ABILITY OF OFFENDERS WITH PSYCHOPATHIC TRAITS TO SIMULATE
CогNITIVE AND AFFECTIVE EMPATHY

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The accurate assessment of psychopathy constitutes a critical component of forensic assessments addressing offender populations. Among the core characteristics of psychopathy, the interpersonal component of deception and empathic deficits are prominently observed in offenders with psychopathic traits. Given the negative consequences of being classified as a psychopath, offenders may be likely to minimize their psychopathic traits. In particular, no research has investigated whether offenders with psychopathic traits are able to simulate empathy in an effort to mask their cognitive or affective empathy deficits (e.g., lack of remorse about offenses). The present study aims to contribute to the literature with regard to the simulation of empathy. Using a mixed between- and within-subjects design, 81 male detainees were placed into (a) a low psychopathy group, (b) a moderate psychopathy group, or (c) a high psychopathy group based on the Psychopathy Checklist – Revised. For the within-subjects component, all offenders answered empathy questionnaires under genuine and simulation conditions. Results indicate the sample possessed cognitive empathy, but did not display affective empathy under genuine instructions. Under simulation instructions, participants significantly increased their scores on several empathy measures. The implications of simulated empathy and comparisons between groups regarding simulation abilities are discussed.
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CHAPTER 1
INTRODUCTION

The psychopathic personality has been identified anecdotally throughout history in religious, literary, and political texts (Andrade, 2008); however, many influential theorists and clinicians have examined the construct of psychopathy more formally in the last century (Hervé & Yuille, 2007). As a result, the definition – as well as the conceptualization of the construct – of psychopathy has evolved significantly over time. The following paragraphs describe various conceptualizations posited by leading theorists and researchers on psychopathy.

Through successive editions of The Mask of Sanity, Hervey Cleckley (1941/1988) exerted the most influence on how psychopathy would be conceptualized during the mid to late 20th century. In addition to providing rich clinical case examples, Cleckley explicitly described the psychopath and meticulously catalogued sixteen specific traits, such as superficial charm, untruthfulness and insincerity, and a general poverty in major affective reactions. In his work, Cleckley focused heavily on the interpersonal and affective components of the syndrome and placed comparatively less emphasis on the behavioral features of psychopathy, such as impulsivity, parasitic lifestyle, and social deviance.

The very title of his influential work alludes to Cleckley’s notion that psychopathic individuals can wear a “mask” and present an outward appearance of positive adjustment. This mask attempts to hide these individuals’ severe underlying pathology. In fact, Cleckley highlighted case studies of various individuals that maintained a façade of outward adjustment and lived successfully in society in spite of their psychopathic
personality traits. Based on his outpatient observations, he de-emphasized the antisocial or violent behavioral elements that are often associated with psychopathy today. Cleckley held the chief symptoms of the syndrome to be charm, manipulation, and deceit, as well as grandiosity. The way in which Cleckley understood and wrote about individuals with psychopathy starkly contrasts with more current conceptualizations (e.g., Hare, 1991, 2003) discussed later.

McCord and McCord (1964) describe the prototypical psychopathic individual as an “asocial, aggressive, highly impulsive person, who feels little or no guilt and is unable to form lasting bonds of affection with other human beings” (p. 3). Studying offender samples, the authors argue deviant behavior per se is an inadequate criterion of psychopathy due to the varying experiences among differing cultures as to what is considered deviant. Thus, the authors emphasized core personality traits rather than antisocial behaviors. In this respect, McCord and McCord (1964) may appear to posit a similar depiction of a psychopathic individual as Cleckley (1941/1988), highlighting interpersonal and affective components rather than focusing on antisociality. However, a crucial distinction is observed in how McCord and McCord assert that many psychopathic individuals are highly aggressive. They also differ from Cleckley’s (1941/1988) description of psychopaths as being able to somewhat mask their pathology. Instead, McCord and McCord (1964) discuss how these individuals overtly encounter conflicts with society due to their inability to adjust and cope with their frustrations.

McCord and McCord (1964) also write extensively about the psychopath’s impaired capacity for love. In fact, they describe the two most distinctive traits of a
psychopathic individual as guiltlessness and lovelessness. These authors’ and Cleckley’s (1941/1988) conceptualizations differ from more recent descriptions of the construct (e.g., Hare, 1991, 2003), in that they concentrate on core personality features and fail to emphasize violent and antisocial behaviors as essential criteria or key components of the syndrome.

Hare’s (1993) conceptualization offers a distinct perspective comprised of both personality and behavioral components as essential components of psychopathy. These dual components may be observed in a two-factor model derived from the Psychopathy Checklist – Revised (PCL-R; Hare, 1991, 2003). The first factor describes a constellation of personality traits considered to be at the core of psychopathy, which has several parallels with Cleckley’s (1941/1988) description of the syndrome. For example, it focuses on the interpersonal processes of psychopathic offenders as reflected in their verbal and interpersonal styles (Hare, 1993). Factor 1 highlights affective difficulties as well, focusing on a lack of emotional depth and empathy. This interpersonal/affective factor captures psychopathic individuals’ propensities for selfishness and callousness, as well as their remorseless use of other individuals.

Hare’s Factor 2 is mainly behaviorally focused and highlights a psychopathic individual’s social deviancy. This factor describes behaviors indicative of a chronically unstable and antisocial life-style. For example, Factor 2 is concerned with behavioral characteristics, such as work instability (e.g., quitting jobs without reason or justification) and impulsivity (e.g., committing unplanned criminal acts). Two components of Hare’s Factor 2, specifically the instability and irresponsible behaviors, are reminiscent of descriptions offered earlier by Cleckley. However, Hare’s other Factor 2 components
emphasized more violent and antisocial behaviors, which were not included in Cleckley’s work. Hare’s work on psychopathy factors are based on the PCL-R, which is briefly discussed below.

As psychopathy gained attention in the academic arena, the need for a valid and reliable measure of psychopathy clearly emerged. Hare addressed this need with his development of the PCL-R. Guided in part by the earlier work of Cleckley (1941/1988), Hare’s measure attempts to capture interpersonal and affective components of Factor 1 as well as antisocial and behavioral components of Factor 2. As previously described, Factor 1 contains items related to superficial charm, egocentricity, deception, and lack of empathy, to highlight a few features. In contrast, items such as parasitic lifestyle, impulsivity, and criminal versatility characterize Factor 2.

The original PCL (the first edition) factor structure continues to be re-evaluated with spirited debate concerning the underlying components of psychopathy. In their early factor analysis of the PCL, Harpur, Hare, and Hakstian (1989) established that Factor 1 (interpersonal/affective items) and Factor 2 (impulsive/antisocial lifestyle items) were moderately correlated. Based on their findings, the authors argued that the two-factor structure, although highly correlated, adequately measured two separable components of the syndrome. They further emphasized the necessity of both components, rather than purely focusing on personality characteristics, in order to comprehensively assess psychopathy. Recently, the traditional two-factor conceptualization of psychopathy has been re-evaluated in terms of the factor analytic methods utilized and its generalizability. This critical re-evaluation led Cooke and Michie (2001) to conceptualize psychopathy in a fundamentally different manner.
Cooke and Michie (2001) question Hare’s two-factor PCL-R structure and contend that a three dimensional model is more appropriate when conceptualizing psychopathy. In their model, Factor 1 is composed of the core features of psychopathy. It emphasizes the deceitful and arrogant interpersonal style and is reflected by items related to charm, grandiosity, deceitfulness and manipulation. In contrast, Factor 2 focuses on affective deficiencies such as an absence of remorse, callousness, shallow affect, and failure to accept responsibility. Finally, Factor 3 of their model captures the impulsive behavioral style of psychopathic individuals. It is comprised of items related to boredom proneness, parasitism, impulsivity, irresponsibility, and absence of goals.

As a clear distinction from Hare’s (2003) conceptualization, Cooke and Michie (2001) propose that antisocial behavioral components are not necessarily defining characteristics of psychopathy, but rather consequences resulting from the syndrome. As an illustration, PCL-R items that focus on early behavior problems, juvenile delinquency, and criminal versatility do not load onto any of Cooke and Michie’s (2001) three factors. Importantly, Cooke and Michie (2001) are not denying antisocial behaviors are often observed with psychopathic individuals, but rather they are acknowledging these behaviors as a consequence of psychopathy. Thus, Cooke and Michie conclude that these antisocial behaviors should not be considered essential components of the syndrome.

More recently, and likely in response to the three-factor model, Hare and Neumann (2006) refined the original two factor model into a two-factor, four-facet model. The personality factor (Factor 1) consists of two related facets representing the affective and interpersonal features. These facets closely mirror Cooke and Michie’s
interpersonal and affective factors. In addition, Hare and Neumann (2006) divided the behavioral dimension (Factor 2) into two facets that incorporate impulsive lifestyle and social deviance. The impulsive lifestyle of the four-facet model partially corresponds to the third factor in Cooke and Michie’s (2001) model. However, Hare and Neumann (2006) add the last “antisocial” facet and argue for its centrality to the psychopathic syndrome.

Most recently, Patrick, Fowles, and Krueger (2009) diverged almost completely from PCL-R-based models and proposed a very different conceptualization of psychopathy termed the “triarchic model.” This model encompasses three distinct phenotypic constructs: meanness, boldness, and disinhibition. According to Patrick et al. (2009), “meanness” describes a collection of attributes including (a) a lack of empathy, (b) contempt for close attachments with other individuals, (c) rebelliousness, (d) exploitation of others, and (e) empowerment through cruelty. In the triarchic model, “boldness” encompasses fearless dominance, audacity, emotional resiliency, assertiveness, and persuasiveness. Finally, “disinhibition” refers to a lack of foresight, insistence on immediate gratification, and a general tendency for problems with impulse control.

The triarchic model was derived from and primarily based on central themes that have recurred time and again in both historic and contemporary accounts of psychopathy. For example, Patrick et al. (2009) suggest the meanness component of their model reflects McCord and McCord’s (1976) description of loveless individuals, as well as the affective component of Cooke and Michie’s (2001) model. Patrick et al. also highlight the role of boldness in prior conceptualizations by various researchers. They
argue that boldness is likely associated with pathological lying, conning, and manipulativeness as described by Hare (1991, 2003). Similarly, the boldness component was emphasized in the theoretical contributions by Cleckley (1941/1988). In his case descriptions, Cleckley discussed psychopathic individuals lacking anxiety with high social efficacy and poise, diminished emotional responsiveness, and a failure to learn by experience. Additionally, Patrick et al. (2009) posit boldness may be associated with Hare’s (1991, 2003) PCL-R Items 1 (charm/glibness) and 2 (grandiose sense of self-worth). Furthermore, the externalizing component of this model—dissimulation—is believed by Patrick et al. (2009) to be associated with many of Hare’s Factor 2 items (e.g., criminal deviance, impulsivity, and addictive behaviors).

Patrick et al.’s (2009) triarchic model of psychopathy is focused on distinctive manifestations of externalizing deviancy (i.e., disinhibited behavior) in which emotional detachment (i.e., meanness and boldness) is prominent. Although based on reoccurring themes throughout varying conceptualizations and assessments of psychopathy, Patrick and colleagues’ (2009) highly selective approach is novel because it concentrates on only these three phenotypic constructs. They offer hypotheses of how these phenotypes emerge from a developmental perspective and combine to produce the distinctive psychopathic traits observed in these individuals. Their conceptualization is markedly different from other models in its focus on developmental psychopathology and the etiology of these particular traits. Developmentally, it extends from childhood and progresses throughout a psychopath’s adult life. Because of their developmental perspective and focus, Patrick et al. (2009) argue their triarchic model may be more useful than other models. They conclude it offers a broader explanation
for psychopathy in its varying manifestations (e.g., criminal and noncriminal, primary and secondary, unsuccessful and successful).

These various conceptualizations of psychopathy reveal interesting similarities and differences. To recap, Cleckley (1941/1988) emphasized the interpersonal and affective components of psychopathy, describing psychopathic individuals as having an outward façade of positive adjustment masking an underlying severe pathology. Cleckley wrote of some psychopathic individuals that were “successful” with established careers, whereas later researchers have focused more on criminal populations who engage repeatedly in antisocial acts and are generally unsuccessful at avoiding detainment. For example, McCord and McCord (1964) and Hare (1993) offer a sharply contrasting view of psychopathy. Unlike Cleckley, both conceive more harsh conceptualizations, portraying psychopathic individuals as antagonistic, violent, cruel, and highly exploitative.

Conceptualizations differ not only in the extent to which psychopathic individuals are able to function or be successful in society, but also in how researchers understand these individuals’ internal motivating characteristics. McCord and McCord (1964) highlighted the distinctly affectionless and predatory form of criminal deviancy seen in psychopathic individuals. Contrastingly, Cleckley portrayed psychopaths as personable and seemingly well meaning but irresponsible and untrustworthy. McCord and McCord’s conceptualization offers a much more cold, abrasive, and aggressively exploitative description of these individuals. From a different perspective, Hare’s (1993) conceptualization emphasizes the core personality components like Cleckley, but also strongly highlights the negative behavioral components of the syndrome (impulsive
lifestyle and social deviance). A clear distinction can be seen in these conceptualizations via Hare’s (1991, 2003) PCL-R items in which Cleckley’s (1941/1988) positive adjustment features (e.g., lack of anxiety) are less strongly represented and antisocial acts (e.g., criminal versatility) are highlighted.

Various researchers differ with regards to the centrality of antisocial behaviors in psychopathy. Cooke and Michie’s (2001) three-factor model focuses on an arrogant-deceitful interpersonal style, deficient affective experience, and the impulsive-irresponsible behavior components of the construct, yet these researchers contend the antisocial behavior component is more of a behavioral manifestation or consequence of psychopathy. Their conceptualization is interesting in that it fails to include antisociality as a necessity of the syndrome, yet like other researchers (e.g., McCord and McCord, and Hare) they write about these individuals as being very distinguishable from others in society in terms of their non-conforming behavior. Hare and Neumann (2006) divided the two-factor structure into their four-facet model and maintain the antisocial behavior component is key in defining psychopathic individuals. Lastly, Patrick et al.’s (2009) triarchic theory differs from the aforementioned conceptualizations by primarily focusing on three phenotypic constructs—boldness, meanness, and disinhibition—and how they develop and produce psychopathic individuals lacking emotional attachment and exhibiting externalizing deviant behaviors. As noted, the triarchic theory places a strong emphasis on the development and emergence of these three specific traits in individuals with psychopathy. While marked variations are observed in psychopathy conceptualizations, affective deficits constitute an important commonality across models.
Affective Deficits and Psychopathy

Affective deficits are considered defining and necessary characteristics of psychopathy across the various models and are often associated with criminality and violent behaviors (Lykken, 1995). To illustrate this point, consider how psychopathy has often been contrasted with the Diagnostic and Statistical Manual (DSM) diagnosis of conduct disorder and antisocial personality disorder (e.g., Hare, 1996; Hart & Hare, 1989; Ogloff, 2006). While similarities are observed, researchers (e.g., Blair, Mitchell, & Blair, 2005; Kirsch & Becker, 2007) cogently argued that psychopathy represents a specific pathology. Despite the presence of antisocial behaviors, psychopathy clearly constitutes its own singular form of emotional dysfunction. On this point, Patrick (2009) noted the major distinction between adolescent psychopathy and other “externalizing” psychopathology is most clearly exemplified by the deficiency of affective reactivity among psychopathic adolescents. More broadly, psychopathy is distinguishable from other pathology by “emotional detachment,” which is a deficit of normal emotional sensitivity and social relatedness (Cleckley, 1941/1988; Lykken, 1995; McCord & McCord, 1964; Patrick, Bradley, & Lang, 1993). In determining whether an individual has psychopathy, these affective/emotional deficiencies are key components to be assessed and thus are represented in Hare’s (1991, 2003) PCL-R.

The measurement of psychopathy with the PCL-R captures four specific emotional deficiencies displayed by psychopathic persons. The affective features of psychopathy are operationally defined as: (a) lack of remorse or guilt, (b) shallow affect, (c) callousness/lack of empathy, and (d) an emotional as well as cognitive failure to accept responsibility for one’s own actions. Of these deficiencies, the lack of
empathy experienced by psychopathic individuals likely contributes to additional deficits in guilt and accountability. A general overview of empathy is the focus of the following paragraphs. This overview introduces empathy as a clinical construct before delving into its role and relation to psychopathy.

Contrasting Models of Empathy

Previously, empathy researchers have been deeply divided on the issue of what exactly defines empathy. A fundamental difficulty in constructing a definition of empathy has involved determining whether recognizing, as opposed to experiencing, emotions is the crucial component. The central issue focuses on the passive recognition versus the active expression of emotion, and whether one or both are necessary for an empathic experience. Several researchers attribute definitional delays and confusion regarding empathy to conflicting perspectives (e.g., Bennett, 1995; Chlopan, McCain, Carbonell, & Hagen, 1985; Jolliffe & Farrington, 2004). Goldman and Sripada (2003) postulated that a deficit in emotional recognition is the necessary foundation for a deficit in emotion production. That is, recognition of emotional cues is essential in experiencing (or appearing to experience) similar emotions in response. In addition to the recognition versus recognition and experience of emotion, some debate exists regarding the inclusion of an actual behavioral response in a definition of empathy (Eisenberg, 2000; Vreeke & van der Mark, 2003).

From a clinical perspective, the main conceptual argument is centered on whether empathy is best conceptualized as a singular or multidimensional construct. Recently, a growing consensus has been observed among academics supporting the dual components of the construct. Researchers have made a clear distinction between
two primary components of empathy: (a) cognitive and (b) affective components (Decety & Jackson, 2006; Jolliffe & Farrington, 2006; Lawrence, Shaw, Baker, Baron-Cohen, & David, 2004). These two elements have helped to resolve the debate, as the cognitive component represents recognition of emotion and the affective component represents the experience felt by an individual. Recent literature appears to have adopted this focus on both the recognition and experience of emotion as equally contributing and necessary components in the conceptualization of empathy (Cohen & Strayer, 1996; Reniers, Corcoran, Drake, Shryane, & Völlm, 2011).

In contrast, Blair (2005) postulates three main divisions of empathy from a cognitive neuroscience perspective. They are categorized as (a) cognitive empathy (or theory of mind), (b) motor empathy, and (c) emotional empathy. Similarly to other researchers (e.g., Decety & Jackson, 2006), Blair describes cognitive empathy as one’s ability to represent the internal mental state of another individual. Where Blair’s (2005) work diverges from other researchers’ work is in his division of the affective component into emotional and motor empathy. Blair describes motor empathy as an individual mirroring the motor responses of another person they are observing, while emotional empathy is the term used to convey a response to the emotional displays of others or an affective response to other emotional stimuli (e.g., a response to “My husband just lost his job.”).

The general consensus in the literature is to clarify empathy into the cognitive and affective components, with the understanding that the affective component encompasses the “emotional” and “motor” divisions put forth by Blair (2005). Cohen and Strayer’s (1996) concise definition of empathy demonstrates the dual components
well; they define empathy as, “the understanding and sharing in another’s emotional state or context” (p. 523). In defining empathy, it is equally important to distinguish it from sympathy, a related yet separate construct.

Sympathy and empathy, although often used interchangeably in popular literature, are two separate concepts (Miller & Eisenberg, 1988). Sympathy has been defined as a vicarious emotional response to someone else’s affective state. The emotional response may be similar to or congruent with the other individual’s state (Hoffman, 1990). In contrast, empathy implies an affective response that precisely matches, as opposed to merely being consistent with, that of another individual. Sympathy and empathy are related, but there is a clear distinction between these two constructs.

Recent trends in the literature aimed at more specifically defining empathy have helped to solidify researchers’ understanding and bring about a general consensus regarding the precise conceptualization of empathy. In the academic realm, empathy entails a comprehension of other people’s experiences (cognitive component) as well as the ability to vicariously experience the affective state or feelings of other people (affective component) (Reniers et al., 2011).

Measuring Empathy

The emergence of a clear understanding of empathy served as a catalyst to encourage the development of measures that conceptualize and operationalize empathy. Indeed, several empathy measures assess both cognitive and affective components (e.g., Interpersonal Reactivity Index, Davis, 1980; Basic Empathy Scale, Jolliffe & Farrington, 2006). In contrast, other earlier measures of empathy only focused
on a unitary construct (e.g., Balanced Emotional Empathy Scale; Mehrabian, 2000).

Recently, Reniers and colleagues (2011) developed a questionnaire to properly assess empathy as it is currently defined. The researchers developed their measure to fully assess both empathy components that included multiple subscales for cognitive and affective empathy. The QCAE: A Questionnaire of Cognitive and Affective Empathy (Reniers et al., 2011) partitions the two dimensions of empathy into five subcomponents. Cognitive empathy is disaggregated into two subscales: (a) Perspective Taking and (b) Online Simulation. Perspective Taking refers to the ability to see things from another individual’s perspective. In contrast, Online Simulation is more involved; it refers to an effortful attempt to put oneself in another individual’s position by imagining what that person is feeling. Together, these components represent an accurate measure of cognitive empathy (Reniers et al., 2011).

Affective empathy, as measured by the QCAE, constitutes the second component of empathy and is divided into three subscales: (a) Emotion Contagion, (b) Proximal Responsivity, and (c) Peripheral Responsivity. The Emotion Contagion subscale refers to an automatic, unintentional mirroring of the feelings of others, which can include the overall mood of a group and its specific effects on an individual. In contrast, the Proximal Responsivity scale refers to the responsiveness aspect of empathic behavior when an affective response is achieved via witnessing the mood of others in a close social context. The Peripheral Responsivity scale is very similar to the Proximal Responsivity scale, but they differ in that the response achieved is in a detached context. The Proximal Responsivity scale involves a response to a friend or loved one, for example, whereas the Peripheral Responsivity scale focuses on a similar
response but to a character in a movie or novel. These three components together comprise the affective empathic component. The Reniers et al. (2011) model clearly distinguishes the dual components of empathy and provides a deeper comprehension of the construct. The following paragraphs primarily focus on empathy, its relation to, and role in the syndrome of psychopathy.

