, it is with the findings of this study and previous

research that spiritual intervention should be considered when treating disorders associated with symptoms such as, lack of empathy, moral disengagement, and callous-unemotional traits. Those with insecure attachment are often victimized as children, they are hurt through the relationships they have as a child, yet relationships can also be the core component of healing from these emotional wounds. This study can be used to help inform clinicians and churches on the importance of human relationships, secure attachment to God, and the positive impact spiritual interventions can have on a neurological level for those who display lack of empathy.

Limitations

This study did not use any experimental manipulations, rather it implemented self-reporting measures. Retrospective self-reports are a potential source of measurement error. Retrospective reports may be biased due to changes in the participant's memory over time. This may be from forgetting, redefining, or the participant's current mental state influencing the memory. In addition, subjectivity of trauma for each individual participant is a limitation. This is due to differing definitions and interpretations, meaning the number of trauma incidents experienced and the level to which it impacts the individual may be skewed. For example, one participant may consider the loss of a pet as a traumatic experience, while another participant may have experienced repeated sexual abuse throughout their childhood and into adolescence. This will result in different neurological and emotional impairments. To help control for this, certain defining factors utilizing the DSM-5 were put in place to define trauma for the participants. Similarly, empathy and psychopathy were self-reported by each individual participant, potentially allowing for skewed answers in attempt to avoid providing answers that may be thought of as socially unacceptable. For the purpose of this study, it is assumed each participant gave truthful answers, as to not skew the data.

A delimitation was placed on this study. The research specifically requires participants to be aged twenty-six or older; this is due to brain maturation. Most developmentalists consider the prefrontal cortex fully developed by the age of 26. Therefore, this may dictate how firm one presents with morally disengaged behaviors and lack of empathy.

The general population was used to collect data, which potentially limited the number of psychopathic participants in the study, as psychopathy and lack of empathy is more prominent in incarcerated populations. The number of non-psychopathic participants greatly outweighed those in the mixed group and psychopathic group. Additionally, the number of female participants was significantly higher than the number of males who chose to participate, which could have potentially impacted the overall results on empathy, attachment, trauma, and psychopathy scores. While empathy showed to be higher for those who are psychopathic, which research supports, having a measurement for anti-social traits separate from psychopathy could have been beneficial, or utilizing qualitative measures (such as interviews) to better assess an individual's perception of their own empathy/reality.

In addition, the number of avoidant participants was significantly different than those in the other three attachment groups causing for data to be unevenly distributed. The last limitation is the neurological underpinnings used in the literature review. The neurological components of this study could not be verified due to lack of ability to implement MRI, or other brain scans, on those who participated.

Lastly, individuals in the anxious attachment group had significantly higher mean empathy scores than those in the other three attachment style groups. While research is consistent in the anxious attachment style displaying lack of emotional regulation (which could typically suggest lower empathy), the anxious attachment can demonstrate too much empathy

(sympathy/enmeshment). Ultimately, they are too in tune with other people's emotions and may take on or mirror the other person's emotion to the same intensity. Thus, making it even more difficult to regulate emotions, which could be related to the neuroticism found in previous research on those with anxious attachment styles (Rowatt and Kirkpatrick, 2002). This can cause the individual to feel the other person's stress, sadness, anxiety, anger, etc.; feelings known to lead to high concentrations of cortisol. Which helps explain the difference between understanding a person's side and using it to connect versus feeling their pain and becoming a victim of their pain alongside them. Those with an anxious attachment may feel responsible for fixing the other person's problem, which could explain the elevated empathy scores found within this study. Further investigations should be considered when determining a healthy amount of empathy and distinguishing this from sympathy, or even enmeshment – because without knowing where we end and the other person's pain begins, genuine empathy is unable to be fostered.

Recommendations for Future Research

For future recommendations, focusing on maintaining an evenly distributed number of participants amongst male and females, as well as various attachment styles could be beneficial. Reproducing this research within a prison could also provide insightful findings on how that population could display different scores than the general population where psychopathy traits are less likely to be found. In addition, because of the correlation on high empathy scores and high psychopathy scores, adding in an additional assessment to detect and separate anti-social traits and psychopathy traits could add value to the findings. Second, looking at when a participant experienced trauma could provide more insight on how the trauma developmentally

impacted the individual. This could include trauma after the age of 26 as this could increase trauma experiences by naturally including career military personal.

