

DENIAL OF RISK: THE EFFECTS OF INTENTIONAL MINIMIZATION ON RISK
ASSESSMENTS FOR PSYCHOPATHIC AND NONPSYCHOPATHIC OFFENDERS

Nathan D. Gillard, M.S.

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APPROVED:

Richard Rogers, Major Professor
Adriel Boals, Committee Member
Jennifer Callahan, Committee Member
Vicki Campbell, Chair of the Department of
Psychology
Mark Wardell, Dean of the Toulouse
Graduate School

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Risk assessments for offenders often combine past records with current clinical findings from observations, interviews, and test data. Conclusions based on these risk assessments are highly consequential, sometimes resulting in increased criminal sentences or prolonged hospitalization. Offenders are therefore motivated to intentionally minimize their risk scores. Intentional minimization is especially likely to occur in offenders with high psychopathic traits because goal-directed deception is reflected in many of the core traits of the disorder, such as manipulateness, glibness, and superficial charm. However, this connection appears to be based on the conceptual understanding of psychopathy, and it has rarely been examined empirically for either frequency or success. The current study examined the connection between psychopathic traits and the intentional minimization of risk factors using a sentenced jail sample. In general, offenders were able to effectively minimize risk on the HCR-20 and SAQ, while the PICTS, as a measure of cognitive styles, was more resistant to such minimization. Psychopathic traits, especially high interpersonal facet scores, led to greater minimization using a repeated measure, simulation design. Important differences in the willingness and ability to use deception were found based on (a) the content of subscales, and (b) the mode of administration (i.e., interview vs. self-report). The important implications of this research are discussed for risk assessment procedures regarding likely areas of deception and its detection. It also informs the growing literature on the connection between psychopathic traits and deception.

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CHAPTER 1

INTRODUCTION

The intuitive appeal of a link between psychopathy and deception is undeniable, with the latter term considered a key characteristic of prototypical psychopathy. On this point, Cleckley's (1941) model of psychopathy listed "untruthfulness and insincerity" as a core feature, while Hare's (1991) model contained the variant of "pathological lying." Beyond direct characterizations of deception, descriptions of psychopathy include multiple core features indicative of deceptive practices, such as superficial charm, manipulateness, and shallowness. Deceptive features are also implied because psychopathic individuals are characterized as exploitative of others, which often requires lying and finesse at conning. Moreover, various forms of deception are also required in the successful commission of most crimes and the subsequent avoidance of apprehension. Beyond the prevarications of ordinary criminals, psychopaths characteristically use conscious distortions and manipulations across multiple domains of their lives, leaving no relationship unaffected (Cleckley, 1976).

Studies have found that psychopaths are not actually any more successful at being deceptive, even though they may do so more frequently than nonpsychopaths (Clark, 1997; Lykken, 1978; Patrick & Iacono, 1989; Raskin & Hare, 1978). At least in one experimental situation, Cogburn (1993) found that psychopaths were actually less successful at deceiving others than nonpsychopaths when attempting to persuade interviewers that they had engaged in either socially desirable or undesirable behaviors. Importantly, they were rated as less credible whether they were lying or being presumably honest. Klaver, Lee, Spidel, and Hart (2009) generally supported Cogburn's findings and concluded in their own study that psychopathic offenders do not exhibit superior deception skills when judged by lay persons. However, both

studies utilized artificial, sanctioned deceptions (Feely & DeTurck, 1998) in a laboratory setting. It is possible that psychopaths are superior to others when using deception in real-world circumstances and when motivated by self-interest.

This dissertation focuses on one specialized form of deception that clearly has far-reaching ramifications for the criminal justice system, specifically the intentional minimization of violence likelihood in the context of risk assessment. In particular, criminal offenders with psychopathic traits may be highly motivated to mask their potential for future violence when being evaluated for level of risk. However, intentional minimization has received little empirical attention despite the importance of psychopathy in the assessment of general and violent risk (Salekin, Rogers, & Sewell, 1996, Steadman, Silver, Monahan, Appelbaum, Clark Robbins, Mulvey, et al., 2000). Indeed, psychopathy is the centerpiece of several widely-used risk assessment measures, such as the Violent Risk Appraisal Guide (VRAG; Harris, Rice & Quinsey, 1993) and the Historical, Clinical, Risk Management-20 (HCR-20; Webster, Douglas, Eaves, & Hart, 1997). Moreover, psychopathy measures are often used alone for this purpose. It is clear that exhibiting a high number of psychopathic traits puts the examinee *at* risk for being classified as *a* risk. Intentional minimization of assessed risk is therefore a highly motivated response style for many psychopathic offenders.