Empathy and Psychopathy

From the initial descriptions by Cleckley (1941/1988), basic emotional response deficits are at the core of the development of psychopathy. Reduced attachment to others, reduced guilt, and reduced empathy have all been shown to be associated with emotional dysfunction (Blair, 2008). The idea that psychopathic individuals experience emotional difficulties remains central to the current clinical description (Hare, 2003) as well as almost all prominent accounts of the syndrome (Kiehl, 2006; Patrick, Cuthbert, & Lang, 1994). According to Blair (2006), psychopathy can be considered one of the classic disorders associated with empathic deficiencies.

More generally, an absence of empathy has often been linked with callous and unemotional behavior, criminality, violence, and aggressive acts (Blair, Mitchell, & Blair, 2005). In fact, Miller and Eisenberg (1988) utilized a meta-analysis to examine the relationship of empathy to aggression and antisocial, externalizing behaviors. They found empathic responding to be modestly negatively related to antisocial, externalizing behaviors as well as aggression. A lack of empathy has also been associated with interpersonal problems, resulting in insecure, impaired relationships (Moeller, Barratt, Dougherty, Schmitz, & Swann, 2001). Reniers et al. (2011) have postulated that offenders and others with antisocial behaviors possess less empathy than their peers.
who do not engage in similar behaviors. While the specific role of empathy in psychopathy has not been explicitly established through empirical research (Rogstad & Rogers, 2008), logical connections between the two can easily be observed.

The line of reasoning has long been argued (Hume, 1967) that successful moral development within individuals is contingent upon their ability to respond empathically. Various researchers (Blair, 2005; Hare, 1991; Lykken, 1995) opine that empathy deficits observed in psychopathic individuals may contribute to the underdevelopment of a moral conscience. This argument is partially supported by prior research demonstrating the positive relations between empathy and multiple forms of prosocial behavior (Batson, Fultz, & Schoenrade, 1987). The acquisition of empathy is a necessary component of adequate moral development (Jolliffe & Farrington, 2006). Therefore, individuals with empathy deficiencies may fail to develop sufficient morals, resulting in the ability for these individuals to manipulate and harm others without feeling remorse (Woodworth & Porter, 2002). For example, Woodworth and Porter (2002) argue a marked lack of empathy is responsible for a large proportion of instrumental homicides committed by psychopathic offenders. Thus, an absence of empathy may serve as a risk factor for aggressive behavior. As a protective factor, empathy may inhibit antisocial behaviors and aggression toward another (Eisenberg, 2000; Jolliffe & Farrington, 2004; Spinella, 2005).

Empathy, while typically a protective factor, can serve a facilitative role with certain antisocial behaviors. Based on Cleckley’s early portrayal of psychopathic individuals, certain symptoms of the syndrome appear linked to specific aspects of empathy. For instance, emotional deficiencies—like a lack of empathy—may enable
and enhance the use of certain psychopathic abilities, such as being superficially charming, manipulating easily, and using deception successfully. More research regarding empathic responding in psychopathic individuals is essential in determining the specific role of empathy in psychopathy.

The ability to identify emotional reactions in others is the first step in acquiring the ability to empathize (Kelly, 1999). Therefore, as an initial step in increasing our understanding of empathic responding in psychopathic individuals, researchers began investigating the cognitive component of empathy in psychopathic populations. Thus, research focusing on the recognition of emotions with this population is currently a popular area of interest. At present, the pool of research on this topic has been characterized by mixed findings. Some research suggest individuals with psychopathy show a cognitive deficit in interpreting facial expressions or processing emotional states of others (Blair & Coles, 2000; Stevens, Charman, & Blair, 2001), while other researchers produced completely contradictory findings (Book, Quinsey, & Langford, 2007; Glass & Newman, 2006). The following paragraphs highlight the supporting and diverging evidence for cognitive empathy in psychopathic offenders.

Psychopathic individuals possess cognitive empathy

Three studies (Book, Quinsey, & Langford, 2007; Glass & Newman, 2006; Kosson, Suchy, Mayer, & Libby, 2002) provide evidence suggesting that psychopathic individuals have no cognitive empathy deficits. Glass and Newman’s (2006) study of psychopathy and facial affect yielded unexpected, yet important results. They failed to find any significant, psychopathy-related deficits in the processing of facial emotions in a sample of psychopathic offenders, even for fearful expressions. Overall, individuals
with psychopathy demonstrated highly similar abilities to the control group when asked to match a facial expression with a specific emotion. In a similar study, Kosson, Suchy, Mayer, and Libby (2002) found psychopathic individuals did not exhibit any deficits in their ability to recognize angry, fearful, happy, or sad facial expressions. Interestingly, however, some evidence was found for a recognition deficit of disgust. More recently, Book, Quinsey, and Langford (2007) reported that psychopathy was not associated with a deficit in categorizing emotions. In fact, in their study PCL-R scores were positively correlated with accuracy in judging the intensity of emotions. While several studies find no deficits, contradictory research must also be considered.

Psychopathic individuals lack cognitive empathy

Several studies (Blair & Coles, 2000; Hansen, Johnsen, Hart, Waage, & Thayer, 2008; Stevens, Charman, & Blair, 2001) have found that psychopathic individuals show a cognitive empathic deficit. These findings support the idea that psychopathic individuals are impaired in their recognition of vulnerable (i.e., sad and fearful) facial expressions (Blair & Coles, 2000; Stevens, Charman, & Blair, 2001). In 2005, Montagne et al. (2005) reported a fear recognition deficit in psychopathic individuals; however, their findings have been questioned due to the small sample size and measurements used to assess psychopathy (BIS/BAS scale; Carver & White, 1994). Kosson, Suchy, Mayer, and Libby (2002) investigated criminal psychopaths’ abilities to recognize and categorize facial expressions and found evidence supporting a specific deficit in classifying disgust. Hansen, Johnsen, Hart, Waage, and Thayer (2008) reported significant negative relations between psychopathy and the processing of disgusted facial expressions. Of note, these researchers examined various facets of
psychopathy rather than the single construct. They reported the antisocial and impulsive facets were the only facets positively related to a deficient recognition of disgust faces.

An initial deficit in facial recognition may not indicate a lasting deficit in cognitive empathy. This argument is consistently supported by the literature regarding psychopaths’ intact cognitive ability (Blair, 2005; Jones, Happé, Gilbert, Burnett, & Viding, 2010), regardless of the contradictory findings about facial emotion recognition. One hypothesis acknowledges that individuals with psychopathy may suffer from a recognition deficit, but postulates that these individuals are able to overcome such deficits and thus are able to acquire cognitive empathy.

Dadds et al. (2006) reported callous and unemotional psychopathic traits were related to poor recognition of fearful expressions. Interestingly, their study showed that the deficit in fear recognition was in part due to the visual neglect of the eye region of others’ faces. As such, it could be temporarily reversed by directing attentional focus to the eye region of other people. This finding suggests a compensation component; that is, these individuals were able to overcome their facial recognition deficits by simply modifying their attention. Their study is not the first to suggest this idea. An earlier study by Richell et al. (2003) found psychopathic individuals could correctly identify facial emotions using stimulus faces that only included the eye region. Results offer evidence of intact facial recognition abilities, suggesting no deficits of cognitive empathy. The Dadds et al. (2006) study further enhanced our understanding by allowing participants to view entire faces first, and then asked them to specifically direct their attention to the eye region. Their conclusions offered a “second chance” to
participants who had difficulties recognizing fear, because they could overcome their
deficit simply by focusing on the eye region.

From a developmental perspective, Dadds et al. (2009) examined adolescents
with psychopathic traits and found youth suffered from deficits in cognitive empathy. As
the key point to the study, these youths were able to overcome their deficits in cognitive
empathy as they moved through their pubertal years. The researchers concluded that
male adolescents with psychopathic traits learned to “talk the talk” about other people’s
emotions, despite original deficits in their own emotional connection (affective empathy)
to others.

Psychopathy and autism spectrum disorders are both syndromes associated with
empathy deficits, yet clear distinctions have been made between the two groups
regarding cognitive empathy. Researchers (Blair, 2008; Jones, Happé, Gilbert, Burnett,
& Viding, 2010) have found individuals with autism spectrum disorders lack cognitive
empathy, while individuals with psychopathy show no impairment in any cognitive
perspective taking of others. In 2005, Blair found evidence to support that individuals
with psychopathy have a specific deficit of emotional or affective empathy, but no
impairments with cognitive empathy.

Lorenz and Newman (2002) coined the term “emotion paradox” to describe
psychopathic individuals’ accuracy in identifying emotion cues that appear to be
contradicted by their inability to use these emotion cues effectively. That is, individuals
with psychopathy were shown to demonstrate normal appraisal of emotional cues and
situations in the abstract, yet they were deficient in using emotion cues to guide their
judgments and behavior. The statement, “Psychopaths know the words but not the
music” of emotion (Johns & Quay, 1962, p. 217) illustrates this concept well.

Empirically, Mullins-Nelson, Salekin, and Leistico (2006) found evidence to suggest individuals with psychopathic traits have the ability to grasp the concept of emotion, but that these cues do not influence their behavior. Using a community sample, these researchers found the level of psychopathic traits did not predict perspective-taking abilities; however, it did predict individuals' affect and concern to alter conduct appropriately. In general, research indicates psychopathic individuals appear to be able to understand what others are feeling, and what motivates them to act (e.g., Blair, Sellars, Strickland, & Clark, 1996), although they appear to be less emotionally responsive to distress signals. Put simply, individuals with psychopathy fully understand an individual is distressed, but lack empathic feelings for this individual. The ability to understand what other people are experiencing (without having an emotional empathic response) could potentially be valuable in manipulating and deceiving others. These interpersonal traits (e.g., manipulation and deceit) are often associated with individuals with psychopathy. The following paragraphs will focus on these specific interpersonal traits and how empathy may relate to them.

Interpersonal Components

Four interpersonal features are consistently associated with psychopathy according to current conceptualizations of psychopathy (Cooke & Michie, 2001; Hare, 2003). They are operationally defined as: (a) glibness and superficial charm, (b) grandiose sense of self-worth (c) pathological lying and deception, and (d) conning and manipulation. These symptoms of psychopathy are likely related to, if not enabled by, deficits in emotional abilities such as empathy (Mullins-Nelson et al., 2006). For
example, callousness and a lack of empathy may allow individuals with underdeveloped morals to use deception for personal gain. Additionally, several personality characteristics of psychopathic individuals suggest they likely engage in deception. These include Cleckley’s (1941/1988) traits such as superficial charm, shallowness, and manipulativeness. Deception is clearly a central feature in the syndrome of psychopathy.

Normal and Pathological Deception

Deception is a common human experience. Wolk and Henley (1970) suggest all humans have the capacity to lie, and that every person has lied at some point in their life. In fact, lying is considered part of normal development (Goldberg, 1973). Ford, King, and Hollender (1988) discuss the role of deception in one’s understanding of the concept of autonomy. They suggest lying naturally plays a role in the differentiation of the self from others during development. According to Paul Ekman, there are two primary reasons why most persons lie: (a) to avoid some type of punishment or (b) to acquire some type of reward. These two motivations appear to account for the majority of deception used by adults as well as children (Ekman, 1989). People’s lies may involve positive outcomes for the person deceiving or positive outcomes for someone other than the deceiver (Ekman, 1997). While deception appears to be a common process with “normal” aspects, lying can be pathological if it is persistent and leads to the destruction of the quality of the person’s life (Ford et al., 1988).

Lying is commonly seen in clinical populations and individuals with various psychological disorders. For instance, several personality disorders have traditionally been associated with prevarication, as have substance abuse and dependence.
Research indicates incarcerated individuals, often diagnosed with antisocial personality disorder (APD), are also prone to lying (Cooper & Yuille, 2007). When compared to the general population, most offenders engage in deception far more frequently. This finding is not especially surprising, given that deception is a cardinal component of APD, a diagnosis assigned to as many as 80% of incarcerated individuals (American Psychiatric Association, 2000).

Offenders may engage in deception frequently just due to the nature of criminal activity and the desire to avoid apprehension. Additionally, offenders lie with primarily self-serving motivations, such as to obtain an external reward (Cooper & Yuille, 2007). In some formal contexts (e.g., parole and risk assessments), offenders likely engage in deception via their responses during evaluations and interviews. For example, offenders would likely attempt to respond in a favorable manner if they stood to benefit from appearing positively. Just as offenders are associated with using deception frequently, so too are individuals with psychopathy.

Psychopathy and Deception

In early conceptualizations of the syndrome, deception was highlighted as a major component of psychopathy. For example, Cleckley (1941/1988) described psychopathic individuals as possessing qualities of “untruthfulness and insincerity.” More recent conceptualizations continue to view deception as a chief component of the syndrome. For example, Cooke and Michie’s (2001) model of psychopathy has an arrogant and deceitful interpersonal style as one of its three main factors. Deception as an important component of psychopathy is further evidenced by its inclusion in the
assessment of the syndrome. Deception is observed in psychopathic persons through pathological lying and manipulation.

In general, psychopaths are believed to be chronic deceivers (Porter & Woodworth, 2006), and psychopathic offenders are specifically thought to use deception and exploitation of others to obtain power or for other personal gain (Woodworth & Porter, 2002). In literature regarding the “successful psychopath” concept (Mullins-Nelson, Salekin, Leistico, 2006; Raine, Ishikawa, Arce, Lencz, Knuth, Bihrlle, et al., 2004), deception is hypothesized to be an essential component in avoiding identification and subsequent sanctions. Deception is also believed to facilitate psychopathic behaviors sometimes typified as “human predators” (Hare, 1993) in their exploitation of others, as they maintain control over others via deception and manipulation. Despite these trenchant observations, relatively few empirical studies have directly addressed deception in psychopathic individuals.

According to Hare, Forth, and Hart (1989), psychopathic criminals use deception more frequently than non-psychopathic offenders. Some research supports this claim (see Spidel et al., 2003), while other research has produced contradicting evidence (see Clark, 1997). Research regarding motivation to deceive is comparatively more consistent. Petitclerc, Herve, Hare, and Spidel (2000) suggest psychopathic offenders—as compared to their non-psychopathic peers—may be motivated to lie more frequently by intrinsic reasons, such as to enhance self-presentation or have a general satisfying feeling of being able to deceive another person. Similar results were found for adolescent offenders with psychopathic traits (Spidel, Herve, Greaves, Cooper, & Hare, 2003). Interestingly, Spidel et al.’s (2003) results indicate that “duping
delight,” or receiving pleasure for putting something over on someone else, sometimes motivates psychopaths. This finding highlights the potential use of deception as a way to devalue another person while simultaneously asserting superiority. Although deception is obviously considered a key characteristic of psychopathic individuals, this observation does not necessarily imply these individuals exhibit superior deception skills.

Lykken (1995) posited that psychopaths are able to deceive more adeptly than non-psychopaths, which he attributed to their comparative lack of anxiety. In general, psychopaths are believed to possess excellent lying ability (Hare, Forth, & Hart, 1989). This conclusion is likely based on assumptions that these individuals have significant experience in manipulation and deception. It is further fueled by the notion that they lack remorse (Cooper & Yuille, 2007). Conversely, research by Ekman suggests the most successful and convincing deceivers that are characterized as “natural liars” (Ekman, 1985) and “natural performers” (Ekman, 1992) are generally not criminals or individuals with psychopathy.

Research on deception has systematically explored success rates of psychopaths and non-psychopaths via control question polygraph tests. Raskin and Hare (1978) examined the ability of 48 incarcerated individuals (24 with psychopathy and 24 without psychopathy) to successfully lie about a mock crime during a polygraph examination. The results indicated that the psychopathic individuals showed no significant advantages or superior deception skills when compared to the non-psychopathic controls. Patrick and Iacono (1989) found comparable results also using a similar mock crime scenario. Both studies used similar participants (male offenders)
and mock-crime designs. However, their designs differed in their use of incentives, from positive (i.e., $20.00 as motivation, Raskin & Hare, 1978) to negative (i.e., threat as motivation, Patrick & Iacono, 1989). Nevertheless, Raskin and Hare (1978) and Patrick and Iacono (1989) both yielded high accuracy in detecting deception (95.5% and 87.0% accuracy, respectively), regardless of presence of psychopathic traits. Of note, this research received criticism due to potential problems with a control question test (see Lykken, 1978), yet other research (Kropp, 1994; Lindblad, 1994) has produced similar results.

Empirical evidence suggests individuals with psychopathy may not be more effective than others at a specific type of deception, namely, malingering. Poythress, Edens, and Watkins (2001) examined 55 male inmates who were categorized by level of psychopathic traits and abilities to malinger. Findings revealed non-significant correlations between malingering indexes and level of psychopathy. These results provide evidence that individuals high in psychopathic traits are not more proficient at malingering than those who score low in these traits. In another study conducted by Kropp (1994), similar results were found in a sample of 100 inmates; psychopathic individuals as a group were no better at feigning mental illness than non-psychopaths. Although very small in number, more psychopaths than non-psychopaths did go undetected, indicating there may be some truth to the clinical lore regarding psychopaths’ deception skills.

Seto and Barbaree (1999) have argued that the context in which psychopathic individuals use deception is important. For example, psychopathic offenders may attempt to convince clinicians that they have succeeded in treatment. They found
individuals with higher psychopathy scores in a sex offender treatment program actually received the best evaluations during the treatment, meaning they appeared to be the most rehabilitated. However, these individuals ultimately showed the highest re-offense rates, indicating they were successful in deceiving the evaluators. The authors concluded these individuals had “put on a good show” using their deception skills.

In summary, the conflicting findings and observations may reflect how individuals with psychopathy have a greater ability to use deception, but only in specific contexts. For example, perhaps they are less successful liars when assessed in a highly controlled study with a structured method (e.g., a control question polygraph test). However, in certain contexts, in which their self-report cannot be easily verified using physiological means (e.g., a parole hearing), they are far more successful deceivers (Cooper & Yuille, 2007).

The Current Study

Offenders with psychopathic traits likely have the resources and motivations to effectively simulate empathy. This observation is evidenced by their lack of affective, emotional empathy in combination with their frequent use of deception to manipulate others. For example, Dadds et al. (2009) posited that males with psychopathic traits appear to learn to “talk the talk” of empathy without actually experiencing its affective component. That is, psychopaths may simply learn to fake empathy by simulating appropriate emotional responses, appearing as if they have a good appreciation of how other people feel. Like many individuals with social deficits, individuals with psychopathic traits may simulate empathy to diminish the visibility of their deficits. Their learning to mask empathy deficits can be viewed as an adaptive strategy. For instance,
if psychopathic offenders could successfully simulate empathy, it could reduce the likelihood of identification and subsequent sanctions, allowing them to continue to function freely in society. Simulating empathy would mask their pathology, thus helping these individuals to appear "normal" and reduce the likelihood of negative stigmatization.

Effective simulation of empathy would aid individuals with psychopathy in manipulating various aspects of the criminal justice system. Social sciences research indicates deception is more effective when the recipient of the lie is motivated to believe the lie (Ekman, 1992). For example, a treatment facilitator may be more easily convinced of gains in treatment by psychopathic offenders simply because that facilitator wants treatment to be effective. Understanding simulated empathy by psychopathic offenders would be highly beneficial given the importance of various legal decisions (parole and sentencing) and their implications (opportunities to reoffend or continued criminality) for society.

The current study was the first to investigate male offenders with different levels of psychopathic traits and their ability to effectively simulate empathy. It focused on male psychopathic offenders because past research (Ireland, 1999; Mullins-Nelson, Salekin, & Leistico, 2006) indicates empathic deficits are more pronounced in this population than in their female counterparts.

The current study had four basic aims regarding empathy and simulated empathy. First, it attempted to clarify whether individuals with psychopathic traits truly possess the cognitive component of empathy that has been supported by some (Lorenz & Newman, 2002), but not all, prior research (Blair & Coles, 2000). It examined
cognitive empathy via multiple empathy measures that have dual components (i.e., BES, IRI, and QCAE). The Basic Empathy Scale (BES; Jolliffe & Farrington, 2006) and the Interpersonal Reactivity Index (IRI; Davis, 1980) are commonly used tools to measure general empathy in current research. They also conceptualize empathy as having dual (cognitive and affective) components. Although the Questionnaire of Cognitive and Affective Empathy (QCAE; Reniers et al., 2011) was developed only recently, it provides five subscales which assess affective and cognitive empathy. Its reliability and factor structure were explored and consecutively confirmed (Reniers et al., 2011).

The second aim was to assess whether individuals with psychopathic traits naturally lack the affective component of empathy, as suggested by prior research (Mullins-Nelson, Salekin, & Leistico, 2006). A solid understanding of the empathy components that are naturally present in these individuals is necessary before the understanding of the simulation of empathy can be enhanced.

The third aim of the current study was to enhance our understanding of the simulation of empathy, as this response style had not yet been empirically evaluated. It is important to understand whether individuals with psychopathic traits can minimize empathic deficits via simulation of empathy, in gaining insight into these individuals’ adaptive capabilities. The current study also examined various related aspects involved with the minimization of empathy deficits, regarding how effective the individuals perceived their simulation abilities to be, and whether their actual success was related to their level of primary versus secondary traits. Psychopathic individuals higher in
Factor 1 likely have a bigger need, but also likely have the deception skills necessary, to simulate empathy (Hare, 2003).

A fourth and final aim of the current study was to investigate how psychopathic individuals simulate empathy. Identification of simulation strategies may increase our current knowledge about how individuals with psychopathy adapt or attempt to cope with their empathic deficits. While a complete understanding of psychopathic individuals' empathy simulation techniques is beyond the scope of the current study, possible patterns that could be identified and understood through the participants' utilizations of a social desirability model (Paulhus, 1998) were investigated.

The current study examined individuals with varying levels psychopathic traits. Based somewhat on Hare’s (2003) categories, participants were categorized into low psychopathy (PCL-R score <17), moderate psychopathy (PCL-R score 17-24) or high psychopathy (PCL-R score >24) groups.

Research Questions and Hypotheses

Research Question 1: What types of empathic deficits do individuals with psychopathic traits exhibit? Based on the literature reviewed (e.g., Blair, 2005; Mullins-Nelson, Salekin & Leistico, 2006), psychopathy is associated with overall deficits in empathy, but specifically they have been shown to exhibit deficits in affective empathy, while maintaining adequate cognitive empathy abilities.