Lastly, with inclusion of MRI, or similar brain scans, the effects of trauma, attachment, and empathy could be verified from a neurological perspective. In this case, before and after scans would be beneficial if one considered implementing spiritual interventions within an experimental study to determine if there are any neurological changes throughout the study. Adding in additional empathy tests (such as qualitative/interviews), may give a clearer view of one's perception of their empathy as opposed to a self-report that could have skewed answers based on what the participants think they should have answered.

Summary

God allows for free will, making every person capable of good and evil. Humans lack self-control and without self-control, without morals grounded in Christ, it becomes easier to act in ways that are focused on one's self ego than considering all of humanity. This has severely strained family, healthy attachment, and care during the developmental stages of childhood; "disruptive forces of a materialistic society in which parents often neglect the interests of their children" for their own sake (p. 54). This concept can be seen within the development of poor parent-child attachment styles; anxious, avoidant, and disorganized attachments aid in many neurological deficits leading to decreased emotional regulation and lowered empathetic responses. It is not only these individuals with insecure attachment/lack of empathy that are suffering, but their families, friends, and society suffer alongside their choices. Humanity is at risk with this complex behavioral problem.

It must be acknowledged that despite mankind's faultiness, God does not neglect our interest. Rather, He shows himself in joy and in suffering, providing us with the opportunity to

create a secure relationship with Him. He will never leave or forsake us (Joshua 1:5, NIV, 2011). While humans have the "capacity to control and discipline their own behaviors" (McMinn & Campbell, 2007, p. 29), they often do not exercise this type of control. Mankind must take responsibility for the condition humanity is in and set their minds on heavenly things as opposed to earthly things. Scripture can help counteract the problem of evil/lack of empathy. Through secure attachment to God and implementing spiritual activities, empathy can form and faith and hope can be nurtured in a world that is currently suffering.

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APPENDIX A: QUESTIONNAIRE OF COGNITIVE AND AFFECTIVE EMPATHY

Below is a list of statements. Please read each statement carefully and rate how strongly you agree or disagree with it by circling your answer. There are no right or wrong answers, or trick questions.

IN ORDER FOR THE SCALE TO BE VALID, YOU MUST ANSWER EVERY QUESTION.

1. I sometimes find it difficult to see things from the "other guy's" point of view.
   1=Strongly agree 2=Slightly agree 3=Slightly disagree 4=Strongly disagree

2. I am usually objective when I watch a film or play, and I don't often get completely caught up in it.
   1=Strongly agree 2=Slightly agree 3=Slightly disagree 4=Strongly disagree

3. I try to look at everybody's side of a disagreement before I make a decision.
   1=Strongly agree 2=Slightly agree 3=Slightly disagree 4=Strongly disagree

4. I sometimes try to understand my friends better by imagining how things look from their perspective.
   1=Strongly agree 2=Slightly agree 3=Slightly disagree 4=Strongly disagree

5. When I am upset at someone, I usually try to "put myself in his shoes" for a while.
   1=Strongly agree 2=Slightly agree 3=Slightly disagree 4=Strongly disagree

6. Before criticizing somebody, I try to imagine how I would feel if I was in their place.
   1=Strongly agree 2=Slightly agree 3=Slightly disagree 4=Strongly disagree

7. I often get emotionally involved with my friends' problems.
   1=Strongly agree 2=Slightly agree 3=Slightly disagree 4=Strongly disagree

8. I am inclined to get nervous when others around me seem to be nervous.
   1=Strongly agree 2=Slightly agree 3=Slightly disagree 4=Strongly disagree

9. People I am with have a strong influence on my mood.
   1=Strongly agree 2=Slightly agree 3=Slightly disagree 4=Strongly disagree

10. It affects me very much when one of my friends seem upset.
    1=Strongly agree 2=Slightly agree 3=Slightly disagree 4=Strongly disagree

11. I often get deeply involved with the feelings of a character in a film, play, or novel.
    1=Strongly agree 2=Slightly agree 3=Slightly disagree 4=Strongly disagree

12. I get very upset when I see someone cry.
    1=Strongly agree 2=Slightly agree 3=Slightly disagree 4=Strongly disagree

13. I am happy when I am with a cheerful group and sad when the others are glum.
1=Strongly agree 2=Slightly agree 3=Slightly disagree 4=Strongly disagree

14. It worries me when others are worrying and panicky.
1=Strongly agree 2=Slightly agree 3=Slightly disagree 4=Strongly disagree