Overview of Violent Risk Assessment

Why Perform Risk Assessment?

Research on the “nothing works” thesis (Martinson, 1974) led to a de-emphasis of rehabilitation and a concomitant focus on the incapacitation of violent and habitual criminals. This trend is unmistakably reflected in Title 18, Section 3553 of the U.S. Code (Cornell, 2011),

which states that one purpose of imprisonment and other legally sanctioned punishments is to “protect the public from further crimes of the defendant.” The rise of “three-strike” sentencing, which increases punishments based on previous convictions, speaks to this goal as well (Mauer, King, & Young, 2004). The reasons for this change in philosophy and the subsequent changes in law are multifaceted (Walker, 2006) and beyond the scope of this introduction. However, this increasing shift toward incapacitation has led to a parallel rise in the need for risk assessment. In 2009, 2.3 million adults were incarcerated in jails and prisons, and more than double that number were on probation or parole (U.S. Bureau of Justice Statistics, 2010). Moreover, the recidivism rate for violent crime remains high; with 59.6% of all offenders being rearrested and 39.9% reconvicted within three years of release (U.S. Bureau of Justice, 2002). Risk assessment is often utilized with these recidivists, with the following referral question, “Is there a significant threat that this individual will commit a violent offense again in the future?”

Beyond recidivism, risk assessments have also grown exponentially because of the continued deinstitutionalization of patients with violence potential. During the transition away from state psychiatric facilities, the number of patients treated in such facilities has dropped precipitously by 90% (Althouse, 2010). Consequently, the number of incarcerated individuals with mental health treatment needs has increased dramatically. Correctional facilities have become the de facto leaders in providing treatment to high risk, mentally disordered offenders (Lamb & Weinberger, 2005).

Outside of the criminal arena, legal doctrines about the “duty to protect” also increased the need for risk assessment. *Tarasoff v. Regents of the University of California* (1974) and similar appellate cases established the legal requirement in many states that mental health professionals warn potential victims of violence. So-called “Tarasoff warnings” heightened the

need for risk assessment with the threat of civil sanctions for clinicians who did not take adequate steps in assessing potential danger.

Around the same time as *Tarasoff*, several Supreme Court decisions tightened civil commitment standards, requiring mental health professionals to weigh on the potential risk of recently released prisoners and/or psychiatric inpatients. In *O'Connor v. Donaldson* (1975) and *Lessard v. Schmidt* (1972), the Court ruled that finding individuals “mentally ill” was not reason enough alone to hold them in confinement against their will; therefore, violent or suicidal risk (termed “dangerousness” in *Lessard*) was henceforth the main criteria for involuntary hospitalization. In a similar vein, the Supreme Court in *Baxstrom v. Herold* (1966) struck down the earlier practice of transferring inmates directly to the hospital at the post-sentence phase. Following *Baxstrom*, a judicial determination of dangerousness was required before such a transfer could be effectuated.

Clearly, the increasing need for risk assessments is based on the combined effect of legal, correctional, and hospitalization changes over the last half century. In addition, the focus on increased clinician accountability has necessitated risk assessments to protect potential victims of crime. Similar forces are at work when examining the legality of civil commitments, with an increase in accountability for those released. The number of situations and individuals (i.e., patients, claimants, inmates, etc.) that now require risk assessment (Lyon, Hart, & Webster, 2001) require both competent clinicians and accurate assessment measures. Specialized measures that go beyond the assessment of general risk of any offense have been developed to fit the varied situations in which they are needed. Furthermore, psychologists have a vested interest in developing strategies for risk assessment that are not susceptible to intentional minimization.