- Hypothesis 1: Offenders in moderate or high psychopathy groups will exhibit less empathy overall than has been observed in control samples.
- Hypothesis 2: The psychopathy groups will not differ significantly from one another on measures of cognitive empathy in the genuine condition.
• Hypothesis 3: The high psychopathy group will exhibit significantly lower affective empathy scores than the low psychopathy group in the genuine condition.

Research Question 2: Can offenders with psychopathic traits simulate empathy on various self-report measures? As research indicates, psychopathic traits are linked with use of deception across multiple domains (Seto, Khattar, Lalumiere & Quinsey, 1997). Although research is somewhat mixed regarding the deception skills of individuals with psychopathic traits (see Seto & Barbaree, 1999; Poythress et al., 2001), the ability to manipulate and use deception remains a core characteristic of the syndrome.

• Hypothesis 4: The moderate and high psychopathy groups will be able to simulate empathy to a greater extent than those in the low psychopathy group, as evidenced by a significantly greater increase in their empathy scores.

Research Question 3: Does the level of Hare’s Factor 1 psychopathic traits influence offenders’ abilities to effectively simulate empathy? At least some current conceptualizations of psychopathy indicate both affective deficits and interpersonal issues (including use of deception) are associated with Factor 1 (Hare, 1991, 2003). Thus, higher levels of Factor 1 traits are likely to be observed in individuals with greater empathic deficits whom also possess the skills to simulate empathy.

• Hypothesis 5: Offenders’ Factor 1 traits will be positively correlated with increased cognitive and affective empathy change scores across genuine to simulation conditions.
- Hypothesis 6: Level of Factor 1 traits will better predict offenders’ abilities to simulate empathy, as measured by their overall change scores from genuine to simulation conditions, when compared to Factor 2 traits.

Supplementary Research Question 1: Can the Paulhus Deception Scales (PDS; Paulhus, 1998) correctly identify simulated empathy among offenders? This question examines whether the cut scores for the impression management (IM) scale can accurately detect simulated empathy. This information could be highly informative and practical, given none of the empathy measures contain validity scales.

Supplementary Research Question 2: On an empathy measure (Trait Empathic Anger Scale) that examines empathy as anger rather than empathy as reflecting others’ emotions, will the high psychopathy group’s scores differ significantly from low psychopathy group’s scores? Empathic anger occurs when one individual attributes the cause of a person’s (a “victim’s”) suffering to another person (a “transgressor”), and then the individual experiences anger at that transgressor on behalf of the suffering victim (Vitaglione & Barnett, 1999). Empathy expressed as anger is not a well-understood concept and little research has been conducted in this area; therefore, it is interesting to observe if individuals with psychopathic traits display a deficit in empathic responding via an angry or aggressive response.

Supplemental Research Question 3: Will offenders with high confidence ratings on the manipulation check be more effective at simulating empathy than those with low confidence? Due to contradictory evidence in the literature regarding the deception abilities of these individuals (see Kropp, 1994; Lykken, 1995), it is informative to gain insight into the offenders’ perceptions of their own abilities.
CHAPTER 2

METHODS

Design

The current study used a mixed between- and within-subjects simulation design. For the non-experimental, between-subjects component, all participants were classified into one of three groups based on Hare’s (2003) recommended psychopathy cut scores on the Psychopathy Checklist – Revised (PCL-R). The groups reflect the participants’ level of psychopathic traits: low psychopathy (PCL-R <17), moderate psychopathy (PCL-R = 17-24), and high psychopathy (PCL-R >24).

For the within-subjects component of the study, each participant completed the measures under genuine and experimental conditions. In the experimental condition of simulated empathy, participants were given specific instructions to increase their empathic responding. An advantage of the within-subjects component to this design was that it allowed for some precise comparisons to be made in individuals across genuine and simulated empathy conditions. Pragmatically, this design also considered time issues and total number of participants, allowing the researcher to administer a lengthy measure (i.e., PCL-R) only once per participant.

Issues of internal and external validity were considered in designing the current study. With regards to internal validity, all participants were given a manipulation check to ensure they understood and followed their instructions. Additionally, instructional sets were written at a low reading level, in accordance with suggested guidelines for simulation research (i.e., Rogers & Cruise, 1998). Instructional sets are a crucial component in simulation design studies, as participants are asked to assume a specific
role. Efforts were made to create a role and deceptive scenario that were relevant to this population. In order to increase motivation, the simulation instructions aimed to frame the study as a challenge for participants to “out-smart the system.” To maximize external validity, this study examined psychopathic individuals in a detained offender sample, as psychopathic traits are likely prevalent within this population (Harper & Hare, 1994).

Participants

The original sample consisted of data from 90 male offenders recruited from the general population at Tarrant County Jail in Fort Worth, Texas. Participants were recruited from all general population units, the sex offender unit, the “rotation” unit (single cell isolation unit for inmates who displayed inappropriate behavior), and the “trustee” unit (inmates with good behavior who receive special privileges). Researchers complied with Tarrant County Jail’s request that no inmates from the Mental Health Mental Retardation (MHMR) unit participate in the study. In accordance with Institutional Review Board requirements, written informed consent was obtained from all participants (see Appendix A). Demographic information was collected and descriptive data are included.

Materials

Measures


Notes

1 All measures with brief descriptions of scales and subscales are listed in Appendix B for quick referencing.
Forth, & Hare, 1998). It consists of 20 items intended to measure both the behavioral and affective components described as primary to the concept of psychopathy. The PCL-R takes approximately 60-90 minutes to administer, and a collateral review of inmates’ criminal records is encouraged. Examinees’ responses are rated on each item using a 3-point scale; 0 indicates the item description does not apply to the individual, 1 indicates the item description applies in some circumstances, and 2 indicates the item description definitely applies to the individual. A total possible score of 40 is obtained by summing across all items. The PCL-R yields dimensional scores but can also be used to classify participants for research purposes.

The PCL-R has demonstrated good reliability and validity in European American samples (Hare, 1996; Hare et al., 1990; Lorenz & Newman, 2002). Hare (2003) reported excellent total PCL-R score internal consistency (α = .84) and inter-rater reliability (ICC = .87) estimates for a pooled sample of male offenders, female offenders, and male forensic psychiatric patients. For male offenders, inter-rater reliabilities of PCL-R factor (Factor 1: ICC = .75; Factor 2: ICC = .85) and facet (Interpersonal: ICC = .71; Affective: ICC = .67; Lifestyle: ICC = .75; Antisocial: ICC = .84) scores were similarly high.

**Questionnaire of Cognitive and Affective Empathy (QCAE).** The Questionnaire of Cognitive and Affective Empathy (QCAE; Reniers et al., 2011) is comprised of 31 items rated on a 4-point Likert-type scale (i.e., *strongly disagree, slightly disagree, slightly agree, and strongly agree*). Two QCAE subscales measure cognitive empathy: Perspective Taking (e.g., “I can easily work out what another person might want to talk about.”) and Online Simulation (e.g., “Before criticizing somebody, I try to imagine how I
would feel if I was in their place."). An additional three scales measure affective empathy: Emotion Contagion (e.g., “I am happy when I am with a cheerful group and sad when the others are glum.”), Proximal Responsivity (e.g., “I often get emotionally involved with my friends’ problems.”), and Peripheral Responsivity (e.g., “I usually stay emotionally detached when watching a film.”). Cronbach’s (1951) alphas for the scales range from .65 for Peripheral Responsivity to .85 for Perspective Taking. With regards to validity, researchers initially identified the five high internally consistent subscales; the structural validity was tested via a confirmatory factor analysis with an acceptable fit for the five subscales (i.e., $\chi^2(80) = 193.897, p < .001$).

**Basic Empathy Scale (BES).** The Basic Empathy Scale (BES; Jolliffe & Farrington, 2006) is comprised of 20 items rated on a 5-point Likert-type scale, ranging from *strongly disagree* to *strongly agree*. The BES is divided into two factors: (a) cognitive empathy measuring comprehension of another’s emotional state (e.g., “I find it hard to know when my friends are frightened.”), and (b) affective empathy assessing the extent of an individual’s experience of others’ emotional states (e.g., “My friends’ emotions don’t affect me much.”). For reliability, its internal consistency estimates range from .79 for BES Cognitive Empathy to .85 for Affective Empathy (Jolliffe & Farrington, 2006). In its initial validation in a sample of European adolescents, the BES was found to have convergent validity, as demonstrated by the observed relations with measures of perspective taking ($r = .33$), alexithymia ($r = -.17$), agreeableness ($r = .30$), conscientiousness ($r = .17$), openness ($r = .34$), parental supervision ($r = -.20$) and socioeconomic status ($r = -.10$) (Jolliffe & Farrington, 2006). The BES also
demonstrated discriminant validity by the non-relationship with socially desirable responding \((r = 0.00)\) (Jolliffe & Farrington, 2006).

**Empathy Quotient (EQ).** The Empathy Quotient (EQ; Baron-Cohen & Wheelwright, 2004) has 60 items (with 40 empathy items and 20 “distracter” items) that measure empathy as a unitary construct. Participants rate items on a 4-point Likert-type scale ranging from *definitely agree* to *definitely disagree*. Recent research conducted to examine the reliability of the EQ produced reliability estimates greater than .90 for the EQ Total score (Allison, Baron-Cohen, Wheelwright, Stone, & Muncer, 2011). Moderate associations \((r's \text{ from} .42 \text{ to} .49)\) were found between the EQ and IRI (Davis, 1980) subscales, indicating concurrent validity (Lawrence et al., 2004). The EQ and the Friendship Questionnaire (FQ; Baron-Cohen & Wheelwright, 2003) demonstrated a strong positive correlation \((r = .59)\), providing evidence for construct validity, as the FQ assesses empathy in the context of close relationships (Baron-Cohen & Wheelwright, 2004).

**Interpersonal Reactivity Index (IRI).** The Interpersonal Reactivity Index (IRI; Davis, 1980) consists of 28 items rated on a 5-point Likert-type scale \((0 = \text{does not describe me very well} \text{ to} 4 = \text{describes me very well})\). The IRI is one of the most commonly used assessments to measure general empathy in current research (Jolliffe & Farrington, 2004). Two IRI factors are frequently utilized to measure: (a) affective empathy via the Empathic Concern factor (e.g., “I often have tender, concerned feelings for people less fortunate than me.”) and (b) cognitive empathy via the Perspective Taking factor (e.g., “I try to look at everybody’s side of a disagreement before I make a decision.”). The IRI has demonstrated satisfactory internal consistency (ranging from
.68 for Empathic Concern to .71 for Perspective Taking) and adequate test-retest reliability estimates for the total score (ranging from .62 to .71) in a sample of undergraduate students (Davis, 1980).

**Trait Empathic Anger Scale (TEA).** The Trait Empathic Anger Scale (TEA; Vitaglione & Barnett, 1999) measures empathy in terms of anger on behalf of a victimized person. The brief questionnaire consists of seven items and responses are made on a 5-point Likert-type scale. A confirmatory factor analysis indicated that the one-factor model was a good fit to the data ($\chi^2(14) = 15.04, p = .38$). Item loadings ranged from .39 to .90. Test-retest reliability analysis yielded a coefficient of .72, indicating an adequate reliability over time. Internal reliability analysis of the seven-item scale yielded an excellent Cronbach’s alpha of .86. The items of the TEA scale tap a unidimensional construct that has good internal reliability and test-retest reliability (Vitaglione & Barnett, 2003). Regarding the validity of the TEA scale, it was found to correlate positively with three of the IRI subscales (Vitaglione & Barnett, 1999).

**Paulhus Deception Scales (PDS).** The Paulhus Deception Scales (PDS; Paulhus, 1998) aim to assess favorable self-presentation in responding. The questionnaire consists of 40 total items that comprise two scales: (a) Impression Management (IM) and (b) Self-Deceptive Enhancement (SDE). Each scale is comprised of 20 items, and all responses are made on a 5-point Likert-type scale ranging from “not true” to “very true.” The IM scale provides information on the tendency of some respondents to consciously respond to items in an attempt to make themselves appear favorably (e.g., “I am always courteous, even to people who are disagreeable.”). The SDE scale provides information on the tendency of some
respondents to provide agreeable self-profiles due to an overly confident, inaccurate self-regard (e.g., “I never regret my decisions.”). The PDS has shown adequate ($\alpha_{SDE} = .72$) to excellent ($\alpha_{IM} = .84$ and $\alpha_{Total} = .86$) internal reliability in offender samples (Paulhus, 1998). Lanyon and Carle (2007) reported moderate convergent validity (L scale: $r_{SDE} = .33$, $r_{IM} = .55$; K scale: $r_{SDE} = .43$, $r_{IM} = .48$) for the PDS and validity scales of the Minnesota Multiphasic Personality Inventory Second Edition (MMPI-2; Butcher, Graham, Ben-Porath, Tellegen, Dahlstrom, & Kaemmer, 2001).

**Procedure**

**Researcher Training**

Three advanced graduate students in clinical psychology were selected to administer the study’s measures. Prior to any data collection, these researchers spent approximately 10 hours reviewing the administration and scoring of all measures. Specifically, researchers reviewed the criteria and practiced scoring of the PCL-R. The researchers compared ratings and resolved discrepancies between protocols, discussing the justification for which scores were most appropriate. Following the training period, inter-rater reliability was evaluated.

**Recruiting Participants**

Participants were recruited through the staff and correctional officers at Tarrant County Jail. Lists of inmates were produced by searching the jail database for individuals who were currently detained for a parole violation (status 13) or who had received a felony conviction (status 02) but were either waiting to be sentenced or waiting to be transported to prison. Of note, no jail statuses corresponded specifically to a felony conviction; thus, many prospective participants (e.g., felons) were not included
in the list generated by the correctional officers. However, many of these individuals were recruited informally for the study (see below).

On the unit, male inmates were called up individually by the correctional officer on the pod. A researcher provided a brief description of the study, and asked the male inmate if he was interested in participating in the study. Those who expressed interest were then escorted to the multi-purpose room inside the unit and given further details about the study. This location afforded the participants adequate privacy while simultaneously fulfilling the facility’s supervision and safety requirements. As an alternative method of recruitment, inmates would occasionally approach researchers and express an interest in the study. Inmates were asked if they had ever received a felony conviction, and if they answered affirmatively, they were added to a “volunteer” list. Individuals on this list were called to participate after the initial list of inmates was depleted. Subsequently, efforts were made to confirm their felony background.

Prior to the initiation of any testing procedures, the examiner explained the consent form to each potential participant and subsequently asked them to paraphrase their rights as research participants. When necessary, any misconceptions were further clarified by the examiner. In these instances, recruits were again asked to summarize their rights as they understood them. According to the research protocol, failure to accurately restate these rights on the second occasion would have resulted in immediate excusal from the study with the examiner’s thanks. However, all detainees in the current study demonstrated adequate comprehension of their research rights and thus completed a written consent form. Any participants, who either did not meet the
following inclusion criteria or met the exclusion criteria, were subsequently excused from the study (see Refinement of Sample section in Results chapter).

Inclusion and Exclusion Criteria

The participants included in the current study were male offenders who met the following inclusion criteria: convicted of at least one felony or charged with a capital offense. These criteria were imposed in order to ensure the sample included individuals with varying levels of psychopathic traits and presumed empathy deficits for the current investigation. Of the 81 individuals in the final sample, 78 had received felony convictions and 3 were charged with capital offenses.

Participants not fluent in English or who demonstrated inadequate reading skills on the consent form were thanked and excluded from the study. Participants behaving in a violent manner or who posed a significant risk to researchers would also have been excused.

Administration

The entire administration took approximately 2.5 to 3 hours per participant to complete. The administration consisted of two sessions: (a) genuine session and (b) simulation session. The two session approach was utilized to provide the participants with a short break between sessions, allowing them to refocus on the new instructional set. In the first session, participants received the following instructional set:

**Genuine Instructions:** Please respond to all of the following questions openly and honestly. Remember, this information will not have your name on it and will not be seen by correctional officers. It is only used for this research study. It is important that you present yourself as you really are.

In accordance with Rogers and Cruise (1998), instructions were straightforward and written at a moderately low reading level (Flesch-Kincaid = 7.2). The genuine
instructions were intended to reassure participants of their confidentiality in responding and to encourage them to provide accurate responses. Researchers asked participants to paraphrase the instructions; misunderstandings were clarified in a similar manner to the process of obtaining consent.

Following adequate understanding of the instructions, participants were asked to complete the following measures: QCAE, TEA, PDS, EQ, BES, and IRI. The order of administration of the measures was purposeful. The QCAE contains some items from the EQ, BES, and IRI; thus, the TEA and the PDS were administered between those measures to allow for maximum time between exposures to identical items. Following these self-report measures, researchers administered the PCL-R semi-structured interview. To minimize researcher bias, no self-report measures were scored prior to the administration of the PCL-R. As noted, a brief break was provided to participants before returning to complete the second session.

For the second session of the study, participants were presented with the experimental condition. Participants were given the following simulation instructions:

Simulation Instructions: Imagine that you hurt someone badly in a fight. You have already been found guilty of aggravated assault. Now the court will decide your sentence. A presentence investigation report will be written to help decide how long your sentence will be. If the report says you are a dangerous person who may be violent again, you will receive a prison sentence of 5-10 years. You want to appear to be a safe, caring person who is sorry. That way you can get a short sentence or even probation.

Please pretend the rest of the questions in this study are for your presentence investigation report. Think about what you should say about yourself. How can you make yourself seem like a peaceful, calm person? Can you only show your very best side? You want to make others think you are not a risk for future crime.

Are you smart enough to convince the psychologist that you deserve a short sentence, even though you are guilty of a violent crime? Can you beat the tests? Keep in mind that if you seem “too good to be true” you will look like you
are lying. Please try to be believable when answering the questions, even though you will have to bend the truth.

Similarly to the genuine instructions, the simulation instructions were written at a low reading level (Flesch-Kincaid = 6.0). The scenario component of the instructions (i.e., the first paragraph) was constructed to be realistic for the population, as all had experience with the judicial system and sentencing procedures. The crime (aggravated assault) provided only general details in an effort to avoid preconceived ideas about the “moral nature” of the crime (e.g., hurting a young person) or an unfamiliar context (e.g., retaliation against an abusive husband).

The motivation and instruction components (i.e., the second paragraph) were designed to get participants involved and invested in the simulation. The word “empathy” was not used in the instructions, but rather participants were asked to “show [their] very best side[s]” and to appear as a “caring person.” It challenged offenders to consider what to highlight versus downplay in their answers.

The challenge and warning component of the scenario (i.e., the third paragraph) was specifically designed to motivate offenders to give full effort at simulation (Rogers & Cruise, 1998). They were motivated by a specific task of “beat[ing] the tests” and presenting it as a challenge to their cognitive abilities. The participants were cautioned to present themselves in a believable manner.

For the second session (like the first), researchers asked participants to paraphrase the instructions. Any misunderstandings were clarified and participants were asked to summarize the instructions as they understood them once more. Researchers then administered the self-report measures in the same order as described above (QCAE, TEA, PDS, EQ, BES, and IRI).
At the conclusion of testing, the examiner administered a manipulation check consisting of six questions. In order to pass, participants had to correctly recall the instructions for both sessions, indicate they followed the instructions, correctly identify an incentive to simulate (e.g., receive a less severe sentence for the crime), and rate their levels of effort above 6 (on a 1-10 scale where “one” means “did not try” and “10” means “tried your hardest”).

Following the manipulation check, all participants were debriefed. Debriefing included a broad description of the aims of the study (e.g., examine how people try to make themselves look good) and general purpose of the testing procedures (e.g., compare your genuine answers to answers from Session 2). Participants were then given ample time to inquire about the study and further clarification was provided by researchers. Each individual was thanked for their participation.

Background checks were performed on each participant following the conclusion of data collection via an online public record search service (InstantCheckmate.com), as file reviews of participants were not made available to researchers from Tarrant County Jail. In the first round of adult background checks, criminal records were obtained for 54 participants. Using the online service, 27 participant records were unavailable. The second round of background checks included inmate searches on the Tarrant County Jail website (https://ijis.tarrantcounty.com/inmatesearch). Of the 27 participants without background information, 8 were still in custody at Tarrant County Jail and their arrest records were therefore available. Background checks allowed researchers to verify with collateral information regarding two items on the PCL-R: Item 19 revocation of conditional release and Item 20 criminal versatility. PCL-R scores on Item 20 were only
increased from self-report, as the criteria is number of types of crimes committed, rather than types of crimes with which one has been charged/convicted. The remaining 19 participants received no background checks and their PCL-R scores remained unchanged.
CHAPTER 3

RESULTS

Refinement of the Sample

The sample originally consisted of 92 male inmates at the Tarrant County Jail. A total of four participants were excluded during the administration phase. Two participants were unable to complete the simulation condition of the study for various reasons (one transferred to another facility, and another dropped out prior to completion). Two additional individuals did not participate in the study due to exclusion criteria. One inmate was a monolingual Spanish-speaking individual and one inmate was illiterate. No participants were excluded based on an inability to understand informed consent or due to a behavioral problem with researchers.

Following data entry and background checks, seven more individuals were excluded from data analysis. Four volunteers for the study could not be verified as being charged with a capital offense or being convicted of a felony and were thus excluded from data analysis. In examining the participants’ scores on the Paulhus Deception Scales (PDS) Impression Management (IM) scale, three inmates exceeded the recommended cut score for genuine responding in a prison setting. Therefore, the accuracy of these individuals’ self-reports was unknown and they were also excluded from data analysis.