15. I can easily tell if someone else wants to enter a conversation.
1=Strongly agree 2=Slightly agree 3=Slightly disagree 4=Strongly disagree

16. I can pick up quickly if someone says one thing but means another.
1=Strongly agree 2=Slightly agree 3=Slightly disagree 4=Strongly disagree

17. It is hard for me to see why some things upset people so much.
1=Strongly agree 2=Slightly agree 3=Slightly disagree 4=Strongly disagree

18. I find it easy to put myself in somebody else's shoes.
1=Strongly agree 2=Slightly agree 3=Slightly disagree 4=Strongly disagree

19. I am good at predicting how someone will feel.
1=Strongly agree 2=Slightly agree 3=Slightly disagree 4=Strongly disagree

20. I am quick to spot when someone in a group is feeling awkward or uncomfortable.
1=Strongly agree 2=Slightly agree 3=Slightly disagree 4=Strongly disagree

21. Other people tell me I am good at understanding how they are feeling and what they are thinking.
1=Strongly agree 2=Slightly agree 3=Slightly disagree 4=Strongly disagree

22. I can easily tell if someone else is interested or bored with what I am saying.
1=Strongly agree 2=Slightly agree 3=Slightly disagree 4=Strongly disagree

23. Friends talk to me about their problems as they say that I am very understanding.
1=Strongly agree 2=Slightly agree 3=Slightly disagree 4=Strongly disagree

24. I can sense if I am intruding, even if the other person does not tell me.
1=Strongly agree 2=Slightly agree 3=Slightly disagree 4=Strongly disagree

25. I can easily work out what another person might want to talk about.
1=Strongly agree 2=Slightly agree 3=Slightly disagree 4=Strongly disagree

26. I can tell if someone is masking their true emotion.
1=Strongly agree 2=Slightly agree 3=Slightly disagree 4=Strongly disagree

27. I am good at predicting what someone will feel?
1=Strongly agree 2=Slightly agree 3=Slightly disagree 4=Strongly disagree

28. I can usually appreciate the other person's viewpoint, even if I do not agree with it.
    1=Strongly agree 2=Slightly agree 3=Slightly disagree 4=Strongly disagree

29. I usually stay emotionally detached when watching a film.
    1=Strongly agree 2=Slightly agree 3=Slightly disagree 4=Strongly disagree

30. I always try to consider the other fellow's feelings before I do something.
    1=Strongly agree 2=Slightly agree 3=Slightly disagree 4=Strongly disagree

31. Before I do something I try to consider how my friends will react to it.
    1=Strongly agree 2=Slightly agree 3=Slightly disagree 4=Strongly disagree

APPENDIX B: ATTACHMENT TO GOD INVENTORY

Below is a list of statements. Please read each statement carefully and rate how strongly you agree or disagree with it by circling your answer. There are no right or wrong answers, or trick questions.

IN ORDER FOR THE SCALE TO BE VALID, YOU MUST ANSWER EVERY QUESTION.

1. My experiences with God are very intimate and emotional.
   1=Disagree strongly 2=Disagree 3=Disagree slightly 4=Neutral/mixed
   5=Agree slightly 6=Agree 7=Agree strongly

2. I prefer not to depend too much on God.
   1=Disagree strongly 2=Disagree 3=Disagree slightly 4=Neutral/mixed
   5=Agree slightly 6=Agree 7=Agree strongly

3. My prayers to God are very emotional.
   1=Disagree strongly 2=Disagree 3=Disagree slightly 4=Neutral/mixed
   5=Agree slightly 6=Agree 7=Agree strongly

4. I am totally dependent upon God for everything in my life.
   1=Disagree strongly 2=Disagree 3=Disagree slightly 4=Neutral/mixed
   5=Agree slightly 6=Agree 7=Agree strongly

5. Without God I couldn't function at all.
   1=Disagree strongly 2=Disagree 3=Disagree slightly 4=Neutral/mixed
   5=Agree slightly 6=Agree 7=Agree strongly

6. I just don't feel a deep need to be close to God.
   1=Disagree strongly 2=Disagree 3=Disagree slightly 4=Neutral/mixed
   5=Agree slightly 6=Agree 7=Agree strongly

7. Daily I discuss all of my problems and concerns with God.
   1=Disagree strongly 2=Disagree 3=Disagree slightly 4=Neutral/mixed
   5=Agree slightly 6=Agree 7=Agree strongly