Three Phases of Risk Assessment

Phase I: Dangerousness

Traditionally, evaluations of dangerousness relied on clinical judgment and experience. Clinical predictions of dangerousness were conducted as a routine facet of psychiatric practice for decades. With the rise of psychiatric research, Halleck (1967) trenchantly observed that research on the prediction or detection of dangerous behavior was practically nonexistent. This observation by Halleck and other distinguished scholars (Rappeport, Lassen, & Hay, 1967) spurred clinical research on dangerousness starting in the 1970s, beginning what is now called the first generation of research on the subject (Steadman, 2000).

Determinations of dangerousness initially paralleled legal issues (i.e., involuntary commitment) with dichotomous (yes-no) predictions of future violence. While mental health professionals offered opinions that judges typically used as conclusory, dangerousness was essentially a legal judgment, not a psychiatric or medical diagnosis (APA, 1974). As a result, mental health professionals became increasingly wary of making predictions due to both this conceptual reason (i.e., a legal decision is not a clinical recommendation) and a growing number of studies that questioned the methods used for predictions of dangerousness.

Many early studies of dangerousness suggested that predictions by mental health professionals were generally poor and no more successful than laypersons (Goldberg, 1968; Oskamp, 1965; Quinsey & Ambtman, 1979). For instance, Quinsey and Ambtman (1979) examined the ability of forensic psychiatrists and high school teachers in predicting violence based on the psychiatric assessment data, histories, and offense descriptions of 30 offenders. The researchers found that (a) the two groups produced similar accuracy rates and (b) the addition of psychiatric data did not substantially affect the overall appraisals of either group. In predicting

dangerousness, the researchers questioned the usefulness of clinical data and the expertise of the psychiatrists. Moreover, Steadman and Coccozza (1974) reviewed multiple studies and concluded over-prediction of dangerousness was common by practitioners. As a further complication, Oskamp (1965) reported the level of confidence assessors had with their dangerousness predictions was not correlated with the accuracy of these predictions (see also Ryback, 1967).¹

Several early studies that questioned the accuracy of dangerousness prediction were based on “cohort release” designs (for review, see Steadman & Coccozza, 1974). As a result of the 1966 *Baxstrom* decision, close to 1,000 offenders were released who were previously classified as “dangerous.” Steadman and Coccozza (1974) followed this cohort for three years after their release. They found that clinicians over predicted dangerousness in about 80% of cases based on follow-ups using hospital and police records. They concluded that the prior predictions of dangerousness were therefore erroneous. Thornberry and Jacoby (1979) proved that the *Baxstrom* case was not unique by analyzing a similar cohort of 586 patients released in Pennsylvania due to the *Dixon v. Pennsylvania* (1971) case. They found a similar over-prediction rate (86%) in 3- and 4-year follow-up periods.

The conclusions drawn from these cohort studies led Monahan (1981) and other prominent researchers (Coccozza & Steadman, 1976; Megargee, 1981; Shah, 1975) to strongly question the traditional dangerousness predictions by psychiatrists and psychologists. Monahan’s monograph (1981) was especially influential and outlined the various types of inaccuracies that occur in predictions of violence. His bottom-line conclusion was that clinicians were wrong in predictions of dangerousness in roughly three out of four cases. While this seminal work was an excellent review of the evidence, its devastating conclusion may have deterred researchers from further studies of risk assessment (Jackson, 2004).

Monohan's (1981) strong criticism of predictions of dangerousness evoked considerable controversy at the time of its publication and even decades later. Focusing on the more recent critiques, flaws in the methodological rigor of Monahan (1981) and his contemporaries involve study design and the analysis of data. Regarding study design, heterogeneous groups without comparisons were used, thereby limiting the generalizability of results (Andrade, 2009a). Related to this point, many early studies used cohorts of released psychiatric patients (Conroy & Murrie, 2007) who were committed with unknown criteria and treatment (Klassen & O'Connor, 1988). Yet when recidivism did not later occur, the previous commitment was treated as a classification error. Thus, these uncontrolled, naturalistic groups created both sampling and outcome criteria problems. Adding to the outcome problems, conviction rates were typically used as the sole measure of risk. Clearly, conviction is the most conservative estimate and likely misses many undetected, unarrested, and unconvicted cases. Lastly, standardized measures were nonexistent at the time of Monahan's (1981) examination. The lack of control in outcome criteria left many unresolved questions concerning the reasons for poor accuracy rates in the prediction of dangerousness.