Inter-rater Reliability

Twelve cases were independently assessed for inter-rater reliability. An intra-class correlation coefficient (ICC) was used to determine the inter-rater reliability for the Psychopathy Checklist – Revised (PCL-R). Results for inter-rater reliability indicate
excellent agreement for PCL-R total scores (ICC = 0.89), as well as Factors 1 (ICC = .91) and 2 (ICC = .90). When examined at the facet level, inter-rater agreement ranges from moderate to excellent: Facet 1 (ICC = .85), Facet 2 (ICC = .73), Facet 3 (ICC = .77), and Facet 4 (ICC = .92)

Description of the Final Sample

After exclusion criteria were implemented, the final sample of the current study consisted of 81 inmates between the ages of 18 and 59 (\(M = 34.01, SD = 11.89\)). Interestingly, self-identified ethnicity was equally distributed between African and European Americans (39.5% each); other ethnicities included 18.5% Hispanic Americans and 2.5% as biracial. Close to half the current sample (38.3%) had completed high school, with overall years of education widely ranging from only a middle school education to a college education. According to the Bureau of Justice Statistics Special Report (1996) on jail inmates across the nation, an average of 40.0% of inmates receive a high school diploma. Thus, the current sample appears to be generally comparable to inmate education levels across the U.S.

The sample had generally extensive correctional histories in terms of both overall arrests and years spent incarcerated (see Table 1). These detained offenders averaged a large number of arrests with a mean of 15.89. They evidenced a large range from 1 to 100 arrests, which is also reflected by the very substantial standard deviation (\(SD = 18.26\)). Additionally, this sample reported being incarcerated (including detainment as a juvenile) on average 7.24 years, or about 21.3% of their lives. Notably, the length of sentences received by the participants ranged from less than one year to a life sentence. Excluding the offender with a life sentence, the sample had received a
12.91 year sentence length on average. The discrepancy between sentences given and time spent incarcerated is likely accounted for by unserved time (e.g., released on parole).

All participants reported on their mental health history, but close examination revealed psychological issues were not highly prevalent in the sample. As one metric for a serious mental diagnosis, participants were asked about previous psychiatric hospitalizations. Approximately 27.2% of the participants had been hospitalized for psychiatric reasons. In terms of chronicity, of 40.9% of those hospitalized, only nine (11.1% of the overall sample) were hospitalized on more than one occasion.

Information regarding participants' levels of psychopathic traits was also examined, as the current study investigates psychopathy and empathy. The sample exhibited a wide range of scores on the Psychopathy Checklist – Revised (PCL-R), with total scores from 6 to 36, and a mean of 23.07 ($SD = 7.18$). As described in the Methods chapter, all participants were categorized into one of three psychopathy groups based on their Total PCL-R scores. The low psychopathy group consists of participants scoring < 17 ($n = 15$); the moderate psychopathy group consists of participants scoring from 17 to 24 ($n = 32$); and the high psychopathy group consists of participants scoring > 24 ($n = 34$) on the PCL-R. Demographic and legal information are examined below with respect to these groups.
Table 1

**Demographic and Legal Information of Sample**

<table>
<thead>
<tr>
<th>Background Information</th>
<th>Total Sample</th>
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<th>Moderate</th>
<th>High</th>
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<td>M</td>
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<td>M</td>
<td>SD</td>
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<tr>
<td>Psychiatric Hospitalizations</td>
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<table>
<thead>
<tr>
<th>Demographic</th>
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</thead>
<tbody>
<tr>
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<td>.30</td>
</tr>
<tr>
<td>Years of Education</td>
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<td>.85</td>
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<tr>
<td>Psychiatric Hospitalizations</td>
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<td>.77</td>
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<table>
<thead>
<tr>
<th>Legal</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arrests in Lifetime</td>
<td>0.44</td>
<td>.65</td>
</tr>
<tr>
<td>Years Incarcerated</td>
<td>1.98</td>
<td>.15</td>
</tr>
<tr>
<td>Longest Sentence (years)</td>
<td>0.36</td>
<td>.70</td>
</tr>
<tr>
<td>Days in Current Detention</td>
<td>0.33</td>
<td>.72</td>
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</tbody>
</table>

*Note.* Regarding psychopathy groups, Low = PCL-R < 17 ($n = 15$); Moderate = PCL-R 17-24 ($n = 32$); High = PCL-R >24 ($n = 34$).

*a* $n = 33$ for High Psychopathy group, as one individual received a life sentence and was therefore excluded from this analysis.
Although non-significant, several trends emerge when examining participants’ legal history data in Table 1. The lack of significance may reflect the limited power due to sample size. For example, the data show a trend for individuals in the low psychopathy group having been incarcerated for a shorter length of time than those in the moderate and high psychopathy groups, creating moderate effect sizes ($d_s = 0.62$ and 0.57; see Table 2). Interestingly, the opposite trend is observed for the longest sentence received, as the individuals in the low psychopathy group have received the most years of conviction. This finding is contrary to our expectations, though only small effect sizes are observed ($d_s = -0.19$ and -0.23).

Table 2

<table>
<thead>
<tr>
<th>Effect Sizes of Differences Between Psychopathy Groups on Demographic and Legal Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demographic Information</td>
</tr>
<tr>
<td>Age</td>
</tr>
<tr>
<td>Years of Education</td>
</tr>
<tr>
<td>Psychiatric Hospitalizations</td>
</tr>
<tr>
<td>Legal Information</td>
</tr>
<tr>
<td>Arrests in Lifetime</td>
</tr>
<tr>
<td>Years Incarcerated</td>
</tr>
<tr>
<td>Longest Sentence (years)</td>
</tr>
<tr>
<td>Days in Current Detention</td>
</tr>
</tbody>
</table>

Note: Regarding psychopathy groups, Low = PCL-R < 17 ($n = 15$); Moderate = PCL-R 17-24 ($n = 32$); High = PCL-R >24 ($n = 34$). $d_1$ compares Low to Moderate, $d_2$ compares Low to High, and $d_3$ compares Moderate to High. Negative (-) $d$ values indicate the higher psychopathy group in the comparison had a smaller mean for that variable. Positive $d$ values indicate the higher psychopathy group in the comparison had a larger mean for that variable.

Marital status and ethnicity were examined within the framework of socio-demographic variables (see Table 3). No interesting trends were observed with respect to psychopathy groups and marital status. Regarding ethnicity, the sample was largely evenly distributed among groups of psychopathic traits. Most individuals, irrespective of
ethnicity, fall into the moderate or high psychopathy groups. Interestingly, a high percentage of Hispanic Americans (66.7%) were categorized in the high psychopathy group. It is unclear what accounts for this finding, given this very small subsample ($n = 15$).

Table 3

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>Low</th>
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<th>High</th>
<th>$\chi^2$</th>
<th>$p$</th>
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<tbody>
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<td>European American</td>
<td>8</td>
<td>12</td>
<td>12</td>
<td>8.55</td>
<td>.20</td>
</tr>
<tr>
<td>African American</td>
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<td>15</td>
<td>12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hispanic American</td>
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<td>10</td>
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</tr>
<tr>
<td>Biracial</td>
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<td>2</td>
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<table>
<thead>
<tr>
<th>Marital Status</th>
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<th>Moderate</th>
<th>High</th>
<th>$\chi^2$</th>
<th>$p$</th>
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<tbody>
<tr>
<td>Single</td>
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<td>17</td>
<td>17</td>
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<td>Married</td>
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<td>8</td>
<td>9</td>
<td></td>
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<tr>
<td>Divorced</td>
<td>4</td>
<td>7</td>
<td>8</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. Regarding psychopathy groups, Low = PCL-R < 17 ($n = 15$); Moderate = PCL-R 17-24 ($n = 32$); High = PCL-R >24 ($n = 34$).

The sample reported a variety of offenses for which they were currently being charged. Approximately one-third of the sample were charged with a violent offense (33.3%), nearly one-third were charged with a parole or firearm violation (29.6 %), whereas the remaining one-third were charged with various property offenses: (18.5%), substance related offenses (7.4%), or other crimes (11.1%). Table C.1 summarizes the specific offenses.

Data were also collected on participants' most serious charges in their criminal histories (see Table 4). Participants utilized their own interpretation for “most serious offense.” Therefore, their answers may reflect subjectivity in their conceptualizations of
their most serious offense (e.g., crime that caused the greatest harm to their victim vs. crime for which they received the longest sentence).

Table 4

**Offenders’ Most Serious Reported Criminal Charges**

| Psychopathy Groups | Low (n=15) | Moderate (n=32) | High (n=34) | χ² | df | p
|-------------------|------------|----------------|-------------|----|----|----
| Violent Offenses  |            |                |             |    |    | .83
| Robbery           | 2 (14.29)  | 5 (35.71)      | 7 (50.00)   |    | 4.30 | 8 |
| Assault           | 2 (14.29)  | 4 (28.57)      | 8 (57.14)   |    |    |    |
| Murder/Attempted Murder | 1 (5.55) | 9 (50.00) | 8 (44.44) |    |    |    |
| Kidnapping        | 0 (0.00)   | 0 (0.00)       | 2 (100.00)  |    |    |    |
| Sexual Assault    | 0 (0.00)   | 1 (50.00)      | 1 (50.00)   |    |    |    |
| Property Offense  |            |                |             |    |    |    |
| Burglary          | 3 (30.00)  | 4 (40.00)      | 3 (30.00)   |    |    |    |
| Substance Related Offenses |        |                |             |    |    |    |
| Drug Possession   | 1 (50.00)  | 0 (0.00)       | 1 (50.00)   |    | 2.93 | 4 |
| Drug Distribution | 1 (20.00)  | 3 (60.00)      | 1 (20.00)   |    |    |    |
| DWI               | 1 (50.00)  | 1 (50.00)      | 0 (0.00)    |    |    |    |
| Violations        |            |                |             |    |    |    |
| Firearm Possession| 0 (0.00)  | 2 (66.67)      | 1 (33.33)   |    | 0.80 | 2 |
| Other             |            |                |             |    |    |    |
| Fraud             | 1 (50.00)  | 1 (50.00)      | 0 (0.00)    |    |    |    |
| Miscellaneous a   | 3 (42.86)  | 2 (28.57)      | 2 (28.57)   |    |    |    |

*Note.* Regarding psychopathy groups, Low = PCL-R < 17 (n=15); Moderate = PCL-R 17-24 (n=32); High = PCL-R >24 (n=34). Power for these analyses was limited by some cells having fewer than 5 observed cases.

*a* Miscellaneous crimes included everything not encompassed by the other categories, such as failure to stop and render aid, online solicitation of a minor, and deadly conduct.

*b* Using Bonferroni correction of α/n, or .05/3, p required for significance is .02.

The sample’s most serious charges are clearly weighted toward violent offenses (61.7%). Property (12.4%), substance related offenses (11.1%), and crimes classified as “other” (11.1%) were almost equally distributed. Although not statistically significant (p = .83), an expected trend emerges for the violent offenses. Arguably the most serious crimes, results indicate those in the high psychopathy group have been charged
with more of these offenses than those in the low or moderate psychopathy groups. For example, only 33.3% of the low and 31.2% of the moderate groups’ most serious charges were violent; in comparison, 76.4% of the high psychopathy group’s charges were violent. With so few participants in each cell, finding statistical significance is extremely challenging; however, this trend appears meaningful in that it clearly demonstrates marked differences between the groups.

Descriptive Data on Cognitive and Affective Empathy

Individuals with psychopathic traits are presumed to exhibit empathic deficits, although literature is mixed regarding the type of empathy (general deficits or specific deficits). Some researchers posit that psychopathy represents an overall deficit in empathy, irrespective of the type (Hare, 2003). Other investigators (Cohen & Strayer, 1996; Reniers et al., 2011) conclude empathy has two major components, and postulate psychopaths possess cognitive empathy, but lack affective empathy. In addressing this controversy, the first analysis examined the overall levels of empathy in the sample with respect to levels of psychopathy. Table 5 provides descriptive data regarding offenders' empathy scores as measured unitarily (e.g., total scores) as well as via specific empathy components (e.g., cognitive and affective subscales).
Table 5

Comparison of Psychopathy Group Differences in Empathy Scores

<table>
<thead>
<tr>
<th>Psychopathy Groups</th>
<th>Total</th>
<th>Low</th>
<th>Moderate</th>
<th>High</th>
<th>F</th>
<th>p</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
<td></td>
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<tr>
<td>EQ Total</td>
<td>35.99</td>
<td>10.13</td>
<td>38.40</td>
<td>11.26</td>
<td>34.65</td>
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<tr>
<td>QCAE Total</td>
<td>87.19</td>
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<td>90.67</td>
<td>8.64</td>
<td>85.71</td>
<td>10.33</td>
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<tr>
<td>QCAE Cog</td>
<td>56.67</td>
<td>8.12</td>
<td>58.27</td>
<td>7.32</td>
<td>56.00</td>
<td>8.51</td>
</tr>
<tr>
<td>QCAE Aff</td>
<td>30.52</td>
<td>5.34</td>
<td>32.40</td>
<td>4.17</td>
<td>29.71</td>
<td>5.49</td>
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<tr>
<td>IRI Total</td>
<td>34.86</td>
<td>7.83</td>
<td>37.80_{a}</td>
<td>5.92</td>
<td>32.06_{c}</td>
<td>8.26</td>
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<tr>
<td>IRI PT</td>
<td>16.74</td>
<td>5.45</td>
<td>18.67_{a}</td>
<td>4.05</td>
<td>14.88_{c}</td>
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<tr>
<td>IRI EC</td>
<td>18.12</td>
<td>3.61</td>
<td>19.13</td>
<td>2.59</td>
<td>17.18</td>
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<tr>
<td>BES Total</td>
<td>67.96</td>
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<td>BES Cog</td>
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<tr>
<td>BES Aff</td>
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<td>34.00_{ab}</td>
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<td>32.12_{b}</td>
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</table>

Note. Regarding psychopathy groups, Low = PCL-R < 17 (n = 15); Moderate = PCL-R 17-24 (n = 32); High = PCL-R >24 (n = 34). EQ = Empathy Quotient; QCAE = Questionnaire of Cognitive and Affective Empathy; BES = Basic Empathy Scale; IRI = Interpersonal Reactivity Index Empathic Concern Subscale and Perspective Taking Subscale combined. A one-tailed approach was utilized because this was a directional hypothesis. The least significant difference test (LSD) was used for post hoc comparisons. Identical subscripts indicate no significant differences between these groups.
Research Questions and Hypotheses

Research Question 1: What types of empathic deficits do individuals with psychopathic traits exhibit? To address the controversy of a complete or partial deficit in psychopaths, we examined differences in cognitive and affective empathy scores between psychopathy groups. These analyses were restricted to answers only from the genuine condition, as the question being addressed is concerned with true empathic deficits. A one-way between-subjects analysis of variance (ANOVA) was conducted using the psychopathic groups as the independent variable and total empathy scores as the dependent variables.

Hypothesis 1: Individuals with moderate or high levels of psychopathy will exhibit less empathy overall than has been observed in control samples. Most measures of empathy decrease as the progression from low to moderate to high psychopathic groups occurs (see Table 5). Although this pattern is observed for eight out of ten measures, only three measures produced statistical differences between groups (IRI Total, $p = 0.009$; IRI PT, $p = .01$; and BES Aff, $p = .03$). Two additional measures approached, but did not reach significance (IRI EC, $p = .06$ and BES Total, $p = .07$).

Of note, Fisher’s Least Significance Difference (LSD) post hoc tests indicated no significant differences between the low and moderate psychopathic groups. Instead, significant differences were observed between the high and either low or moderate psychopathy groups. This finding suggests that the high psychopathy group is distinguishable from other groups, in displaying distinctly lower levels of empathy. As considered in the discussion, it may also suggest true empathic deficits are only
observed in individuals with very high levels of psychopathy, but are relatively absent in individuals with fewer psychopathic traits.

The contrast between the high psychopathy and other groups is further evidenced by effect sizes (see Table 6). Although a wide range (from $d = 0.07$ to $d = 0.75$) of effect sizes emerge, the more prominent effects are observed between the high and low psychopathy groups (see $d_2$ column). However, high to moderate group comparisons yield three moderate effect sizes, as well. As expected, very little differences were observed between the low and moderate psychopathy groups, as evidenced by small effect sizes (from $d = .08$ to $d = .37$). This pattern suggests the high group’s genuine levels of empathy are distinctly different than the low or moderate psychopathy groups’ empathy levels.

Table 6

<table>
<thead>
<tr>
<th></th>
<th>EQ Total</th>
<th>QCAE Total</th>
<th>QCAE Cog</th>
<th>QCAE Aff</th>
<th>IRI Total</th>
<th>IRI PT</th>
<th>IRI EC</th>
<th>BES Total</th>
<th>BES Cog</th>
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<td>$d_3$</td>
<td>$d_1$</td>
<td>$d_2$</td>
<td>$d_3$</td>
<td>$d_1$</td>
<td>$d_2$</td>
<td>$d_3$</td>
<td>$d_1$</td>
</tr>
<tr>
<td>EQ Total</td>
<td>-0.20</td>
<td>-0.37</td>
<td>-0.17</td>
<td>-0.33</td>
<td>-0.50</td>
<td>-0.13</td>
<td>-0.19</td>
<td>-0.75</td>
<td>-0.56</td>
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</tr>
<tr>
<td>QCAE Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>QCAE Cog</td>
<td>-0.21</td>
<td>-0.28</td>
<td>-0.08</td>
<td>-0.37</td>
<td>-0.52</td>
<td>-0.14</td>
<td>-0.19</td>
<td>-0.69</td>
<td>-0.53</td>
<td>0.15</td>
</tr>
<tr>
<td>QCAE Aff</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>IRI Total</td>
<td>-0.19</td>
<td>-0.75</td>
<td>-0.56</td>
<td>-0.19</td>
<td>-0.69</td>
<td>-0.53</td>
<td>-0.14</td>
<td>-0.57</td>
<td>-0.40</td>
<td></td>
</tr>
<tr>
<td>IRI PT</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IRI EC</td>
<td>-0.14</td>
<td>-0.57</td>
<td>-0.40</td>
<td>-0.14</td>
<td>-0.57</td>
<td>-0.40</td>
<td>-0.14</td>
<td>-0.57</td>
<td>-0.40</td>
<td></td>
</tr>
<tr>
<td>BES Total</td>
<td>0.19</td>
<td>-0.30</td>
<td>-0.48</td>
<td>0.08</td>
<td>-0.13</td>
<td>-0.07</td>
<td>0.15</td>
<td>-0.51</td>
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<tr>
<td>BES Cog</td>
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<td></td>
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</tr>
<tr>
<td>BES Aff</td>
<td>0.15</td>
<td>-0.51</td>
<td>-0.60</td>
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</tr>
</tbody>
</table>

Note. Regarding psychopathy groups, Low = PCL-R < 17 ($n = 15$); Moderate = PCL-R 17-24 ($n = 32$); High = PCL-R >24 ($n = 34$). EQ = Empathy Quotient; QCAE = Questionnaire of Cognitive and Affective Empathy; BES = Basic Empathy Scale; IRI = Interpersonal Reactivity Index Empathic Concern Subscale and Perspective Taking Subscale combined. $d_1$ compares Low to Moderate, $d_2$ compares Low to High, and $d_3$ compares Moderate to High.

$^a$ Negative (-) $d$ values indicate higher scores for the lower psychopathy group. Positive $d$ values indicate higher scores for the higher psychopathy group.
The current sample exhibits lower empathy scores than has been observed in community and some correctional samples in the literature. Specific benchmarks for empathic deficits on these measures do not exist, yet research provides general information regarding how certain groups have performed on these measures. The information included in Table 7 may assist in the interpretation of the current study’s empathy data. For example, Baron-Cohen and Wheelright (2004) found males in the community averaged 41.80 on the Empathy Quotient (EQ), which is much higher than observed in the current sample. When compared to the low psychopathy group, a small effect size emerges ($d = -0.30$), whereas comparisons to the moderate and high psychopathy groups produced moderate effect sizes (-0.51 and -0.67, respectively).

For purposes of comparison, the low psychopathy group’s affective empathy levels appear comparable to levels of community groups (see Table 7). For instance, college males produced a mean of 32.27 on the QCAE Affective (Reniers et al., 2011), and similar means are evidenced by the current study’s low psychopathy group, producing a minute effect size ($d = -0.12$). However, a dissimilar trend is observed when examining the high psychopathy group’s scores on this scale, producing a very large effect size ($d = -1.39$). As predicted, the high psychopathy group evidenced marked emotional deficits when compared to more general comparison groups.