8. I am uncomfortable allowing God to control every aspect of my life.
   1=Disagree strongly 2=Disagree 3=Disagree slightly 4=Neutral/mixed
   5=Agree slightly 6=Agree 7=Agree strongly

9. I let God make most of the decisions in my life.
   1=Disagree strongly 2=Disagree 3=Disagree slightly 4=Neutral/mixed
   5=Agree slightly 6=Agree 7=Agree strongly

10. I am uncomfortable with emotional displays of affection to God.
    1=Disagree strongly 2=Disagree 3=Disagree slightly 4=Neutral/mixed

5=Agree slightly 6=Agree 7=Agree strongly

11. It is uncommon for me to cry when sharing with God.
1=Disagree strongly 2=Disagree 3=Disagree slightly 4=Neutral/mixed
5=Agree slightly 6=Agree 7=Agree strongly

12. I am uncomfortable being emotional in my communication with God.
1=Disagree strongly 2=Disagree 3=Disagree slightly 4=Neutral/mixed
5=Agree slightly 6=Agree 7=Agree strongly

13. I believe people should not depend on God for things they should do for themselves.
1=Disagree strongly 2=Disagree 3=Disagree slightly 4=Neutral/mixed
5=Agree slightly 6=Agree 7=Agree strongly

14. My prayers to God are often matter-of-fact and not very personal.
1=Disagree strongly 2=Disagree 3=Disagree slightly 4=Neutral/mixed
5=Agree slightly 6=Agree 7=Agree strongly

15. I worry a lot about my relationship with God.
1=Disagree strongly 2=Disagree 3=Disagree slightly 4=Neutral/mixed
5=Agree slightly 6=Agree 7=Agree strongly

16. I often worry about whether God is pleased with me.
1=Disagree strongly 2=Disagree 3=Disagree slightly 4=Neutral/mixed
5=Agree slightly 6=Agree 7=Agree strongly

17. I get upset when I feel God helps others but forgets about me.
1=Disagree strongly 2=Disagree 3=Disagree slightly 4=Neutral/mixed
5=Agree slightly 6=Agree 7=Agree strongly

18. I fear God does not accept me when I do wrong.
1=Disagree strongly 2=Disagree 3=Disagree slightly 4=Neutral/mixed
5=Agree slightly 6=Agree 7=Agree strongly

19. I often feel angry with God for not responding to me.
1=Disagree strongly 2=Disagree 3=Disagree slightly 4=Neutral/mixed
5=Agree slightly 6=Agree 7=Agree strongly

20. I worry a lot about damaging my relationship with God.
1=Disagree strongly 2=Disagree 3=Disagree slightly 4=Neutral/mixed
5=Agree slightly 6=Agree 7=Agree strongly

21. I am jealous at how God seems to care more for others than for me.
1=Disagree strongly 2=Disagree 3=Disagree slightly 4=Neutral/mixed
5=Agree slightly 6=Agree 7=Agree strongly

22. I am jealous when others feel God's presence when I cannot.
1=Disagree strongly 2=Disagree 3=Disagree slightly 4=Neutral/mixed
5=Agree slightly 6=Agree 7=Agree strongly

23. I am jealous at how close some people are to God.
1=Disagree strongly 2=Disagree 3=Disagree slightly 4=Neutral/mixed
5=Agree slightly 6=Agree 7=Agree strongly

24. If I can't see God working in my life, I get upset or angry.
1=Disagree strongly 2=Disagree 3=Disagree slightly 4=Neutral/mixed
5=Agree slightly 6=Agree 7=Agree strongly

25. Sometimes I feel that God loves others more than me.
1=Disagree strongly 2=Disagree 3=Disagree slightly 4=Neutral/mixed
5=Agree slightly 6=Agree 7=Agree strongly

26. Almost daily I feel that my relationship with God goes back and forth from "hot" to "cold."
1=Disagree strongly 2=Disagree 3=Disagree slightly 4=Neutral/mixed
5=Agree slightly 6=Agree 7=Agree strongly

27. I crave reassurance from God that God loves me.
1=Disagree strongly 2=Disagree 3=Disagree slightly 4=Neutral/mixed
5=Agree slightly 6=Agree 7=Agree strongly

28. Even if I fail, I never question that God is pleased with me.
1=Disagree strongly 2=Disagree 3=Disagree slightly 4=Neutral/mixed
5=Agree slightly 6=Agree 7=Agree strongly