Previously unstructured dangerousness judgments have been reanalyzed in recent years, resulting in more encouraging results. One of the largest problems in previous analyses was a failure to take the base rate of violence in the general population into account (Mossman, 1994). Base rates are extremely important in understanding infrequent events such as violence and can greatly affect accuracy rates. For example, Douglas, Cox, and Webster (1999) noted that traditional utility estimates based on 2 X 2 contingency tables perform best at base rates of 50%. Research on violence recidivism suggests base rates that are typically in the range of 20% to 30%.

Low base rates, combined with a clinical preference to maximize positive predictive power, can lead to a high number of overall errors, while still predicting almost all incidents of future violence (Mossman, 2000). Mossman demonstrated that even when 90% of those who commit future violence are identified, the overall accuracy rate can remain at 50%. The converse of this can also occur, with superb overall accuracy for non-dangerous persons but poor prediction of violence. Using Receiver Operating Characteristic (ROC) analysis, Mossman (2000) found Areas Under the Curve (AUCs) for 44 previous studies of dangerousness ranged from .48 to .98, with an average of .78, similar to that when using actuarial techniques. Clearly, the type of statistical analysis can change the perceived level of accuracy in risk assessment. It should be noted that ROC analysis is not without its critics. While ROC is able to provide accuracy rates independent of base rate, optimal decision points are still dependent on these rates (Harris & Rice, 2007). Since a decision point is needed in real-world risk assessment, ROC may prove to have little practical importance.

Phase II: Refocusing on Risk Assessment and the Rise of Actuarials

After a decade of relative inactivity, the professional community witnessed an explosion of research on violence prediction. This dramatic shift resulted from a changing legal and conceptual landscape. First, new involuntary commitment guidelines (e.g., sexually violent predator laws; Andrade, 2009) and legal precedents (e.g., *Lessard v. Schmidt*, 1972; see above) spurred the development of new prediction procedures. Second, a reconceptualization of the issue transpired, changing “dangerousness” to “risk” assessment and accelerating research.

Researchers and scholars in the 1970s (Brooks, 1978; Shah, 1978) were the first to delineate the case against the concept of dangerousness, which lacked operational and clinical clarity. For instance, both authors point out that the courts did not appear to recognize the

complexity of such determinations and failed to adequately define the term “dangerousness.” At the same time, clinicians struggled to find empirical methods to clinically measure the concept. Grisso and Appelbaum (1992) later questioned what the phrase “dangerousness” even meant. “Dangerousness,” they pointed out, was not an event (which is a requirement for prediction) but “a condition that [existed] as a function of the presence of someone or something perceived as ‘dangerous’” (p. 623, footnote 3). The authors’ argument went beyond semantics and touched on an inherent flaw in the research questions of the 1970s and 1980s.

Recognition of the problems with dangerousness prediction did not immediately result in new research, but by the early 1990s, studies began to focus instead on *risk assessment*. Risk assessment can be differentiated from dangerousness by a focus on probabilistic thinking, the use of specific risk factors, and an understanding that accuracy is limited (Andrade, 2009; Steadman, 2000). Two large-scale, longitudinal studies were started in the late 1980s using this new paradigm, one funded by NIMH and the other now known as the MacArthur Risk Study (Conway & Murrie, 2007). Both longitudinal studies had similar goals of learning more about the factors associated with risk and developing methods for accurately using these factors. These studies started the second generation of risk assessment research.