Interestingly, these empathic deficits appear limited to affective subscales only, providing evidence to support that cognitive deficits are not pronounced in psychopathic individuals. For example, a sample of male undergraduates (Reniers et al., 2011) produced a mean score of 56.12 on the QCAE Cognitive, similar to the scores produced by the moderate ($M = 56.13$) and high ($M = 56.00$) psychopathy groups in the current
study. Thus, results suggest offenders in the moderate and high psychopathy groups may not lack cognitive empathy. In comparing the high psychopathy group’s BES Cognitive scale to a sample of adult male offenders (Rogstad, 2011), results were highly similar, producing a $d$ of 0.21.
Table 7

**Adult Male Offenders’ and College/Community Adult Males’ Empathy Scores for Reference**

<table>
<thead>
<tr>
<th>Study</th>
<th>n</th>
<th>Sample</th>
<th>Measure</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baron-Cohen &amp; Wheelwright, 2004</td>
<td>71</td>
<td>Community Adults</td>
<td>EQ Total</td>
<td>41.80</td>
<td>11.20</td>
</tr>
<tr>
<td>Reniers, Corcoran, Drake, Shryane, &amp;Völlm, 2011</td>
<td>284</td>
<td>College Adults</td>
<td>QCAE Total</td>
<td>88.39</td>
<td>13.48</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>QCAE Cog</td>
<td>56.12</td>
<td>0.30</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>QCAE Aff</td>
<td>32.27</td>
<td>0.50</td>
</tr>
<tr>
<td>Davis,1980</td>
<td>579</td>
<td>College Adults</td>
<td>IRI Total</td>
<td>35.82</td>
<td>NA</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>IRI PT</td>
<td>16.78</td>
<td>NA</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>IRI EC</td>
<td>19.04</td>
<td>NA</td>
</tr>
<tr>
<td>Sebastian, Fontaine, Bird, Blakemore, DeBrito, McCrory, &amp; Viding, 2011</td>
<td>15</td>
<td>Community Adults</td>
<td>BES Total</td>
<td>73.79</td>
<td>5.13</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>BES Cog</td>
<td>36.13</td>
<td>4.47</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>BES Aff</td>
<td>37.15</td>
<td>5.79</td>
</tr>
<tr>
<td>Offender Populations</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gery, Mijkovitch, Berthoz, &amp; Soussignan, 2009</td>
<td>30</td>
<td>Prisoner Inmates</td>
<td>EQ Total</td>
<td>19.80</td>
<td>5.39</td>
</tr>
<tr>
<td>Ireland, 1999</td>
<td>140</td>
<td>Prisoner Inmates</td>
<td>IRI Total</td>
<td>47.70</td>
<td>8.70</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>IRI PT</td>
<td>23.70</td>
<td>4.60</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>IRI EC</td>
<td>24.00</td>
<td>4.10</td>
</tr>
<tr>
<td>Rogstad, 2011</td>
<td>39</td>
<td>Jail Inmates</td>
<td>IRI Total</td>
<td>30.65</td>
<td>10.70</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>IRI PT</td>
<td>12.86</td>
<td>4.61</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>IRI EC</td>
<td>17.79</td>
<td>6.09</td>
</tr>
<tr>
<td>Gery, Mijkovitch, Berthoz, &amp; Soussignan, 2009</td>
<td>30</td>
<td>Prisoners</td>
<td>IRI Total</td>
<td>24.20</td>
<td>5.18</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>IRI PT</td>
<td>12.20</td>
<td>2.39</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>IRI EC</td>
<td>12.00</td>
<td>2.79</td>
</tr>
<tr>
<td>Von Borries, Volman, de Bruijn, Bulten, Verkes, &amp; Roelofs, 2012</td>
<td>17</td>
<td>Forensic Adult Patients</td>
<td>IRI Total</td>
<td>33.74</td>
<td>2.40</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>IRI PT</td>
<td>17.82</td>
<td>1.12</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>IRI EC</td>
<td>15.82</td>
<td>1.28</td>
</tr>
<tr>
<td>Rogstad, 2011</td>
<td>39</td>
<td>Jail Inmates</td>
<td>BES Total</td>
<td>69.28</td>
<td>7.28</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>BES Cog</td>
<td>35.85</td>
<td>4.08</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>BES Aff</td>
<td>33.43</td>
<td>6.70</td>
</tr>
</tbody>
</table>

*Note.* EQ = Empathy Quotient; QCAE = Questionnaire of Cognitive and Affective Empathy; BES = Basic Empathy Scale; IRI = Interpersonal Reactivity Index; EC = Empathic Concern Subscale; PT = Perspective Taking Subscale.

**Hypothesis 2:** Psychopathy groups will not differ significantly on cognitive empathy measures under genuine instructions. Hypothesis 2 appears to be partially
confirmed. Psychopathy groups scored significantly differently on only one of the four cognitive empathy measures, supporting the idea that cognitive empathy remains intact in psychopathic individuals (see Table 8). As an exception, Perspective Taking (IRI cognitive empathy scale) yielded significant results, with moderate effect sizes between the low and high psychopathy groups ($d = -0.69$) and between the moderate and high psychopathy groups ($d = -0.53$). Only offenders with high levels of psychopathy appear to possibly exhibit cognitive empathy deficits, differentiating this group from those offenders with fewer psychopathic traits.

The high psychopathy group continued to stand out from the other groups in examining effect sizes of differences on cognitive empathy measures. The QCAE Online Simulation produced similar patterns of differences observed with the IRI Perspective Taking, with moderate effect sizes emerging between the low and high psychopathy groups ($d = -0.47$) and between the moderate and high psychopathy groups ($d = -0.52$). Overall, the low and moderate psychopathy groups scored similarly on cognitive empathy measures (see $d_1$ column in Table 8), whereas the high psychopathy group’s scores tended to be lower in general than the rest. Predictably, the low to high psychopathy group comparisons produced the largest differences.
Table 8

*Differences Between Low, Moderate, and High Psychopathy Groups’ Cognitive Empathy Scores Under Genuine Instructions*

<table>
<thead>
<tr>
<th></th>
<th>Low</th>
<th>Moderate</th>
<th>High</th>
<th>F</th>
<th>p</th>
<th>d&lt;sub&gt;1&lt;/sub&gt;</th>
<th>d&lt;sub&gt;2&lt;/sub&gt;</th>
<th>d&lt;sub&gt;3&lt;/sub&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognitive Empathy</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>QCAE – Online Simulation</td>
<td>26.53</td>
<td>26.72</td>
<td>23.97</td>
<td>2.70</td>
<td>.08</td>
<td>0.04</td>
<td>-0.47</td>
<td>-0.52</td>
</tr>
<tr>
<td>QCAE – Perspective Taking</td>
<td>31.73</td>
<td>29.91</td>
<td>32.03</td>
<td>1.78</td>
<td>.18</td>
<td>-0.37</td>
<td>0.07</td>
<td>0.44</td>
</tr>
<tr>
<td>IRI – Perspective Taking</td>
<td>18.67&lt;sub&gt;a&lt;/sub&gt;</td>
<td>17.81&lt;sub&gt;ab&lt;/sub&gt;</td>
<td>14.88&lt;sub&gt;c&lt;/sub&gt;</td>
<td>3.78</td>
<td>.03</td>
<td>-0.19</td>
<td>-0.69</td>
<td>-0.53</td>
</tr>
<tr>
<td>BES – Cognitive Subscale</td>
<td>34.53</td>
<td>34.22</td>
<td>33.94</td>
<td>0.12</td>
<td>.89</td>
<td>-0.09</td>
<td>-0.13</td>
<td>-0.07</td>
</tr>
</tbody>
</table>

Mean Effect Sizes: -0.11 -0.31 -0.17

**Note.** Regarding psychopathy groups, Low = PCL-R < 17 (n = 15); Moderate = PCL-R 17-24 (n = 32); High = PCL-R >24 (n = 34). QCAE = Questionnaire of Cognitive and Affective Empathy; BES = Basic Empathy Scale; IRI = Interpersonal Reactivity Index. d<sub>1</sub> compares Low to Moderate; d<sub>2</sub> compares Low to High; and d<sub>3</sub> compares Moderate to High. Negative (-) d values indicate higher scores for the lower psychopathy group. Positive d values indicate higher scores for the higher psychopathy group. The least significant difference test (LSD) was used for post hoc comparisons. Identical subscripts indicate no significant differences between these groups. A two-tailed approach was utilized for these comparisons, as this was not a directional hypothesis.
Hypothesis 3: The high psychopathy group will exhibit significantly lower affective empathy scores than the low psychopathy group under genuine instructions. This hypothesis was mainly disconfirmed, as four of the five affective empathy measures yielded no significant differences between psychopathy groups (see Table 9). In fact, the only significant difference was observed on the BES Affective subscale. Unlike other differences in empathy measures, the difference was found to be between the moderate and high psychopathy groups, producing a moderate effect size ($d = -0.60$). This trend varies from results regarding cognitive empathy, as that trend primarily indicated differences between low and high psychopathy groups.

Notably, the IRI Empathic Concern scale was approaching significance ($p = .06$), with the largest effect size expectedly emerging between the low and high psychopathy groups ($d = -0.57$). Despite the lack of significant differences, it is interesting to note several interesting trends. As expected, offenders in the low psychopathy group have slightly higher scores on the QCAE’s Proximal Responsivity and Emotion Contagion scales and the IRI Empathic Concern scale than those in the moderate psychopathy group, a pattern that is repeated with the high psychopathy group for these three of the measures. This trend is in the hypothesized direction, suggesting that level of psychopathy is inversely related to levels of affective empathy. On the QCAE Peripheral Responsivity scale, however, a different trend emerges. The moderate psychopathy group’s scale is comparable to the high psychopathy group. In looking across mean effect sizes, the largest effects were between the low and high psychopathy groups, similar to effect sizes found for cognitive empathy measures.
<table>
<thead>
<tr>
<th>Affective Empathy</th>
<th>Low</th>
<th>Moderate</th>
<th>High</th>
<th>F</th>
<th>P</th>
<th>d₁</th>
<th>d₂</th>
<th>d₃</th>
</tr>
</thead>
<tbody>
<tr>
<td>QCAE – Prox. Resp.</td>
<td>11.67</td>
<td>2.58</td>
<td>10.44</td>
<td>2.43</td>
<td>1.40</td>
<td>.13</td>
<td>-0.30</td>
<td>-0.54</td>
</tr>
<tr>
<td>QCAE – Per. Resp.</td>
<td>10.20</td>
<td>2.15</td>
<td>9.85</td>
<td>2.40</td>
<td>0.23</td>
<td>.40</td>
<td>-0.21</td>
<td>-0.15</td>
</tr>
<tr>
<td>QCAE – Emotion Contagion</td>
<td>10.53</td>
<td>2.75</td>
<td>9.41</td>
<td>2.44</td>
<td>0.95</td>
<td>.20</td>
<td>-0.25</td>
<td>-0.44</td>
</tr>
<tr>
<td>IRI – Empathic Concern</td>
<td>19.13</td>
<td>2.59</td>
<td>17.18</td>
<td>3.69</td>
<td>2.17</td>
<td>.06</td>
<td>-0.14</td>
<td>-0.57</td>
</tr>
<tr>
<td>BES – Affective Subscale</td>
<td>34.00</td>
<td>4.65</td>
<td>35.50</td>
<td>5.26</td>
<td>3.13</td>
<td>.03</td>
<td>-0.33</td>
<td>-0.33</td>
</tr>
</tbody>
</table>

**Mean Effect Sizes**

-0.15 -0.41 -0.26

*Note. Regarding psychopathy groups, Low = PCL-R < 17 (n = 15); Moderate = PCL-R 17-24 (n = 32); High = PCL-R >24 (n = 34). QCAE = Questionnaire of Cognitive and Affective Empathy; Prox. Resp. = Proximal Responsivity Scale; Per. Resp. = Peripheral Responsivity Scale; BES = Basic Empathy Scale; IRI = Interpersonal Reactivity Index. d₁ compares low to moderate; d₂ compares low to high; and d₃ compares moderate to high. Negative (-) d values indicate higher scores for the lower psychopathy group. Positive d values indicate higher scores for the higher psychopathy group. The least significant difference test (LSD) was used for post hoc comparisons. Identical subscripts indicate no significant differences between these groups.

A one-tailed approach was utilized for these comparisons, as this was a directional hypothesis.*
Research Question 2: Can offenders with psychopathic traits simulate cognitive and affective empathy on self-report measures? Investigators examined offenders’ abilities to simulate empathy, given results to Hypothesis 1 regarding overall empathy deficits in the sample. A repeated-measures ANOVA was utilized to address this question, and results are presented in Table 10 below. As there were only two repeated conditions (genuine and simulation) sphericity was assumed.

Hypothesis 4: moderate and high psychopathy groups will simulate empathy to a greater extent than those in the low psychopathy group. Researchers examined the overall sample’s cognitive and affective empathy scores prior to investigating specific group simulation abilities. With respect to cognitive empathy measures, the overall sample of offenders increased their scores significantly from the genuine to simulation condition (see Table 10). Effect sizes ranged from $d = 0.28$ for QCAE Perspective Taking to $d = 1.14$ for QCAE Online Simulation, reflecting the marked increase. This suggests offenders as a whole are able to simulate cognitive empathy with ease.

The affective empathy scales yielded similar results, with the overall sample greatly increasing their empathy scores. All five affective empathy measures showed marked increases across conditions. Interestingly, the range of effect sizes was slightly smaller ($d$'s from 0.45 to 1.04) for the affective empathy simulation than was produced with the cognitive empathy simulation. Even so, these results suggest offenders do not find increasing their affective empathy scores challenging in the least.
Table 10

**Overall Differences on Cognitive and Affective Empathy Measures Between Genuine and Simulated Conditions in a Repeated-Measures ANOVA**

<table>
<thead>
<tr>
<th></th>
<th>Genuine</th>
<th>Simulation</th>
<th>M Diff.</th>
<th>F</th>
<th>p</th>
<th>d</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cognitive Empathy</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>QCAE – Online Simulation</td>
<td>25.53</td>
<td>30.78</td>
<td>5.25</td>
<td>64.01</td>
<td>&lt;.001</td>
<td>1.14</td>
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<tr>
<td>QCAE – Perspective Taking</td>
<td>31.14</td>
<td>32.49</td>
<td>1.36</td>
<td>3.76</td>
<td>.03</td>
<td>0.28</td>
</tr>
<tr>
<td>IRI – Perspective Taking</td>
<td>16.74</td>
<td>22.11</td>
<td>5.37</td>
<td>54.89</td>
<td>&lt;.001</td>
<td>1.12</td>
</tr>
<tr>
<td>BES – Cognitive Subscale</td>
<td>34.16</td>
<td>36.21</td>
<td>2.05</td>
<td>10.45</td>
<td>.001</td>
<td>0.46</td>
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<tr>
<td><strong>Affective Empathy</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>QCAE – Proximal Responsivity</td>
<td>10.88</td>
<td>12.63</td>
<td>1.75</td>
<td>22.45</td>
<td>&lt;.001</td>
<td>0.72</td>
</tr>
<tr>
<td>QCAE – Peripheral Responsivity</td>
<td>9.85</td>
<td>10.90</td>
<td>1.05</td>
<td>9.57</td>
<td>.002</td>
<td>0.45</td>
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<tr>
<td>QCAE – Emotion Contagion</td>
<td>9.79</td>
<td>10.77</td>
<td>0.98</td>
<td>6.38</td>
<td>.007</td>
<td>0.34</td>
</tr>
<tr>
<td>IRI – Empathic Concern</td>
<td>18.12</td>
<td>19.98</td>
<td>1.85</td>
<td>10.69</td>
<td>.001</td>
<td>0.50</td>
</tr>
<tr>
<td>BES – Affective Subscale</td>
<td>33.80</td>
<td>40.47</td>
<td>6.67</td>
<td>47.20</td>
<td>&lt;.001</td>
<td>1.04</td>
</tr>
</tbody>
</table>

*Note.* QCAE = Questionnaire of Cognitive and Affective Empathy; IRI = Interpersonal Reactivity Index; BES = Basic Empathy Scale. One-tailed approach was utilized due to the directional nature of the hypothesis. Positive effect sizes (ds) reflect an increase in mean scores from genuine to simulation condition.

The data suggest offenders effectively simulated cognitive and affective empathy without difficulty, as scores were significantly increased on all measures. Two cognitive, as well as two affective, empathy scales evidenced the biggest differences across conditions, suggesting one component of empathy is not simulated more easily than the other. This difference may also reflect the “fakability” of specific measures on which offenders produced the largest change scores. The next logical step employed was to examine significant increases in scores with respect to the psychopathic groups. A one-way analysis of variance was conducted to compare mean difference scores across the three groups. Results revealed statistically significant differences between the psychopathic groups on two cognitive empathy measures and three affective empathy measures (see Table 11).
Table 11

Psychopathy Group Differences on Cognitive and Affective Empathy Measures Between Genuine and Simulated Conditions

<table>
<thead>
<tr>
<th>Psychopathy Groups</th>
<th>Low</th>
<th>Moderate</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M Diff</td>
<td>M Diff</td>
<td>M Diff</td>
</tr>
<tr>
<td>Cognitive Empathy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>QCAE – Online Simulation</td>
<td>2.60a</td>
<td>4.44ab</td>
<td>7.18b</td>
</tr>
<tr>
<td>QCAE – Perspective Taking</td>
<td>0.07</td>
<td>2.63</td>
<td>0.74</td>
</tr>
<tr>
<td>IRI – Perspective Taking</td>
<td>2.00a</td>
<td>4.47ab</td>
<td>7.71c</td>
</tr>
<tr>
<td>BES – Cognitive</td>
<td>1.80</td>
<td>1.81</td>
<td>2.38</td>
</tr>
<tr>
<td>Affective Empathy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>QCAE – Prox. Resp.</td>
<td>-0.20</td>
<td>0.47</td>
<td>1.97</td>
</tr>
<tr>
<td>QCAE – Per. Resp.</td>
<td>1.27</td>
<td>1.13</td>
<td>0.88</td>
</tr>
<tr>
<td>IRI – Empathic Concern</td>
<td>-0.07a</td>
<td>1.06ab</td>
<td>3.44b</td>
</tr>
<tr>
<td>BES – Affective Subscale</td>
<td>5.73</td>
<td>4.63</td>
<td>9.00</td>
</tr>
</tbody>
</table>

Note. Regarding psychopathy groups, Low = PCL-R < 17 (n = 15); Moderate = PCL-R 17-24 (n = 32); High = PCL-R > 24 (n = 34). QCAE = Questionnaire of Cognitive and Affective Empathy; IRI = Interpersonal Reactivity Index; BES = Basic Empathy Scale. d1 compares low to moderate; d2 compares low to high; and d3 compares moderate to high. Negative (-) d values indicate higher scores for the lower psychopathy group. Positive d values indicate higher scores for the higher psychopathy group. The least significant difference test (LSD) was used for post hoc comparisons. Identical subscripts indicate no significant differences between these groups. One-tailed approach was utilized due to the directional nature of this hypothesis.

Offenders across the different psychopathy groups were able to simulate empathy to varying degrees on two cognitive and three affective measures. On the cognitive empathy measures, the higher psychopathy classification was associated with higher mean difference scores from genuine to simulation conditions. On the QCAE Online Simulation scale, significant differences were observed ($F[2, 79] = 3.89, p = .01$) between the low and high psychopathy groups ($d = 0.75$). Similarly, the low and high psychopathy groups differed on the IRI Perspective Taking scale ($F[2, 79] = 4.93, p = .005$), producing a large effect size ($d = 0.85$). Interestingly, on this scale it appears the high psychopathy group stood out, as evidenced by a significant difference between the moderate and high psychopathy groups as well ($d = 0.51$). Generally, the high
psychopathy group’s simulation abilities were significantly more effective than the low psychopathy group’s simulation attempts, and in some cases, the moderate psychopathy group’s efforts.

Higher psychopathy classification was also associated with higher simulation abilities on three affective empathy measures. Differences emerged between groups on the QCAE Proximal Responsivity scale \((F[2,79] = 2.73, \ p = .04)\), the QCAE Emotion Contagion scale \((F[2,79] = 2.70, \ p = .04)\), and the IRI Empathic Concern scale \((F[2,79] = 3.28, \ p = .02)\). When comparing the low to high psychopathy groups on these affective measures, moderate effect sizes were produced \((ds \text{ ranging from } 0.59 \text{ to } 0.74)\). Notably, a fourth measure (BES Affective subscale) approached significance \((p = .06)\) and produced two small effect sizes when between the high psychopathy and other groups \((d = 0.39 \text{ and } 0.49)\).

Contrary to Hypothesis 4, the real differences in affective empathy simulation appear to lie between the high psychopathy group and the other groups. Individuals categorized in the high psychopathy group are clearly distinguishable from inmates with fewer psychopathic traits in their capacity to imitate affective responses to someone else’s situation. This ability is evidenced by the three statistically significant differences emerging between the low and high psychopathy groups, with a fourth measure (the BES) producing an effect size between the moderate and high psychopathy groups \((d = 0.49)\). The uniqueness of the high psychopathy group is further demonstrated by the lack of significant differences between the low and moderate psychopathy groups.

A closer examination of each groups’ change scores on empathy measures was performed and results are displayed in Tables C.2, C.3, and C.4. The low psychopathy
group did not significantly increase their scores on any measures, while the moderate
group significantly increased their scores on two measures, and the high group
significantly increased their scores on six out of nine measures. Paired sample $t$ tests
were utilized to determine significant increases. Cohen’s $d$ effect sizes were calculated
for each measure and ranged from 0.05 to 1.55.

Results indicate that the high psychopathy group as a whole was more effective
simulators than offenders categorized as low or moderate psychopathy. However, the
researcher was interested in examining the specific individuals, who were most
successful as simulating empathy. Thus, taking a different approach, an ancillary data
analysis was conducted to examine offenders with the greatest and smallest empathy
change scores. Empathy change scores for each measure were summed to create an
overall change score. Offenders with an overall change score $\geq 60$ points ($n = 15$) are
considered “super simulators” because of their ability to greatly increase their empathy
scores. On the opposite end of effectiveness, offenders with a change score $\leq 6$ points
($n = 16$) were identified as “non-simulators.” PCL-R results showed the super
simulators averaged a total score of 24.73 (7.37), which – contrary to expectations – is
similar to the non-simulators ($M = 21.75$, $SD = 8.27$). Although as a group psychopathic
traits influenced offenders’ simulation abilities, it appears the individuals most and least
successful at empathy simulation look quite similar in terms of psychopathy ($F[1,29] =
1.12, p = .30$), producing only a small effect size ($d = 0.38$).

Research Question 3: Does the level of an individual’s Factor 1 psychopathic
traits influence his ability to effectively simulate empathy? A Pearson’s $r$ correlation was
utilized to determine the relation between participants’ Factor 1 scores and their overall empathy change scores (described above).

*Hypothesis 5:* Due to researchers (Hare, 1991, 2003) positing that Factor 1 psychopathy is conceptualized as interpersonal issues (including deception) and affective deficits (specifically empathy), it was hypothesized that offenders’ Factor 1 scores will positively correlate with empathy change scores.

This hypothesis was partially supported by the results, as change scores on two measures were significantly correlated with offenders’ Factor 1 Scores. Change scores on the IRI Perspective Taking scale ($r = .21, p = .03$) and the QCAE Proximal Responsivity scale ($r = .28, p = .01$) were found to be significantly correlated with Factor 1 scores, meaning higher Factor 1 scores correlated with greater simulation ability.

Three additional scales approached significance (QCAE Online Simulation, QCAE Emotion Contagion, and IRI Empathic Concern). Interestingly, three measures were slightly negatively correlated with Factor 1 scores. However, given the extremely small correlations (e.g., $r = -.02, -.10$ and $-.14$), these results likely reflect a very weak relation between change and Factor 1 scores rather than a negative relation. See Table 12 below for details.