APPENDIX C: LEVENSON SELF-REPORT PSYCHOPATHY SCALE

Primary

1. Success is based on survival of the fittest; I am not concerned about the losers.
1=Disagree strongly 2=Disagree somewhat 3=Agree somewhat 4=Agree strongly

2. For me, what's right is whatever I can get away with.
1=Disagree strongly 2=Disagree somewhat 3=Agree somewhat 4=Agree strongly

3. In today's world, I feel justified in doing anything I can get away with to succeed.
1=Disagree strongly 2=Disagree somewhat 3=Agree somewhat 4=Agree strongly

4. My main purpose in life is getting as many goodies as I can.
1=Disagree strongly 2=Disagree somewhat 3=Agree somewhat 4=Agree strongly

5. Making a lot of money is my most important goal.
1=Disagree strongly 2=Disagree somewhat 3=Agree somewhat 4=Agree strongly

6. I let others worry about higher values; my main concern is with the bottom line.
1=Disagree strongly 2=Disagree somewhat 3=Agree somewhat 4=Agree strongly

7. People who are stupid enough to get ripped off usually deserve it.
1=Disagree strongly 2=Disagree somewhat 3=Agree somewhat 4=Agree strongly

8. Looking out for myself is my top priority.
1=Disagree strongly 2=Disagree somewhat 3=Agree somewhat 4=Agree strongly

9. I tell other people what they want to hear so that they will do what I want them to do.
1=Disagree strongly 2=Disagree somewhat 3=Agree somewhat 4=Agree strongly

10. I would be upset if my success came at someone else's expense.
1=Disagree strongly 2=Disagree somewhat 3=Agree somewhat 4=Agree strongly

11. I often admire a really clever scam.
1=Disagree strongly 2=Disagree somewhat 3=Agree somewhat 4=Agree strongly

12. I make a point of trying not to hurt others in pursuit of my goals.
1=Disagree strongly 2=Disagree somewhat 3=Agree somewhat 4=Agree strongly

13. I enjoy manipulating other people's feelings.

1=Disagree strongly 2=Disagree somewhat 3=Agree somewhat 4=Agree strongly

14. I feel bad if my words or actions cause someone else to feel emotional pain.

1=Disagree strongly 2=Disagree somewhat 3=Agree somewhat 4=Agree strongly

15. Even if I were trying very hard to sell something, I wouldn't lie about it.
1=Disagree strongly 2=Disagree somewhat 3=Agree somewhat 4=Agree strongly

16. Cheating is not justified because it is unfair to others.
1=Disagree strongly 2=Disagree somewhat 3=Agree somewhat 4=Agree strongly

Secondary

17. I find myself in the same kinds of trouble, time after time.
1=Disagree strongly 2=Disagree somewhat 3=Agree somewhat 4=Agree strongly

18. I am often bored.
1=Disagree strongly 2=Disagree somewhat 3=Agree somewhat 4=Agree strongly

19. I find that I am able to pursue one goal for a long time.
1=Disagree strongly 2=Disagree somewhat 3=Agree somewhat 4=Agree strongly

20. I don't plan anything very far in advanced.
1=Disagree strongly 2=Disagree somewhat 3=Agree somewhat 4=Agree strongly

21. I quickly lose interest in tasks I start.
1=Disagree strongly 2=Disagree somewhat 3=Agree somewhat 4=Agree strongly

22. Most of my problems are due to the fact that other people just don't understand me.
1=Disagree strongly 2=Disagree somewhat 3=Agree somewhat 4=Agree strongly

23. Before I do anything, I carefully consider the possible consequences.
1=Disagree strongly 2=Disagree somewhat 3=Agree somewhat 4=Agree strongly

24. I have been in a lot of shouting matches with other people.
1=Disagree strongly 2=Disagree somewhat 3=Agree somewhat 4=Agree strongly

25. When I get frustrated, I often "let off steam" by blowing my top.
1=Disagree strongly 2=Disagree somewhat 3=Agree somewhat 4=Agree strongly

26. Love is overrated.
1=Disagree strongly 2=Disagree somewhat 3=Agree somewhat 4=Agree strongly

APPENDIX D: RECRUITMENT – SOCIAL MEDIA

ATTENTION FACEBOOK FRIENDS: I am conducting research as part of the requirements for a Doctorate of Philosophy in Psychology (PhD) at Liberty University. The purpose of my research is to analyze the relationship between attachment to God and lack of empathy. To participate, you must be between the ages of 26 and 64. Participants will be asked to complete 3 assessments measuring empathy, psychopathy, and attachment to God, which should take about 19 minutes to complete. Questions are based on a Likert scale. An information sheet is provided as the first page of the survey. Please review this page, and if you agree to participate, continue to the survey questions.