Risk assessment variables are often divided into two categories based on the stability of the item being measured. Static, or unchangeable, factors generally rely on historical information, much of which can be gleaned from hospital or correctional records when available. Common examples include gender and factual information about past offenses (e.g., age of first offense and presence of any violent convictions). Dynamic factors refer to those behaviors or characteristics that can change over time, with some researchers (e.g., Douglas & Skeem, 2005) noting there must be a corresponding change in risk level. Dynamic factors can be further broken

down into “stable” dynamic (i.e., those that, once changed, alter long-term risk), and “acute” dynamic (i.e., those which can change quickly and must be measured frequently). For example, holding a diagnosis of a major mental disorder may be considered a stable dynamic factor, although treatment and life course may ameliorate symptoms, rendering the diagnosis inappropriate. However, the presence of particular symptoms may be considered acute dynamic. Active hallucinations may increase the chance of harm to self or others, but the experience of these symptoms may change quickly and affect immediate risk level. Protective factors are also often classified as dynamic and include examples such as prosocial relationships, feasible treatment plans, and stable living conditions (Conroy & Murrie, 2007).

Unfortunately, dynamic risk factors have not proven as useful as theory might suggest (Heilbrun, Yasuhara, & Shah, 2010). Stable dynamic factors that are changed by treatment have not been shown to increase the accuracy of risk prediction above static factors alone (Heilbrun, Yasuhara, & Shah, 2010). On the other hand, changes in acute dynamic factors (e.g., mood, intoxication) have been shown to affect imminent violence, especially when static risk is already high (Quinsey, Jones, Book, & Barr, 2006). Acute dynamic factors have not yet been included in formal risk assessments.

Actuarial model. Actuarial scales were a direct result of research on risk factors associated with future violence (Quinsey, Harris, Rice & Cormier, 1998). The actuarial assessment method uses “fixed or mechanical and explicit rules” to predict risk (Litwack, 2001, p. 412). Heilbrun, Yasuhara, and Shah (2010) describe the sine qua non of these measures as “the objective, mechanistic, reproducible combination of predictive factors” (p. 5). All descriptions appear to refer to the use of quantifiable predictors of both a categorical and dimensional nature that are combined via specific rules, often with each variable weighted according to its predictive

importance. A final overall rating is calculated, which is compared to a normative chart of the likelihood of the specified outcome (e.g., future violence; Grove & Meehl, 1996). Rice, Harris, and Hilton (2010) add to other descriptions, noting it is not the formulaic nature that defines actuarial measures, but the use of specific development samples, outcome tables, and percentile norms. In other words, it is not the use of scores, but the scores' formal connection to probabilities that is important in actuarial measures.

Actuarial measures, by definition, are supposed to be “mechanical” and debate exists about the use of non-objective variables and score adjustments (Heilbrun et al., 2010). Regarding the first debate, some measures are classified as actuarial based on their use of a final numerical risk score, but have items that are not themselves quantifiable. For example, many of the items on the PCL-R (e.g., pathological lying, shallow affect, and lack of remorse; Hare, 2003) are quantifiable only in the sense that a numerical score is assigned, while the content itself is essentially subjective. This discrepancy appears to defy the meaning of “actuarial” but provides a similar outcome. Likewise, while all scholars seem to agree on the basic definition given in the previous paragraph, the line between actuarial and non-actuarial (i.e., structured clinical judgments [SCJ], discussed in the next section) is not well delineated. For example, “adjusted” actuarial measures involve the modification of actuarial scores or the final classification of risk. Some authors have argued the accuracy of actuarial measures is “too good and clinical judgment too poor to risk contaminating the former with the latter” (Quinsey, et al., 1998, p. 171), while the majority appear to believe that some adjustment is acceptable if (a) there is compelling evidence, such as a direct verbal threat of violence, or (b) if the actuarial measure is one of multiple sources contributing to a conclusion (Heilbrun, 2001). Empirically, no evidence exists to support modification (Rice, Harris, & Hilton, 2010).

Proponents of actuarial methods focus on the long history of research studies showing increased accuracy when compared to first generation unstructured clinical methods (see Andrade, 2009; Grove et al., 2000). Since the accuracy rate of unstructured methods was previously thought to be at or below chance (Monahan, 1981), any improvement above chance was initially viewed as encouraging. However, many studies of actuarial measures have now shown a consistent, moderate advantage over unstructured approaches over the last 25 years (Heilbrun, Yasuhara, & Shah, 2010). Bonta, Law, and Hanson (1998) conducted a meta-analysis of many different predictor variables. They found support for many actuarial variables [e.g., age ($r = .15$), gender ($r = .11$), juvenile criminal history ($r = .24$), family problems ($r = .10$), substance use ($r = .11$)]. Most encouragingly, they found the single largest effect size for recidivism to be “objective risk assessment” (mean $r = .39$), or the use of an actuarial or structured professional judgment measure. The MacArthur Risk Assessment Study (Monahan et al., 2001), one of the most extensive studies of violence in the community, also found great support for the actuarial measure created from its data, with an original AUC of .88. As is typical for many actuarial measures, cross validation and later studies found much lower AUC’s (.63 - .70).