As an ancillary analysis, empathy change scores were correlated with the PCL-R’s Interpersonal Facet, which includes the items (a) Glibness/Superficial Charm, (b) Grandiose Sense of Self-Worth, (c) Pathological Lying, and (d) Conning/Manipulative. Only one significant correlation emerged (QCAE Peripheral Responsivity $r = -.21, p = .03$); however, it was in the unexpected direction.
Table 12

Correlations Between Offenders’ Factor 1 Scores and Empathy Measure Change Scores

<table>
<thead>
<tr>
<th>Cognitive Empathy</th>
<th>Pearson’s r</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>QCAE – Online Simulation</td>
<td>.17</td>
<td>.07</td>
</tr>
<tr>
<td>QCAE – Perspective Taking</td>
<td>-.10</td>
<td>.18</td>
</tr>
<tr>
<td>IRI – Perspective Taking Scale</td>
<td>.21</td>
<td>.03</td>
</tr>
<tr>
<td>BES – Cognitive Subscale</td>
<td>-.02</td>
<td>.43</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Affective Empathy</th>
<th>Pearson’s r</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>QCAE – Proximal Responsivity</td>
<td>.28</td>
<td>.01</td>
</tr>
<tr>
<td>QCAE – Peripheral Responsivity</td>
<td>-.14</td>
<td>.11</td>
</tr>
<tr>
<td>QCAE – Emotion Contagion</td>
<td>.17</td>
<td>.06</td>
</tr>
<tr>
<td>IRI – Empathic Concern Scale</td>
<td>.19</td>
<td>.05</td>
</tr>
<tr>
<td>BES – Affective Subscale</td>
<td>.08</td>
<td>.14</td>
</tr>
</tbody>
</table>

Note. QCAE = Questionnaire of Cognitive and Affective Empathy; IRI = Interpersonal Reactivity Index; BES = Basic Empathy Scale. One-tailed approach was utilized due to the directional nature of the hypothesis.

Hypothesis 6: Factor 2 scores will not account for more variance in change scores (from genuine to simulation) than Factor 1 scores alone. A hierarchical linear regression was performed to test this hypothesis. Using the enter method, Factor 1 scores were entered first and Factor 2 scores were entered second.

Only one significant model emerged on the QCAE Proximal Responsivity ($F[1,79] = 6.51, p = .01, R^2$ change = .08), indicating Factor 1 scores accounted for a significant percentage of change on this measure. In other words, offenders’ Factor 1 psychopathy scores predicted their abilities to simulate empathy. Interestingly, this was the only measure upon which Factor 2 also reached significance ($F(1,79) = 3.42, p = .04, R^2$ change = .005), meaning Factor 2 psychopathy scores predicted simulation slightly more than Factor 1 psychopathy alone. Although Factor 1 did not predict change in scores on empathy measures, these results indicate on all but one occasion,
Factor 2 accounted for less than 3% of the variance in change scores after accounting for Factor 1 scores.

Supplementary Research Questions and Hypotheses

*Supplementary Research Question 1: Will the PDS IM scale correctly identify offenders simulating empathy?* Paulhus (1998) provides a cut score of $T > 70$ to classify PDS profiles as invalid due to impression management. For these analyses, participants formerly removed due to their elevated PDS Impression Management $T$ scores were included. After calculating $T$ scores for all individuals for genuine and simulation conditions, utility estimates were calculated for the recommended cut score (Simulation > 70$T$) and two other potential cut scores (Simulation > 60$T$ and > 80$T$). Results indicate the Paulhus’ cut score of 70 is highly effective at identifying possible cases of impression management with a positive predictive power (PPP) of .93 and a specificity of .95. At a cut score >80$T$, specificity is increased at a great cost to sensitivity (see Table 13).

Simulated profiles bring into question offenders’ honesty, and may produce large implications for these offenders in terms of potential biases of evaluators. Due to the possible stigma associated with simulating, specificity is of utmost importance; however, a balance is also needed so as not to have a vast number of false negatives (simulators misclassified as genuine responders). Therefore, the cut score provided by Paulhus (1998) of $T > 70$ appears to be the most effective for our purposes. In the current study, three individuals in the genuine condition were indicated as engaging in impression management based on this cut score. In examining their means on empathy measures
under genuine instructions and comparing them to the sample as a whole, these individuals produced highly elevated scores (see Table C.5 for details).

Table 13

*Effectiveness of Paulhus’ (1998) Impression Management Cut Score Under Genuine and Simulation Conditions*

<table>
<thead>
<tr>
<th>Sensitivity</th>
<th>Specificity</th>
<th>PPP</th>
<th>NPP</th>
<th>OCC</th>
</tr>
</thead>
<tbody>
<tr>
<td>T &gt; 60</td>
<td>0.80</td>
<td>0.76</td>
<td>0.77</td>
<td>0.79</td>
</tr>
<tr>
<td>T &gt; 70</td>
<td>0.61</td>
<td>0.95</td>
<td>0.93</td>
<td>0.71</td>
</tr>
<tr>
<td>T &gt; 80</td>
<td>0.35</td>
<td>0.98</td>
<td>0.94</td>
<td>0.60</td>
</tr>
</tbody>
</table>

*Note.* PPP = positive predictive power; NPP = negative predictive power; OCC = overall correct classification.

*Utility estimates were calculated at a 50% base rate.*

*Supplementary Research Question 2: How will psychopathy groups differ in terms of their scores on the Trait Empathic Anger Scale, which measures empathy as an anger response on behalf of others?*

A one-way ANOVA was utilized to examine mean difference scores across groups. Results indicate no significant difference between groups ($F[2, 79] = 1.26, p = .29$). However, when examining the groups’ means, we find the high psychopathy group scored slightly lower than the other groups under genuine instructions. Interestingly, this group produced the highest score of any on the measure under simulation instructions.
Table 14

<table>
<thead>
<tr>
<th></th>
<th>Psychopathy Groups</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Low</td>
<td>Moderate</td>
<td>High</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Gen</td>
<td>Sim</td>
<td>Gen</td>
<td>Sim</td>
<td>Gen</td>
<td>Sim</td>
<td>F</td>
<td>p</td>
</tr>
<tr>
<td>Mean TEA Scale Scores</td>
<td>23.00</td>
<td>25.60</td>
<td>23.88</td>
<td>25.22</td>
<td>22.06</td>
<td>27.38</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean Differences</td>
<td>2.60</td>
<td></td>
<td>1.34</td>
<td></td>
<td>5.32</td>
<td></td>
<td>2.65</td>
<td>.08</td>
</tr>
</tbody>
</table>

Note. For Psychopathy groups, Low n = 15; Moderate n = 32; High n = 34. Gen = genuine; Sim = simulation.

Supplemental Research Question 3: How accurate will individuals be in predicting their ability to simulate empathy? Of the final sample, two groups emerged: (a) a confident group (n = 66), and (b) a non-confident group (n = 15) of whom two participants believed they were unsuccessful and 13 were unsure of their performance. A one-way ANOVA was performed with overall change score as the dependent variable and prediction group (confident vs. unconfident) as the independent variable. Results indicate no difference between groups’ overall change scores (F[1,79]) = .02, p = .88), meaning confidence did not predict effective simulation. The confident group’s overall change score was 29.79 (SD = 37.92), whereas the non-confident group’s mean change score was 28.20 (SD = 35.86).
Forensic psychologists are commonly given the onerous task of performing risk assessments on offenders. Every year, courts and institutions – both mental health and correctional – call for thousands of violence risk assessments on mentally disordered offenders and inmates (Lyon, Hart, & Webster, 2001; Shah, 1978). The main function of risk assessments is arguably to render accurate decisions that will contribute to community safety, specifically, to protect the public against criminal victimization. Risk assessments aid in forensic decisions made about these offenders, such as sentencing, institutional placement, treatment planning, recommendations with regard to parole, and the restrictiveness of conditions attached to supervision in the community. For example, those offenders who are judged as “high risk” may receive more restrictive interventions, whereas those in a low risk category may experience less restrictive interventions (Austin, 2004). This chapter discusses the intersection of three major components of risk assessments: psychopathy, deception, and empathy.

Implications of Risk Assessments

The accuracy of risk assessments has far-reaching societal implications. A federal sentencing report (Austin, 2004) describes two ways in which public safety may be endangered if risk assessments are not performed well. The first and more obvious way pertains to high risk offenders who likely continue to commit crimes because they were (a) released from prison too soon, or (b) received inadequate levels of supervision and treatment upon release. The second and less apparent implication arises when low risk offenders are subjected to unnecessarily restrictive levels of supervision.
misjudgment creates consequences on two levels: macro and micro. On the macro level, valuable and increasingly scarce correctional resources are being diverted from high risk offenders. As a further consequence, research has shown exposing low risk offenders to more stringent supervision or intense treatment actually contributes to higher recidivism rates (Andrews & Bonta, 2003). On the micro level, inaccurately classified offenders may be subjected to overly stringent guidelines or harsh punishments.

Accuracy in risk assessments is essential given the importance of possible ramifications on society. However, obtaining accurate information from individuals involved with the justice system poses unique challenges, especially when the evaluation has strong influence over possible incarceration or treatment. Offenders pursuing the most positive personal outcome in risk assessments may be somewhat misleading, if not directly deceitful, in discussing negative attributes of themselves.

Role of Psychopathy in Risk Assessment

The assessment of psychopathy plays a crucial role in risk evaluations, because its core psychological and behavioral traits are linked to criminal behavior (Harpur et al., 1988). Psychopathy has long been recognized as a relatively strong risk factor among offenders, and the construct has historically been considered to have an “unparalleled” ability to predict future violence in criminal samples (Hare, 1996; Hemphill, Templeman, Wong, & Hare, 1998; Salekin, Rogers, & Sewell, 1996). As researchers gained interest in the construct of psychopathy, a need for a valid and reliable psychopathy measure became apparent. Hare’s (1991, 2003) development of the Psychopathy Checklist – Revised PCL-R) has been recognized as a reliable and valid measure (Hare et al.,
1990; Kosson, Smith, & Newman, 1990) and is considered the “gold standard” for psychopathy assessment (Fulero, 1995).

Many studies have evaluated the use of the PCL-R in risk assessments. Results have generally found this instrument to moderately predict community-based violence and recidivism among general offenders (Hart, Kropp, & Hare, 1988; Serin & Amos, 1995), offenders with mental illness (Harris, Rice, & Quinsey, 1993; Heilbrun et al., 1998; Rice & Harris, 1995) and incarcerated sex offenders (Quinsey, Rice, & Harris, 1995; Rice & Harris, 1997).

Several PCL-R Factor 1 items have special significance to the current study. Specifically, lack of empathy and pathological lying particularly are relevant to this study. The PCL-R test manual describes a person without empathy as “an individual whose attitudes and behavior indicate a profound lack of empathy and a callous disregard for the feelings, rights, and welfare of others” (Hare, 2003, p. 39). In further describing a lack of empathy, Hare (2003) adds, “Any appreciation of the pain, anguish, or discomfort of others is merely abstract and intellectual” (p. 39). Thus, the construct of empathy appears highly important, if not necessary, both in the assessment of psychopathy in general and with regard to risk assessments.

A second Factor 1 item, pathological lying, likely complicates assessing psychopathy, empathy, and risk factors in general. Offenders undergoing risk assessments may be highly motivated to appear empathetic and remorseful. Therefore, it is possible for psychopathic offenders to lack empathy, but possesses deception skills which they may choose to utilize if motivated to mask their callousness. This example displays the difficulty in assessing offenders with high Factor 1 scores, which
encompasses a lack of empathy and pathological lying features. At least one group of
researchers (Lee, Klaver, & Hart, 2008) investigated Factor 1 psychopathy with regard
to deceptive abilities.

Lee et al. (2008) found high Factor 1 scores were associated with greater
perceived credibility when discussing false information. However, the offenders in the
Lee et al. (2008) study were not specifically deceitful in their emotions, but rather were
instructed to lie regarding various facts. Although that study suggests Factor 1 is
related to ability to deceive, the current study produced inconclusive findings. No past
research has investigated Factor 1 PCL-R scores and simulated emotions. As such,
the current study may contribute to our understanding of simulated empathy.

Offenders level of Factor 1 scores on the PCL-R were correlated with simulation
ability on only two out of nine empathy scales, although three additional scales
approached significance. Interestingly, no pattern emerged with regards to Factor 1
scores correlating with cognitive versus affective measures. For example, of the two
scales (Interpersonal Reactivity Index’s Perspective Taking and the Questionnaire of
Cognitive and Affective Empathy’s Peripheral Responsivity) that were significantly
correlated with offenders’ Factor 1 scores, one measures cognitive empathy and the
other measures affective empathy. In examining the three scales that approached
significance, one scale (QCAE Online Simulation) is a cognitive empathy measure,
while the other two (QCAE Empathic Concern and IRI Empathic Concern) are affective
empathy measures. Thus, it does not appear that offenders’ Factor 1 scores are clearly
more correlated with simulation abilities on cognitive or affective empathy scales.
Interestingly, the two significant correlations and the three scales approaching
significance are from the same two measures: the IRI and QCAE. This finding suggests perhaps these scales are more susceptible to offenders with high Factor 1 scores distorting their responses. Although interesting and informative regarding measures vulnerable to simulation, these results do not confirm or deny the relation between Factor 1 scores and offenders’ abilities to simulate.

Probing further, a Pearson’s $r$ correlation was utilized to examined the relation between Facet 1 scores and simulation abilities (as measured by empathy change scores), but yielded similar results. Although hypothesized that Factor 1 would positively correlate with simulation ability, the results suggest a weak correlation at best. Indeed, predicting offenders’ abilities to deceive has proven difficult, meaning risk assessments are likely to become highly complex endeavors when considering response styles.

Role of Deception in Risk Assessment

Universality of Deception

Deceit, prevalent in most animals, reaches its highest evolutionary development in humans (Ford, 2004). Researchers suggest all humans possess the capacity to lie (Wolk & Henley, 1970), and deception is so common among all persons that it is considered to be a normal part of human development (Goldberg, 1973). In fact, the deception of others and self-deception are believed to be integral parts of human communication (Ford, 2004). According to Ekman (1989), the two primary reasons individuals engage in deception are to gain a reward or avoid some type of punishment. Since all individuals have the capacity to accept rewards and/or receive punishments, everyone is tempted to be deceitful at one time or another.
Mental health professionals, like all persons, are not immune to the temptations of minimizing negative personal attributes or distorting information for unwarranted financial gain. Accurate self-disclosure remains variable in mental health professionals and the general public, with many factors contributing to the decision-making process of whether or not to disclose (Laurenceau, Barrett, & Rovine, 2005). In fact, Bersoff (1999) reported mental health professionals are often not completely forthright about information pertaining to their assessment and treatment methods. Bersoff (1999) suggested that unethical acts can occur with mental health professionals when self-interest causes them to analyze a situation selectively. In other words, mental health professionals engage in deception when the outcome has a direct impact on their lives, paralleling the process of offenders being evaluated for risk. Ironically, the mental health professionals performing risk assessments may hold offenders to a standard they sometimes do not attain for themselves.

Offenders and Deception

Forensic psychologists and psychiatrists rely heavily upon accurate self-disclosure by offenders during crucial forensic evaluations. These professionals commonly ask for complete self-disclosure – often against the self-interest – of the offenders being evaluated. This expectation however, creates a dilemma for offenders. While wanting to appear cooperative with the assessment, they are primarily motivated to pursue the outcome most beneficial for their current circumstances, rather than disclosing potentially damaging information (Novaco, Ramm, & Black, 2005). As such, considering response styles of examinees is integral in all forensic assessment contexts, including risk assessments (Heilbrun, 2001; Rogers & Bender, 2003).
Evaluators, asking examinees to cooperate and be entirely forthright, are holding these individuals to an incredibly high standard.

In considering response styles, many offenders’ choices may be multi-determined and motivating factors should not be overlooked. Given the potentially adversarial nature of the risk assessment and the potential implications of the assessment’s outcome, any level of deceit from impression management to blatant fabrication may be considered adaptive. Rogers (2008) highlights the disparity in goals between forensic evaluators and the examinees, further encouraging these individuals to engage in some type of deception. Akin to the adaptational model of malingering (Rogers, 2008), offenders engaging in concealment of information or distortions of information may be doing so as a rational decision to create a more positive outcome for themselves.

Professional clinical judgment about the accuracy of offenders’ disclosures constitutes an important aspect of the risk assessment process (Webster et al., 1997). In risk assessments, offenders’ current behavior and responses to questions about themselves are considered in combination with other, more static factors, in determining risk. Evaluators likely find these static factors, such as criminal history and arrests, to be generally easier to verify. Conversely, with more dynamic factors, such as offenders’ emotional states, evaluators must rely on their own clinical judgment to determine authenticity. Offenders likely strategically select how to use deceit in answering questions regarding dynamic factors, deciding what may be believable versus what may seem implausible to evaluators. As a result, offenders may specifically target certain factors in an attempt to bias the evaluator in their favor. For example, a male offender
may be fully aware that the evaluator has access to his criminal record (i.e., static factors); however, he may therefore attempt to manipulate the evaluator into believing he is highly remorseful for his unlawful acts via simulating remorse. Certainly, the apparent genuineness of emotions displayed, strongly influences the evaluators’ conceptualization of the examinee.

Offenders’ abilities to successfully use deception during the assessment process have received very little empirical attention. Specifically, psychopathic offenders are believed to be more motivated to deceive than their peers (Petitclerc, Herve, Hare & Spidel, 2000), but little is understood about their actual effectiveness at lying, either to peers or professionals. A few studies report that psychopathic offenders display no significant advantages over their non-psychopathic offender peers (Patrick & Iacono, 1989; Raskin & Hare, 1978) in experimental settings. Yet other research supports the more historical view of psychopathic offenders as innately more successful deceivers (Cooper & Yuille, 2007; Seto & Barbaree, 1999). This controversy may be the result of experimental laboratory findings that are disparate from what professionals have experienced or observed in society. The offenders’ motivations to deceive in a laboratory study (i.e., small monetary compensation) are not comparable to the motivations they experienced during risk assessments (i.e., possible incarceration).

Results from the current study contribute to this debate, as offenders were directly asked to deceive. The current sample included offenders with varying levels of psychopathy, but a universal trend spanning all groups was observed. Offenders were able to effectively simulate empathy, a particular form of social deception, on every
empathy measure administered. As a whole, offenders were able to make themselves look “caring” by increasing their empathy scores.

Despite success increasing their empathy scores, the majority of simulating offenders (60.7%) were accurately classified by the Paulhus Deception Scales (Paulhus, 1998) impression management (IM) scale. This percentage is increased when a lower IM cut score > 60T is utilized; however, specificity is compromised when using this cut score. The importance and potential utility of a measure of validity was highlighted by the PDS’s classification of three individuals as engaging in impression management under genuine instructions. After their identification, these individuals’ genuine empathy scores were examined, and results showed this group produced highly disparate empathy scores from the rest of the sample (see Table C.5). Although all simulators were not detected, the current study’s findings highlight the potential effectiveness of the PDS IM scale coupled with very high empathy scores.

In addressing whether psychopathic individuals are more effective at deceiving than non-psychopathic offenders, the current study yielded a majority of significant differences between offenders classified into the high psychopathy group (PCL-R score > 24) and those classified into the low psychopathy group (PCL-R score < 17), with those in the high group creating larger change scores. These results support the idea that individuals with more psychopathic traits are moderately more effective deceivers, at least when simulating a prosocial emotion such as empathy.

Inmates’ abilities to mask empathy deficits have major implications, given the relation between empathy and offending and the role empathy plays in risk assessments. Possible deception may be difficult to detect using only offenders’ Factor
1 scores, although this may be useful on the two identified measures discussed above. However, results regarding potential effectiveness of validity indicators in categorizing simulators appear encouraging.

Role of Empathy in Risk Assessment

As described in the introduction, research links empathy directly to criminal behavior and violent acts. For example, Blair et al. (2005) found evidence connecting empathy deficits to callous and unemotional behavior, criminality, aggression, and violence. The connection between low empathy and offending has been established in research spanning several disciplines, including criminology. Many criminologists (Burk, 2001; Bush et al., 2000; Hogan, 1969; Marcus & Gray, 1998) postulate those who act antisocially have less empathy than those who act prosocially. Thus, offenders are expected, and have been shown, to exhibit less empathy than non-offending populations. The current study replicated earlier findings to an extent, as offenders generally produced lower empathy scores than individuals in the community (see Table 15 below).
Table 15

Community/College and Offender Samples’ Empathy Scores Compared to Current Sample’s Genuine Empathy Scores

<table>
<thead>
<tr>
<th>Empathy Measures</th>
<th>Community/College</th>
<th>Offender</th>
<th>Current Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>EQ Total&lt;sup&gt;a&lt;/sup&gt;</td>
<td>41.80</td>
<td>11.20</td>
<td>19.80</td>
</tr>
<tr>
<td>QCAE Total&lt;sup&gt;b&lt;/sup&gt;</td>
<td>88.39</td>
<td>13.48</td>
<td>NA</td>
</tr>
<tr>
<td>QCAE Cog</td>
<td>56.12</td>
<td>0.30</td>
<td>NA</td>
</tr>
<tr>
<td>QCAE Aff</td>
<td>32.27</td>
<td>0.50</td>
<td>NA</td>
</tr>
<tr>
<td>IRI Total&lt;sup&gt;c&lt;/sup&gt;</td>
<td>35.82</td>
<td>NA</td>
<td>30.65</td>
</tr>
<tr>
<td>IRI PT</td>
<td>16.78</td>
<td>NA</td>
<td>12.86</td>
</tr>
<tr>
<td>IRI EC</td>
<td>19.04</td>
<td>NA</td>
<td>17.79</td>
</tr>
<tr>
<td>BES Total&lt;sup&gt;d&lt;/sup&gt;</td>
<td>73.79</td>
<td>5.13</td>
<td>69.28</td>
</tr>
<tr>
<td>BES Cog</td>
<td>36.13</td>
<td>4.47</td>
<td>35.85</td>
</tr>
<tr>
<td>BES Aff</td>
<td>37.15</td>
<td>5.79</td>
<td>33.43</td>
</tr>
</tbody>
</table>

Note. For measures, EQ = Empathy Quotient; QCAE = Questionnaire of Cognitive and Affective Empathy; IRI = Interpersonal Reactivity Index; EC = Empathic Concern Subscale; PT = Perspective Taking Subscale; BES = Basic Empathy Scale; NA = data not available. Standard deviations for current study are presented in Table 5.