If you would like to participate and meet the study criteria, please use the following link: https://liberty.co1.qualtrics.com/jfe/form/SV_2foFpo3V1GWbJs2

An information sheet is provided as the first page of the survey. The information sheet contains additional information about my research. After you have read the information sheet, please click the button to proceed to the survey. Doing so will indicate that you have read the information sheet and would like to take part in the survey.

APPENDIX E: RECRUITMENT – CONSENT/INFORMATION PAGE

Consent/Information Page

Title of the Project: Moral Disengagement and Psychopathy: A Quantitative Correlational Study on Attachment to God and Empathy
Principal Investigator: Kimberly Essler, Doctoral Candidate, School of Behavioral Sciences, Psychology Department, Liberty University

Invitation to be Part of a Research Study

You are invited to participate in a research study. To participate, you must be between the ages of 26 and 64. Taking part in this research project is voluntary.

Please take time to read this entire form and ask questions before deciding whether to take part in this research.

What is the study about and why is it being done?

The purpose of the study is to investigate the relationship between attachment to God and empathy, as well as explore the role of trauma in this relationship.

What will happen if you take part in this study?

If you agree to be in this study, I will ask you to do the following:

1. You will be provided with three assessments. The first will have 31 questions and will take approximately 7 minutes, the second will have 28 questions and will take approximately 6 minutes, and the third will have 26 questions and take approximately 5 minutes. All assessments will be completed during 1 meeting.

How could you or others benefit from this study?

Participants should not expect to receive a direct benefit from taking part in this study.

Benefits to society include increased public knowledge and potentially increasing awareness for mental health providers.

What risks might you experience from being in this study?

The expected risks from participating in this study are minimal, which means they are equal to the risks you would encounter in everyday life. However, the possibility of psychological stress exists, such as being asked to recall the amount of trauma experiences one has encountered. To reduce the risk, you are allowed to stop the study at anytime and your answers will be void and not included in the study.

How will personal information be protected?

The records of this study will be kept private and are anonymous, including all answers to the assessments provided. Research records will be stored securely, and only the researcher will have access to the records.

Participant responses to the assessments (hardcopy or online) will be anonymous. Data will be stored on a password-locked computer. All hardcopy records will be shredded after data is coded on the password-locked computer. Prior to being shredded, hardcopy records will be locked in a file cabinet. Data from the study will be kept for at least three years before being deleted.

Is study participation voluntary?

Participation in this study is voluntary. Your decision whether to participate will not affect your current or future relations with Liberty University or Henderson County Offices. If you decide to participate, you are free to not answer any question or withdraw at any time prior to submitting the survey, without affecting those relationships.

What should you do if you decide to withdraw from the study?

If you choose to withdraw from the study, please exit the survey and close your internet browser if online, or you may personally dispose of your hardcopy assessment. Your responses will not be recorded or included in the study.

Whom do you contact if you have questions or concerns about the study?

The researcher conducting this study is Kimberly Essler. You may ask any questions you have now. If you have questions later, **you are encouraged** to contact her at 214-912-6698 or kessler@liberty.edu. You may also contact the researcher's faculty sponsor, Dr. Janet Brown, at jmbrown@liberty.edu.

Whom do you contact if you have questions about your rights as a research participant?

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher, **you are encouraged** to contact the IRB. Our physical address is Institutional Review Board, 1971 University Blvd., Green Hall Ste. 2845, Lynchburg, VA, 24515; our phone number is 434-592-5530, and our email address is irb@liberty.edu.

Disclaimer: The Institutional Review Board (IRB) is tasked with ensuring that human subjects research will be conducted in an ethical manner as defined and required by federal regulations. The topics covered and viewpoints expressed or alluded to by student and faculty researchers are those of the researchers and do not necessarily reflect the official policies or positions of Liberty University.

Your Consent

Before agreeing to be part of the research, please be sure that you understand what the study is about. You can print/keep a copy of the document for your records. If you have any questions about the study later, you can contact the researcher using the information provided above.