Substantive criticisms have been raised regarding the creation and use of actuarial measures, the most basic being what critics see as problematic methods of item selection (Conroy & Murrie, 2007). Some researchers initially select variables they believe “might” work, while others appear to run correlations on all available data. For example, the MacArthur study examined 134 potential risk and protective factors, which were analyzed both individually and in groups (Monahan et al., 2001). Regardless of the size of the initial item pool, the end result is a list of cross-validated variables that empirically differentiate between those who exhibit future

violence and non-violence during a specified time period. The criticism appears to be one of dust bowl empiricism: given a large enough list of variables, some correlations between “predictors” and violence will occur but cannot be conceptually explained. Additionally, large item pools can result in substantial multicollinearity. Items with high intercorrelations can indicate redundant content, with little added validity.

Occasionally the relationship between predictor and outcome appears to be contrary to what one might expect based on a review of relevant literature. The Violence Risk Appraisal Guide (VRAG; Harris, Rice, & Quinsey, 1993) provides an excellent example of this problem. Among its twelve items, several raise important conceptual questions. For example, extent of victim injury is negatively correlated with violence; murder is therefore rated lower than assault. Likewise, a diagnosis of schizophrenia lowers the risk score, while its absence increases it. However, the literature is mixed on the contribution of schizophrenia to violence (see Swanson, Holzer, Ganju, & Jono, 1990; Monahan et al., 2001) and appears to be sample dependent. In maximum security hospital settings, the VRAG’s negative relationship is supported. However, the weighting of the diagnosis may ignore more fine-grained variables, such as the presence of command hallucinations or violent delusions.

Psychopathy is another variable that is used on actuarial measures but has undergone debate. It is heavily weighted on the VRAG (i.e., approximately 30% of the total score) in the form of Psychopathy Checklist-Revised (PCL-R; Hare, 2003) scores. The PCL-R covers very similar content to other VRAG items, raising the possibility of multicollinearity or even double-counting of content. Regarding this point, Coid et al. (2011) found that only 5 of the 12 items on the VRAG (as well as similar proportions of the PCL-R and HCR-20; discussed later) independently predicted risk. More importantly, the PCL-R, a component of the VRAG, has

been found to result in similar area under the curve (AUC) values as the total VRAG (Coid et al., 2011), leading some to wonder whether the PCL-R should simply be used on its own.

Phase III: Structured Professional Judgments

A competing model that combines some ideas from the first generation with the research methodology of the second emerged in the mid-1990s and led to the creation of “structured professional judgment” measures.² As Lidz, Mulvey, and Gardner (1993) pointed out, the unstructured nature of early methods allowed wide variations in accuracy. In contrast, structured approaches to risk assessment improve over unstructured approaches by standardizing how (a) evaluations are conducted and (b) variables are rated.

Structured professional judgments (SPJ) allow the evaluator greater flexibility than actuarial measures when rendering a conclusion about risk. While both actuarial and SPJ measures use empirically supported risk factors, they differ in the decision making process. SPJ decisional guidelines are typically gleaned from a review of the relevant literature rather than the empirical analysis of one data set. Measurement of these factors is completed in a variety of methods, including interviews with the person being assessed, collateral interviews, and record review (Heilbrun, Yasuhara, & Shah, 2010). Unlike actuarial measures, items are not combined via formula; indeed, a more flexible combination is implemented, leaving the final decision in the hands of the evaluator. Hart (1998), one of the most vocal SPJ proponents, opined that a very low score on the VRAG means little if it is accompanied by expressions of “genuine homicidal intent.” In other words, at times, a single risk factor may override other factors, but be lost in a VRAG total score. SPJ proponents point out that the more flexible nature of this technique allows more emphasis to be put on dynamic, potentially changeable factors, rather than the historical, static factors that are used almost exclusively by actuarial measures.