<sup>a</sup> Community/College: Baron-Cohen & Wheelwright, 2004; Offender: Gery, Mijlkovitch, Berthoz, & Soussignan, 2009
<sup>b</sup> Community/College: Reniers, Corcoran, Drake, Shryane, &Völlm, 2011
<sup>c</sup> Community/College: Davis, 1980; Offender: Rogstad, 2011
<sup>d</sup> Community/College: Sebastian, Fontaine, Bird, Blakemore, DeBrito, McCrory, & Viding, 2012; Offender: Rogstad, 2011
Generally, individuals in the current study classified into the low psychopathy group tended to produce means similar to the community/college samples. For example, the low group produced a mean of 32.40 on the QCAE Affective scale, which is very similar to the average score ($M = 32.27$) of individuals in the college sample. On the IRI EC scale, notice the community sample and the low psychopathy group again produced especially comparable means ($M = 19.04$ and $M = 19.13$, respectively). This finding is expected, as individuals in these community samples are expected to have no to low psychopathic traits. Conversely, empathy scores from other offender populations are comparable to the current sample’s high psychopathy group’s results. Individuals classified in the high psychopathy group produced means similar to those observed in other offender samples. For example, the high psychopathy group on average score 32.06 on the IRI Total, less than two points higher than the offender sample to which it was compared ($M = 30.65$). Again, this was expected due to the increased prevalence of psychopathy in forensic settings. However, for the Empathy Quotient (EQ) Total score, a very large difference emerged ($d = -1.85$) between the offender sample and high psychopathy group. This difference may reflect the different levels of restriction of offenders in the two samples (county jail vs. prison inmates). The current study was the first to administer the QCAE in an offender population; thus, no comparisons can be made to other offender samples on this measure.

Empathy’s role in risk assessment is undoubtedly crucial in predicting an examinee’s propensity to reoffend, given the links between violence and a lack of empathy. Providing an entirely different perspective between violence and empathy,
Hoffman (2000) proposed a theory that relates “empathic distress” to prosocial behavior. He discusses moral issues involving people in some type of distress (pain, danger, etc.), and states that an individual’s ability to empathize with someone else’s distress leads them to engage in prosocial (helping) behaviors. Following this logic, if an individual lacks empathic distress, they may be less inclined to engage prosocially; even further, this could contribute to some antisocial attitudes and callousness. Indeed, in the field of psychology, researchers opine empathy is a basic emotional faculty that allows human connections. Thus, the ability to empathize establishes a relationship between the self and others that may be necessary for one to interact appropriately with other humans (Vetleson, 1994). The current study contributes further support to the notion of a relation between low empathy and offending.

Jolliffe and Farrington (2004) conducted a meta-analysis of empathy measures as related to offending. Their results suggest the relation between low empathy and offending was relatively strong for violent offenders, providing evidence to the claim that empathy serves as a protective factor. Andrade (2009) provides a conceptual link between low empathy and offending by emphasizing the role of empathy in overall moral development of humans. According to his formulation, an individual lacking empathy may ignore the distress of others, allowing the obvious experience of harm to others to be distorted and go unrecognized (Andrade, 2009). Several investigators opine empathy deficits may contribute to an underdeveloped moral conscience (Blair, 2005; Hare, 1991; Lykken, 1995). Specifically, research suggests a lack of conscience stemming from a lack of empathy allows an individual for a higher tolerance of causing harm to others (Blair, 2005; Lykken, 1995).
Actual Empathy Deficits

As noted in the Introduction chapter, several researchers (Hare, 1991; Soderstrom, 2003) failed to make a distinction between types of empathy in the context of psychopathic emotional deficits. Although an empathic deficit in this population is generally recognized, little consideration is provided about specific empathic deficits (cognitive and affective). For example, the most widely used assessment tool measuring psychopathy (Psychopathy Checklist – Revised; PCL-R) includes a single item for empathy. The manual gives examples of behaviors that an individual may engage in if they lack empathy, but it does not distinguish between cognitive and affective empathy. For example, the test manual describes potential behaviors resulting from an individual lacking empathy, stating, “the [examinees’] files may contain reports of callous and sadistic treatment of others. This behavior may be criminal or noncriminal in nature, ranging from emotional or physical abuse of family members to cold-blooded murder” (p. 40). It is unclear whether this description is representative of an individual lacking cognitive, affective, or both types of empathy. While several typical behaviors of an individual lacking empathy are provided, no instructions are offered regarding how to score the item should an individual possess cognitive but not affective empathy.

The lack of differentiation between aspects of empathy has produced a wealth of literature, which posits an overall empathy deficit (including cognitive empathy) in psychopathic individuals. Specifically, several studies examined cognitive empathy and found psychopathic individuals to be impaired. For example, cognitive empathy was found to be moderately negatively correlated ($r = -.41$) with psychopathic traits in a
juvenile sample (Dadds et al., 2009). Additionally, in comparing 25 individuals with psychopathy to 25 controls, Blair et al. (1996) found no differences between the groups on a Theory of Mind task, purported to measure cognitive empathy. Similarly, Blair and Coles (2000) found psychopathic individuals to show impairment in the recognition of vulnerable facial expressions, a skill associated with cognitive empathy.

Other studies suggest no relation, or only a very slight relation, between impaired cognitive empathy and psychopathy. Specifically, researchers have produced findings consistent with only an affective deficit in psychopathic individuals (Blair, 2008; Jones, Happe, Gilbert, Burnett, & Viding, 2010). In fact, Blair (2008) posits cognitive empathy deficits are often small, if observed at all. This is exemplified by results from a study by Mullins-Nelson, Salekin, and Leistico (2006), which found a very small negative correlation ($r = -.08$) between psychopathy and a perspective taking measure (IRI PT). However, in examining their methodology, undergraduate students with psychopathic traits comprised the sample, limiting their generalizability to offenders with higher levels of psychopathic traits. Given the controversy of specific types of empathic deficits in psychopaths, the current study aimed to clarify which deficits actually emerge.

Current results support the hypothesis that psychopathic offenders possess cognitive empathy, yet trends suggest an inverse relation between levels of psychopathic traits and cognitive empathy. For example, the high group produced slightly lower scores on cognitive empathy measures although only one was statistically significant. It suggests that the low and moderate psychopathy groups may possess cognitive empathy to a slightly greater extent than the high group. This trend however, may be strongly influenced by the specific wording on some measures of cognitive
empathy. This potential dilemma is addressed in the subsequent section below regarding the assessment of empathy.

The current sample’s overall cognitive empathy scores were expectedly similar to community/college samples’ cognitive scores (see Table 14). For example, offenders in the current study produced very similar cognitive empathy scores to groups with intact empathy on the QCAE ($M$s = 56.12 and 56.67). This trend is consistent across cognitive measures, as the current sample produced comparable cognitive empathy scores to a college/community sample on the IRI cognitive scale ($M$s = 16.78 and 16.74), and only slightly lower scores on the Basic Empathy Scale (BES) cognitive scale ($M$s = 36.13 and 34.16) than did community/college samples.

Individuals with psychopathy are expected to exhibit affective empathy deficits when compared to community and college samples. The high psychopathy group displayed markedly lower levels of affective empathy than did these comparison groups. For example, the high psychopathy group’s affective empathy scores on the QCAE produced a very large effect size ($d = -1.43$) when compared to college males (Reniers et al. 2011). Likewise, the BES Affective scale and IRI Empathic Concern scale also yielded large to very large differences ($d$’s of -0.85 and -2.14, respectively). Thus, the current study strongly supports the notion that individuals with high levels of psychopathy traits exhibit large affective empathy deficits.

The high psychopathy group consistently scored the lowest of any group on these affective empathy measures, similar to the trend observed for cognitive empathy. This pattern suggests individuals with higher psychopathy scores may possess less affective empathy than others. As expected, the largest differences are observed
between the low and high psychopathy groups. Surprisingly, the only statistically significant difference between groups was between the moderate and high groups, which may reflect a lack of power due to small sample size. Again, the high psychopathy group appears distinct from other groups on measures of affective empathy.

Conceptually, offenders with high levels of psychopathy are thought to truly embody the callous characteristics Hare (1991, 2003). The implications of lacking affective empathy are likely recognized in the violent acts committed against these offenders' victims. Overall, the current study provides results support Lorenz and Newman’s (2002) “emotion paradox,” which suggests psychopathic individuals possess cognitive empathy but lack affective empathy. The adage by Johns and Quay (1962) that, “Psychopath’s know the words but not the music” is bolstered by the current study’s findings (p. 217).

Clearly, an individual’s ability to understand another person’s experience (cognitive empathy) and feel compassion for them (affective empathy) is a strong protective factor against victimization (Hare, 1991). Thus, the formal or informal assessment of empathy is a crucial component to assessing an offender’s potential for future violence. However, several issues arise in the assessment of empathy with psychopathic offenders. Specifically, the possibility of offenders simulating empathy must be considered. The current study is the first to empirically examine offenders’ abilities to simulate empathy; however, other researchers in the medical field have considered empathy simulation in populations with motivations to appear empathic.

Simulated Empathy
In the medical field, Hemmerdinger, Stoddart, and Lilford (2007) stressed the importance of empathy for physicians working effectively with patients. Specifically, these medical researchers express a need to assess empathy in medical students and post-graduates, as well as prior to their admittance into medical school. The authors discuss the possibility of the simulation of empathy when the results of the test have potential to affect a person’s life chances (e.g., getting accepted into medical school). They further call for an empathy measure “highly resistant to faking” (Hemmerdinger et al., 2007, p. 6).

In comparing the context of medical school admittance to potential incarceration (or release from incarceration), both groups may be highly motivated to simulate empathy. Empathy simulation may occur at a high rate or at a high intensity in these two populations, therefore increasing the need for valid empathy measures not at risk for undetected simulation.

Examination of offenders’ abilities to simulate empathy is critical in understanding if or how deficits are masked. Research indicates psychopathic offenders engage in deceit across multiple settings (Seto et al., 1997) and their ability to use deception remains a core characteristic of the syndrome (Hare, 1991, 2003). Results regarding simulated empathy are understood in the context of psychopathic offenders’ motivations and propensity to deceive others in combination with face-valid empathy measures.

The current study examined the degree to which psychopathic offenders can simulate empathy. Research indicates impression on personality tests can occur (Alliger & Dwight, 2000; Ellingson, Sackett, & Hough, 1999; Viswesvaran & Ones, 1999) even when measures are taken to reduce faking (Heggestad, Morrison, & Reeve,
The measurement of emotional abilities, such as empathy, is highly vulnerable to biased responding as well. Empathy, perhaps more so than general personality measures, are highly susceptible due to the lack of validity indicators on empathy instruments. However, this is the first study to empirically investigate the simulation of empathy.

Offenders had no difficulty increasing their cognitive and affective empathy scores to levels observed in the community. Offenders produced very large effect sizes (e.g., $d_s = 1.04, 1.12, \text{ and } 1.14$) indicating empathy simulation was easily achieved. As noted, these offenders increased their empathy scores to a level higher than that observed in populations with presumably intact empathy (see Table 16 below for comparisons). This finding is not surprising, given the face validity of the measures; however, results may inform the future development of empathy simulation scales in reducing the transparency of items and identifying responders simulated empathy to a degree typically not found in genuine responders.
Table 16

Community/College and Offender Samples' Empathy Scores Compared to Current Sample's Simulated Empathy Scores

<table>
<thead>
<tr>
<th>Empathy Measures</th>
<th>Community/College</th>
<th>Offender</th>
<th>Low</th>
<th>Moderate</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>EQ Total</td>
<td>41.80</td>
<td>11.20</td>
<td>19.80</td>
<td>5.39</td>
<td>45.87</td>
</tr>
<tr>
<td>QCAE Total</td>
<td>88.39</td>
<td>13.48</td>
<td>NA</td>
<td>NA</td>
<td>93.79</td>
</tr>
<tr>
<td>QCAE Cog</td>
<td>56.12</td>
<td>0.30</td>
<td>NA</td>
<td>NA</td>
<td>60.43</td>
</tr>
<tr>
<td>QCAE Aff</td>
<td>32.27</td>
<td>0.50</td>
<td>NA</td>
<td>NA</td>
<td>33.73</td>
</tr>
<tr>
<td>IRI Total</td>
<td>35.82</td>
<td>NA</td>
<td>30.65</td>
<td>10.70</td>
<td>39.73</td>
</tr>
<tr>
<td>IRI PT</td>
<td>16.78</td>
<td>NA</td>
<td>12.86</td>
<td>4.61</td>
<td>20.67</td>
</tr>
<tr>
<td>BES Total</td>
<td>73.79</td>
<td>9.80</td>
<td>69.28</td>
<td>7.28</td>
<td>76.07</td>
</tr>
<tr>
<td>BES Cog</td>
<td>36.13</td>
<td>5.10</td>
<td>35.85</td>
<td>4.08</td>
<td>36.33</td>
</tr>
<tr>
<td>BES Aff</td>
<td>37.15</td>
<td>6.50</td>
<td>33.43</td>
<td>6.70</td>
<td>39.73</td>
</tr>
</tbody>
</table>

Note. For measures, EQ = Empathy Quotient; QCAE = Questionnaire of Cognitive and Affective Empathy; IRI = Interpersonal Reactivity Index; EC = Empathic Concern Subscale; PT = Perspective Taking Subscale; BES = Basic Empathy Scale; NA = data not available.

a Community/College: Baron-Cohen & Wheelwright, 2004; Offender: Gery, Miljkovitch, Berthoz, & Soussignan, 2009
b Community/College: Reniers, Corcoran, Drake, Shryane, & Völlm, 2011
c Community/College: Davis, 1980; Offender: Rogstad, 2011
Regarding their abilities to simulate, the high psychopathy group produced more large effect sizes (large \(d\)'s ranging from 0.87 to 1.41) than the low or moderate psychopathy groups (see Tables C.2, C.3, and C.4 for specific group effect sizes). Two explanations may account for this finding. First, offenders with higher Total PCL-R scores are presumed to possess a greater propensity for deception and would likely therefore be highly successful at simulating empathy. In short, this group produced the largest mean differences as a result of their highly developed deception skills. The second explanation is considering a basic advantage of the high psychopathy group. With the lowest scores under genuine instructions, they had the greatest opportunities to change their scores from the genuine to simulation condition. Although the high psychopathy group had the greatest range for change, the low psychopathy group’s genuine scores were at a range that allowed them to increase their scores significantly (see Table C.6 for highest possible empathy scores).

Interestingly, a small group of offenders \((n = 16)\) were apparently unable to simulate, as measured by their overall change scores \((\leq 6)\). In examining their genuine empathy scores, these individuals scored similarly to other participants, but were unable to increase their scores. Two primary hypotheses could account for this apparent inability to simulate. First, these individuals may have truly been unable to simulate empathy purely because they lacked an adequate understanding of how to be empathic. An individual cannot mimic or simulate empathy unless they first understand the concept. These individuals would truly exhibit a complete lack of cognitive empathy. As a competing hypothesis, their inability to increase their empathy scores could also
reflect inadequate effort; however, all offenders in this group successfully passed the manipulation check, making this second hypothesis unlikely.

In contrast, fifteen “super simulators” produced extreme change scores (overall change scores $\geq 60$), indicating an ability to dramatically simulate empathy. Their results may suggest these individuals are extremely adept in their understanding of empathy, allowing them to simulate empathy to a greater extent. Ancillary data analyses showed the two groups did not differ significantly from one another, or the rest of the non-extreme sample, with regard to their cognitive or affective empathy scores under genuine conditions.

Examining these outliers’ scores from a different perspective, the extreme groups’ psychopathy scores were compared in pursuit of finding a distinguishing factor of these groups. Given the purported deception abilities of psychopathic individuals, one explanation for these extreme offenders may be that the “super simulators” have more psychopathic traits. In comparing these group’s means to each other, they were highly similar, suggesting psychopathic traits were not related to non – or super simulators’ responses. Therefore, the current study cannot offer an explanation for these extreme groups with regard to their simulation abilities.

More generally, neither Factor nor Facet 1 scores on the PCL-R predicted offenders’ abilities to simulate. This is surprising, given that Factor and Facet 1 measure manipulation and pathological lying (Hare, 1991, 2003), which was hypothesized to be related to deception abilities. Additionally, offenders’ confidence of simulation abilities did not predict their change scores. Moreover, if a highly validated standardized semi-structured interview and offenders’ perceptions of their own abilities
neither accurately predict offender simulation, this type of prediction appears highly complex and should be taken into consideration by forensic psychologists. This is discussed further in the Professional Implications section below.

Empathy as Anger

Hoffman (1989) posited a somewhat provocative theory regarding “empathic anger,” suggesting an individual may experience anger as an affective empathy response toward a “transgressor” causing another person to suffer. Empathy expressed as anger is an interesting concept to examine in psychopathic individuals with empathic deficits. Perhaps these individuals’ affective deficits are only present when the affective response being measured is sadness. This potential affective aspect of empathy has not been empirically investigated in a population with empathy deficits. Therefore, a supplementary research question in the current study addressed this gap in the literature by measuring offenders’ responses to items assessing empathy as an anger response on behalf of others.

Comparisons cannot be made with other offender or psychopathic populations with regards to empathy as anger; however, scores can be compared to a sample of undergraduate students on whom the Trait Empathic Anger (TEA) scale was developed. In a sample of 50 undergraduate male students, a mean score of 23.87 was produced (Vitaglione & Barnett, 2003). In comparing this to the current sample’s mean of 22.98, the similar scores suggest no empathy deficits exists with regard to empathy measured as an affective anger response.

In comparing psychopathy groups’ scores on the Trait Empathic Anger scale, results suggest levels of empathy as anger are similar in offenders with varying levels of
psychopathic traits. In other words, individuals in the high psychopathy group scored comparably with those in the low and moderate psychopathy groups. In inspecting offenders’ anger empathy scores under simulation instructions, the high psychopathy group increased their scores more than other groups (change score of 5.32 for high, 1.34 for moderate, and 2.60 for low).

One possible reason for these results may be due to the precise wording of the instructions. Specifically, when instructed to look “like a caring person,” offenders in the low and moderate psychopathy groups may have felt appearing angry would be contrary to their goal. In other words, these individuals may have viewed anger as mutually exclusive with caring. In contrast, the offenders in the high psychopathy group may have perceived showing anger on behalf of another as a caring response. Regardless of the motivation or reasoning for increasing their empathy scores, inmates were able to successfully simulate on this measure just as they did on the other empathy measures.

Without self-report empathy measures for offender populations currently available, forensic evaluators may need to rely on more interview-based assessments to determine an inmate’s empathy. As an alternative to self-report measures of empathy, offenders may be assessed using validated measures for other clinical syndromes or disorders associated with a lack of empathy. The current study utilized this approach by administering the PCL-R to all offenders. Item 8 on the PCL-R was rated for every offender by researchers based on information gleaned from the interview. Surprisingly, this item was not significantly correlated with any measures of empathy given under genuine instructions. This finding was unexpected and may either
be due to researcher’s inability to accurately assess offenders’ empathy levels, or it could be a result of empathy measures’ inaccuracies. The latter of these two is discussed in more detail below.

Problems in Assessing Empathy

A disconnect exists between the importance placed on assessing empathy in offenders in the literature and the scarce availability of reliable and valid empathy measures for risk assessments. Jolliffe and Farrington (2004) discuss current difficulties with available empathy measures as applied to offender populations. Questions have been raised regarding the efficacy of several empathy measures including the QMEE (Questionnaire Measure of Emotional Empathy). Possible problems include items measuring sympathetic emotions rather than concordant emotional reactions (Hoppe & Singer, 1976). The IRI, a measure administered in the current study, has also been criticized for this same problem (Jolliffe & Farrington, 2004). Further critiques include validation on undergraduate university students, which calls into question their usefulness when assessing empathy in offender populations.

The current study highlighted previously unnoted weakness of three (QCAE, BES, and EQ) empathy measures. The results of the current study may have been influenced by the specific wording of some of the empathy items. Specifically, items that intend to measure an individual’s cognitive empathy abilities, may in fact, be measuring the individual’s preference for utilizing cognitive empathy. For example, the item “I try to look at everybody’s side of a disagreement before I make a decision.” (QCAE, Item 4) asks directly what they do, not what they could do if they so chose. In
essence, the high psychopathy group may not truly lack cognitive empathy, but rather may not demonstrate using this ability to the degree the other groups do.

Regarding cognitive empathy, Glannon (2008) postulated a theory in the context of moral responsibility that may explain the difference between true empathic deficits versus conscious decisions to ignore another’s suffering. He argues that even if some level of “cognitive empathy deficits” (as measured by self-report) exists in psychopathic individuals, they do not lack the capacity to respond to moral reasoning and conform their behavior. In other words, the mere existence of an individual’s ability to take others’ perspectives and understand the emotional states of others does not imply this ability will be exercised. This observation has profound implications for the current study. If the cognitive empathy measures administered in the current study only assess offenders’ preferences for or use of cognitive empathy, rather than their actual ability to engage in cognitive empathy, these findings of the study are confounded and the cognitive empathy measures are fundamentally flawed.

Perhaps the most critical problem with current empathy measures is the transparency of face valid instruments. The current study highlights this weakness, as offenders were able to simulate empathy on face valid measures. Face validity refers to the extent to which a test appears to assess the construct of interest (Anastasi, 1988). At present, empathy instruments appear highly face valid; for example, the EQ (used in the current study) contains the following questions: “I really enjoy caring for other people.” and “I tend to get emotionally involved with a friend’s problems.” (Baron-Cohen & Wheelwright, 2004; Items 6 and 59, respectively). Reverse coded items similarly show face validity: “Seeing people cry doesn’t really upset me.” (Item 32). Given the
face validity of empathy measures and offenders’ possible selection to deceptively
target dynamic factors such as empathy, these measures appear at extreme risk for
intentional distortion.

Importantly, none of these face-valid self-report empathy measures include
validity indicators, leaving them susceptible to simulated empathy, as evidenced by the
current findings. Until empathy measures effective at discriminating sincere versus
simulated empathy are developed, evaluators will continue to be vulnerable to offenders
“faking” empathy. Just as medical researchers (Hemmerdinger et al., 2007) call for
empathy measures that are unable to be simulated, so should forensic psychologist,
as the stakes are much greater for the outcome of their risk assessments.

Professional Implications

Findings from the current study suggest empathy measures are highly
susceptible to impression management. Due to the relation between empathy and
offending, assessing an individual’s ability to understand and connect with another
person’s emotional experience is a crucial component of risk assessments. Forensic
evaluators need to be acutely aware of how offenders may distort their true empathy
levels when motivated to do so. In addition to implications for those conducting risk
assessments, other professionals may also find it beneficial to be alert to the possibility
of simulated empathy.

Empathy and deception intersect with offenders in correctional empathy training
and programming. Many facilities offer empathy training, as a way to increase
offenders’ appreciation for others (primarily the offenders’ victims). For example, a
common treatment for offenders follows a treatment of empathy deficit plan that
parallel’s Marshall, Hudson, Jones, and Fernandez’s (1995) stages of empathy model. The model contains two stages for increasing cognitive empathy and two stages aimed at increasing affective empathy and appropriate responses.

According to the four-step model, the first step of treatment involves emotional recognition, where inmates are taught to recognize emotions in themselves and others via exposure to Ekman faces (Ekman & Frisen, 1976). At the second step, offenders practice perspective taking. Perspective taking is accomplished via offenders examining the perspectives of the correctional staff, their spouses, and other inmates. After these two cognitive empathy training steps have been adequately demonstrated by offenders, the focus shifts to their affective empathy. In the third step, offenders are modeled appropriate emotional responses and educated regarding emotional self-regulation. As the fourth and final step, offenders are challenged to ease the suffering of others while maintaining appropriate interpersonal boundaries.

Empathy training is encouraged, and at times required, for some offenders, such as sex offenders. As such, several treatment programs have been designed to target deficiencies in empathic abilities (Hudson, Marshal, Ward, Johnson, & Jones, 1995; Ward, Keenan, & Hudson 2000). In some instances, inmates need to display a certain level of empathy to complete this empathy training. If empathy can be simulated during this training however, the true effectiveness of these efforts is brought into question. In this respect, multiple negative consequences are possible. For example, offenders likely never actually gain empathy and may therefore continue to harm others. Additionally, the professional resources required to facilitate empathy programming in correctional institutions is used poorly, in that other areas that could potentially benefit
from these resources do not. Another area of concern, highlighted by researchers, is the possibility that these training programs may teach offenders to be more successful simulators (Wastell, Cairns, & Haywood, 2009), rather than promoting actual changes in empathy.

Limitations

The current study was implemented as an initial investigation of the abilities of offenders to simulate empathy. Despite its strengths, the researcher acknowledges three major limitations of the current study. First, the researcher is very appreciative of Tarrant County Jail and its cooperation with data collection. Because of their institutional policies, the study did not have access to full criminal histories. Nonetheless, felony arrests were verified via electronic inmate categorization. Background checks were later performed using a nationwide criminal database. Despite these efforts, no data were available regarding institutional problems and their potential effects on PCL-R ratings.

A second limitation involved the external validity of the study’s findings. In forensic practice, the measurement of empathy relies mostly on self-report measures and clinical observations. Although commonly used, these self-report questionnaires are – by their nature – limited with respect to external validity. While possession of empathy may be a prerequisite to helping behavior (Iannotti, 1975; Shantz, 1975), the behavior itself is of the most importance. It is assumed that offenders act prosocially, rather than antisocially, if their scores reflect adequate levels of cognitive and affective empathy, and vice versa. For instance, if an offender’s scores reflect someone with adequate levels of cognitive and affective empathy, we can only assume this individual
will act prosocially, rather than antisocially. However, the current study did not directly measure empathic behavior or outcome, as the project aimed to simulate an authentic risk assessment which relies on self-report.

Thirdly, the current investigation was restricted to male offenders, because the PCL-R was normed on and has been heavily researched in male populations. Further, gender differences with respect to empathy are not well understood; for example, a lower empathy score for a female may still be higher than a male empathy score, meaning empathy “deficits” have not been established for female populations. Primarily, research findings on predominantly male samples do not bear directly on the female offender populations. Research (Rogstad, 2011) focused on general empathy deficits in female offenders with psychopathy and antisocial personality disorder revealed conflicting empathy trends across genders. Rogstad (2011) found females producing higher affective empathy scores than cognitive empathy scores, while the opposite trend was observed for their male counterparts.

Future Directions

The current study’s findings highlight several underdeveloped areas of research on simulation and cognitive and affective empathy deficits. Some limitations of the current study could easily be addressed in future research. For example, future research may examine levels of empathy and simulation of empathy in a female offender population, and include access full criminal records and files on all participants. Beyond these, this study highlights the need for the development of valid empathy measures.
Currently, empathy measures are highly vulnerable to response styles. As a result, simulation of empathy is easily accomplished. However, the development of empathy measures that include empathy simulation indicators may reduce this type of undetected deception. One approach to the development of such measures would be to make the items with balanced desirability, which are less face valid. Other psychological measures, such as the Structured Interview for Diagnostic Statistical Manual (DSM-IV) Personality (SIDP-IV; Pfohl, Blum, & Zimmerman, 1994) have had success with this approach, discouraging responders to choose the “right” answer. As an alternative approach, empirical criterion keying could be used in the development of empathy measures. Items could be eliminated or included based on their ability to discriminate between genuine responders and those simulating. A known-groups design methodology could be utilized for this approach.

Development of empathy measures that assess the behavioral responses to empathic experiences would provide information regarding the outcome of these experiences. This research would be informative in that comparisons could be made between those who act prosocially, antisocially, or who choose not to act. Currently, no measures exist with the capability to answer questions regarding behaviors resulting from empathy. Until their development, investigators may choose to examine empathy-driven behaviors through research methodology using a specified behavior as the dependent variable.

The conceptualization of empathy may need to be broadened to include other potential facets of empathy, such as empathy experienced as an anger response. Investigators may examine what empathy-influenced behaviors may result from an
empathic anger response. In the current study, empathy was highlighted as a protective factor; however, empathy expressed as an anger response may actually lead to victimization of an individual on the behalf of someone else with whom the aggressor empathized. If investigated empirically, findings have potential to revolutionize how empathy is understood with regards to risk.

Lastly, the treatment amenability and recidivism of offenders with empathic deficits deserves empirical attention. Recidivism studies may focus on which specific empathy components (cognitive versus affective) are “treatable” in psychopathic offenders. Research projects offering either cognitive or affective empathy training to offenders could assess both short and long term effects and success rates (via recidivism statistics) of such programs.
APPENDIX A

University of North Texas Institutional Review Board

Informed Consent Form
Before agreeing to participate in this research study, it is important that you read and understand the following explanation of the purpose, benefits and risks of the study and how it will be conducted.

Title of Study: Intentional Minimization: The Ability of Offenders with Psychopathic Traits to Minimize Their Level of Risk and Psychopathy

Investigator: Richard Rogers, PhD, University of North Texas (UNT) Department of Psychology.

Key Personnel: N. Gillard and K. Kelsey, UNT Department of Psychology

Purpose of the Study: You are being asked to participate in a research study which involves certain personality traits and your ability to be deceptive when answering questions. The study will look at the relationship between the personality traits and successful deception.

Study Procedures: You will be asked a series of interview questions and fill out a number of short questionnaires about personality traits that cause trouble for some people. These are standard questions that are often asked of people that are in court or jail. The study will take about two hours of your time, but may take slightly longer depending on your answers.

Foreseeable Risks: There are no known risks to completing these questions. You will be asked about your past history of violence and about some psychological problems, which may be stressful to think about. If you feel distress or wish to stop your participation in this study for any reason, you are free to stop at any time.
Benefits to the Subjects or Others: This study is not expected to be of any direct benefit to you, although it may provide you with some knowledge about the way you behave. The study may benefit the field of psychology. The study is expected to explain the connection between certain personality traits and lying.

Compensation for Participants: None. Participation will be on a strict voluntary basis as facility guidelines stipulate.

Procedures for Maintaining Confidentiality of Research Records: Information about your identity will not be recorded on research materials. We will use a random number to identify your surveys so we know that they all belong to the same person. During the interview portion of this study, efforts to protect your privacy will consist of recording general, not specific, details. This consent form will be kept separate from all research materials. All data will be stored in a securely locked research room at the University of North Texas.

Questions about the Study: If you have any questions about the study, you may contact Richard Rogers at (940) 565-2671.

Review for the Protection of Participants: This research study has been reviewed and approved by the UNT Institutional Review Board (IRB). The UNT IRB can be contacted at (940) 565-3940 with any questions regarding the rights of research subjects.

Research Participants’ Rights:
Your signature below indicates that you have read or have had read to you all of the above and that you confirm all of the following:
A researcher has explained the study to you and answered all of your questions. You have been told the possible benefits and the potential risks and/or discomforts of the study.

You understand that you do not have to take part in this study, and your refusal to participate or your decision to withdraw will involve no penalty or loss of rights or benefits. The study personnel may choose to stop your participation at any time.

You understand why the study is being conducted and how it will be performed.

You understand your rights as a research participant and you voluntarily consent to participate in this study.

You have been told you will receive a copy of this form.

____________________________________
Printed Name of Participant

____________________________________                              ____________
Signature of Participant                                      Date

For the Investigator or Designee:

I certify that I have reviewed the contents of this form with the subject signing above. I have explained the possible benefits and the potential risks and/or discomforts of the study. It is my opinion that the participant understood the explanation.

____________________________________                              ____________
Signature of Investigator or Designee    Date
APPENDIX B

Measures and Subscales Guide

Questionnaire of Cognitive and Affective Empathy (QCAE)
- Cognitive Subscale – Perspective Taking (PT)
  - Intuitively putting oneself in another person’s shoes to see things from his or her perspective.
  - Sample Item: “I can easily work out what another person might want to talk about.”

- Cognitive Subscale – Online Simulation (OS)
  - An effortful attempt to put oneself in another person’s position by imagining what the person is feeling.
  - Sample Item: “Before criticizing somebody, I try to imagine how I would feel if I was in their place.”

- Affective Subscale – Emotion Contagion (EC)
  - Automatic mirroring of the feelings of others.
  - Sample Item: “I am happy when I am with a cheerful group and sad when the others are glum.”

- Affective Subscale – Proximal Responsitivity (PrR)
  - Responsiveness aspect of empathic behavior illustrated by the affective response when witnessing the mood of others in a close social context.
  - Sample Item: “I often get emotionally involved with my friends’ problems.”

- Affective Subscale – Peripheral Responsitivity (ReR)
  - Responsiveness aspect of empathic behavior illustrated by the affective response when witnessing the mood of others in a detached context.
  - Sample Item: “I usually stay emotionally detached when watching a film.”
Interpersonal Reactivity Index (IRI)

- Perspective Taking Scale – Cognitive Empathy
  - Sample Item: “I try to look at everybody’s side of a disagreement before I make a decision.”

- Empathic Concern Scale – Affective Empathy
  - Sample Item: “I often have tender, concerned feelings for people less fortunate than me.”

Basic Empathy Scale (BES)

- Cognitive Empathy Scale – Measures comprehension of others’ emotional states
  - Sample Item: “I find it hard to know when my friends are frightened.”

- Affective Empathy Scale – Assesses the extent of an individual’s experience of others’ emotional states
  - Sample Item: “My friends’ emotions don’t affect me much.”
APPENDIX C

Tables C.1, C.2, C.3, C.4, C.5, and C.6

Table C.1

Participants’ Current Criminal Charges
### Psychopathy Groups

<table>
<thead>
<tr>
<th>Offense</th>
<th>Low</th>
<th>Moderate</th>
<th>High</th>
<th>$\chi^2$</th>
<th>df</th>
<th>p$^b$</th>
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<tbody>
<tr>
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<td></td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>Robbery</td>
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<td>2</td>
<td>4</td>
<td>5.39</td>
<td>6</td>
<td>.43</td>
</tr>
<tr>
<td>Assault</td>
<td>1</td>
<td>2</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Murder/Attempted Murder</td>
<td>1</td>
<td>3</td>
<td>5</td>
<td></td>
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</tr>
<tr>
<td>Kidnapping</td>
<td>0</td>
<td>0</td>
<td>1</td>
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<tr>
<td>Sexual Assault</td>
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<td>1</td>
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</tr>
<tr>
<td>Robbery</td>
<td>1</td>
<td>2</td>
<td>4</td>
<td>5.39</td>
<td>6</td>
<td>.43</td>
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<tr>
<td>Assault</td>
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<td>3</td>
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<tr>
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<td>1</td>
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<td></td>
<td></td>
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<tr>
<td>Sexual Assault</td>
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<td>1</td>
<td>1</td>
<td></td>
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<tr>
<td>Property Offenses</td>
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<td>2</td>
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<td>Substance Related Offenses</td>
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<td>Drug Possession</td>
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<td>1</td>
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<td>.71</td>
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<td>Drug Distribution</td>
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<td>0</td>
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<td>DWI</td>
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<td>1</td>
<td>0</td>
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<tr>
<td>Violations</td>
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<td>Parole Violation</td>
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<td>3</td>
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<tr>
<td>Miscellaneous $^a$</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>3.21</td>
<td>2</td>
<td>.20</td>
</tr>
</tbody>
</table>

Note. Regarding psychopathy groups, Low = PCL-R < 17 ($n = 15$); Moderate = PCL-R 17-24 ($n = 32$); High = PCL-R >24 ($n = 34$). Power for these analyses was limited by some cells having fewer than 5 observed cases.

$^a$ Miscellaneous crimes included everything not encompassed by the other categories, such as failure to stop and render aid, online solicitation of a minor, and deadly conduct.

$^b$ Using Bonferroni correction of $\alpha/n$, or .05/5, $p$ required for significance is .01.

Table C.2
### Differences on Cognitive and Affective Empathy Measures Between Genuine and Simulated Conditions for Low Psychopathy Group

<table>
<thead>
<tr>
<th>Low Psychopathy (n = 15)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Genuine</strong></td>
</tr>
<tr>
<td><strong>Cognitive Empathy</strong></td>
</tr>
<tr>
<td>QCAE – Online Simulation</td>
</tr>
<tr>
<td>QCAE – Perspective Taking</td>
</tr>
<tr>
<td>IRI – Perspective Taking Scale</td>
</tr>
<tr>
<td>BES – Cognitive Subscale</td>
</tr>
<tr>
<td><strong>Affective Empathy</strong></td>
</tr>
<tr>
<td>QCAE – Proximal Responsivity</td>
</tr>
<tr>
<td>QCAE – Peripheral Responsivity</td>
</tr>
<tr>
<td>QCAE – Emotion Contagion</td>
</tr>
<tr>
<td>IRI – Empathic Concern Scale</td>
</tr>
<tr>
<td>BES – Affective Subscale</td>
</tr>
</tbody>
</table>

**Note.** QCAE = Questionnaire of Cognitive and Affective Empathy; BES = Basic Empathy Scale; IRI = Interpersonal Reactivity Index. One-tailed approach was utilized due to the directional nature of this hypothesis.

<sup>a</sup> Using Bonferroni correction of α/n, or .05/9, p required for significance is .01.

<sup>b</sup> Positive d’s indicate the simulation mean is larger than the genuine mean for that measure. Negative (-) d’s indicate the genuine mean is larger than the simulation mean for that measure.
**Differences on Cognitive and Affective Empathy Measures Between Genuine and Simulated Conditions for Moderate Psychopathy Group**

<table>
<thead>
<tr>
<th></th>
<th>Moderate Psychopathy (n = 32)</th>
<th></th>
<th></th>
<th>t</th>
<th>p&lt;sup&gt;a&lt;/sup&gt;</th>
<th>d&lt;sup&gt;b&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Genuine</td>
<td>Simulation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cognitive Empathy</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>QCAE – Online Simulation</td>
<td>26.72</td>
<td>4.67</td>
<td>31.16</td>
<td>3.00</td>
<td>-5.03</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>QCAE – Perspective Taking</td>
<td>29.91</td>
<td>5.27</td>
<td>32.53</td>
<td>3.88</td>
<td>-2.86</td>
<td>.01</td>
</tr>
<tr>
<td>IRI – Perspective Taking</td>
<td>17.81</td>
<td>4.87</td>
<td>22.28</td>
<td>4.12</td>
<td>-4.76</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>BES – Cognitive Subscale</td>
<td>34.22</td>
<td>3.25</td>
<td>36.03</td>
<td>4.75</td>
<td>-2.22</td>
<td>.03</td>
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<tr>
<td>Affective Empathy</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>QCAE – Proximal Responsivity</td>
<td>10.97</td>
<td>2.58</td>
<td>12.53</td>
<td>2.23</td>
<td>-2.71</td>
<td>.01</td>
</tr>
<tr>
<td>QCAE – Peripheral Responsivity</td>
<td>9.69</td>
<td>2.58</td>
<td>10.81</td>
<td>2.82</td>
<td>-1.92</td>
<td>.06</td>
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<tr>
<td>QCAE – Emotion Contagion</td>
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<td>2.78</td>
<td>10.31</td>
<td>3.01</td>
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<tr>
<td>IRI – Empathic Concern</td>
<td>18.66</td>
<td>3.78</td>
<td>19.72</td>
<td>4.08</td>
<td>-1.15</td>
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<tr>
<td>BES – Affective Subscale</td>
<td>35.50</td>
<td>5.26</td>
<td>40.13</td>
<td>7.96</td>
<td>-2.99</td>
<td>.01</td>
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</table>

**Note.** QCAE = Questionnaire of Cognitive and Affective Empathy; BES = Basic Empathy Scale; IRI = Interpersonal Reactivity Index. One-tailed approach was utilized due to the directional nature of this hypothesis.

<sup>a</sup> Using Bonferroni correction of α/n, or .05/9, p required for significance is .01.

<sup>b</sup> Positive d’s indicate the simulation mean is larger than the genuine mean for that measure.

Negative (-) d’s indicate the genuine mean is larger than the simulation mean for that measure.
## Conditions for High Psychopathy Group

### High Psychopathy (n = 34)

<table>
<thead>
<tr>
<th></th>
<th>Genuine</th>
<th>Simulation</th>
<th>M</th>
<th>SD</th>
<th>M</th>
<th>SD</th>
<th>t</th>
<th>p^a</th>
<th>d^b</th>
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</thead>
<tbody>
<tr>
<td>Cognitive Empathy</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>QCAE – Online Simulation</td>
<td>23.97</td>
<td>5.81</td>
<td>31.15</td>
<td>4.53</td>
<td>-6.36</td>
<td>&lt;.001</td>
<td>1.38</td>
<td></td>
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<tr>
<td>QCAE – Perspective Taking</td>
<td>32.03</td>
<td>4.46</td>
<td>32.77</td>
<td>5.32</td>
<td>-0.62</td>
<td>.54</td>
<td>0.15</td>
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<td>IRI – Perspective Taking</td>
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<td>22.59</td>
<td>3.67</td>
<td>-6.19</td>
<td>&lt;.001</td>
<td>1.55</td>
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</tr>
<tr>
<td>BES – Cognitive Subscale</td>
<td>33.94</td>
<td>4.40</td>
<td>36.32</td>
<td>4.51</td>
<td>-2.21</td>
<td>.04</td>
<td>0.53</td>
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<td></td>
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<tr>
<td>Affective Empathy</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>QCAE – Proximal Responsivity</td>
<td>10.44</td>
<td>3.43</td>
<td>13.03</td>
<td>2.47</td>
<td>-4.66</td>
<td>&lt;.001</td>
<td>0.87</td>
<td></td>
<td></td>
</tr>
<tr>
<td>QCAE – Peripheral Responsivity</td>
<td>9.85</td>
<td>2.40</td>
<td>10.74</td>
<td>1.46</td>
<td>-1.59</td>
<td>.12</td>
<td>0.45</td>
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<tr>
<td>QCAE – Emotion Contagion</td>
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<td>11.38</td>
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<td>.003</td>
<td>0.71</td>
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<td>IRI – Empathic Concern</td>
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<td>1.41</td>
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</tbody>
</table>

*Note.* QCAE = Questionnaire of Cognitive and Affective Empathy; BES = Basic Empathy Scale; IRI = Interpersonal Reactivity Index. One-tailed approach was utilized due to the directional nature of this hypothesis.

^a^ Using Bonferroni correction of α/n, or .05/9, p required for significance is .01.

^b^ Positive d's indicate the simulation mean is larger than the genuine mean for that measure. Negative (-) d's indicate the genuine mean is larger than the simulation mean for that measure.
Table C.5

*Total Sample Genuine Means Compared to Offenders Exceeding Paulhus' Impression Management Cut-Score*

<table>
<thead>
<tr>
<th>Empathy Measure</th>
<th>Total Sample (n = 81)</th>
<th>Impression Management (n = 3)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$M$</td>
<td>$SD$</td>
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<tr>
<td>EQ Total</td>
<td>35.99</td>
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<tr>
<td>QCAE Total</td>
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<td>IRI Total</td>
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<tr>
<td>BES Total</td>
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<td>7.60</td>
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</table>

*Note.* EQ = Empathy Quotient; QCAE = Questionnaire of Cognitive and Affective Empathy; BES = Basic Empathy Scale; IRI = Interpersonal Reactivity Index; EC = Empathic Concern Subscale and PT = Perspective Taking Subscale.
## Highest Possible Scores on Empathy Measures

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<thead>
<tr>
<th>Measure</th>
<th>Total</th>
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<td>Empathy Quotient Total</td>
<td>80</td>
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<tr>
<td>Questionnaire of Cognitive and Affective Empathy Total</td>
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<td>QCAE Cognitive Scale</td>
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<td>QCAE Affective Scale</td>
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<td>Interpersonal Reactivity Index Total</td>
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<td>IRI Cognitive Scale (Perspective Taking)</td>
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<td>IRI Affective Scale (Empathic Concern)</td>
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<td>BES Affective Scale</td>
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REFERENCES


doi:10.1192/bjp.bp.105.018150


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