A Vancouver team of risk assessment researchers have championed the two most frequently used guides for structured risk assessment, the Historical-Clinical-Risk Management – 20 (HCR-20; Webster, Douglas, Eaves, & Hart, 1997b) and the Sexual Violence Risk –20 (SVR-20; Boer, Hart, Kropp & Webster, 1997). As an overview, the HCR-20 identifies 20 variables that are organized into three scales: *Historical*, *Clinical*, and *Risk management*. The HCR-20 manual (Webster et al., 1997b) provides definitions and scoring guidelines for each of the variables, with historical variables generally covering problems in living, problems with mental health, and antisociality (Douglas & Reeves, 2010). In comparison, clinical variables cover short and long term dynamic factors, whereas risk management variables representing life circumstances likely to affect the success of risk management (e.g., feasibility of plans, financial means). In addition to static variables, the HCR-20 also considers situational and environmental variables, such as exposure to destabilizers in the environment, lack of personal support, and stress. Webster et al. underscore this final aspect of the HCR-20 as particularly important for allowing flexibility in assessments. Identifying dynamic variables suggests targets for intervention, thus making structured approaches more consistent with the second prong of risk assessment, namely risk management. In this way, structured professional judgments such as the HCR-20 represent conceptually driven advances over earlier actuarial measures. However, research has failed to show either model to be superior to the other, likely due to the significant overlap in their coverage (Yang et al., 2010).

Comparisons of actuarial and structured professional judgment approaches. The two major methods of risk assessment – actuarial and SPJ – represent a continuum rather than a strict dichotomy. They have more in common than the heated debates about their utility may suggest (Hanson, 2000). Both employ risk factors that are empirically related to outcomes of violence.

Actuarial measures typically use only static factors, while most SPJ measures add dynamic and risk management factors, though exceptions to this general rule do exist for actuarial measures with dynamic factors (see Level of Service/Case Management Inventory; Andrews & Bonta, 1995). As noted above, actuarial measures typically use statistical analysis from one large dataset, while SPJ measures use a wider set of literature (Heilbrun, Yasuhara, & Shah, 2010). For instance, Harris, Rice, and Quinsey (1993) used one large data set consisting of 618 mentally disordered offenders for item selection when developing the actuarial VRAG. In contrast, the HCR-20, a SPJ measure, used a survey of the risk assessment literature to develop 20 conceptually-based items.

The key difference between actuarial and SPJ measures lies not in the type of information examined, but in the specific steps used in appraising risk. Actuarial measures weigh factors in a predetermined fashion, while SPJ measures leave the apportionment of importance in the hands of the evaluator. The comparative accuracy of each is heavily debated (Skeem & Monahan, 2011).³ The few studies that directly compare the use of actuarial and SPJ measures have found them to be similar in accuracy. Kroner and Mills (2001) compared the HCR-20, VRAG, and PCL-R and observed no significant differences in classifying violent reconvictions, with very small effect sizes (*rs*) of .16, .11, and .12, respectively. Two other studies examined the VRAG and the H scale of the HCR-20, with no significant differences in hospitalized samples of personality disordered or schizophrenia patients (Grann, Belfrage, & Tengström, 2000) or a British mentally disordered sample (Doyle, Dolan, & McGovern, 2002).

Five large meta-analyses have found similar effect sizes across measures when at least one actuarial and one SPJ measure are included in the analysis (Walters, 2003; Walters, 2006; Edens, Skeem, & Douglas, 2006; Schwalbe, 2007; Yang, Wong, & Coid, 2010). Although

differences existed in some specific studies, no advantage was found for any single measure across studies. As Yang et al. (2010) summarized, they found no discernible pattern and the results did not favor any single measure based on any of the measured demographic or sample variables. In other words, although some studies found small effects favoring one measure over another, the possible causes of these differences are currently unknown. Of nine general (i.e., non-sexual) risk assessment measures, all produced similar moderate effect sizes. The sole exception was PCL-R Factor 1, which has performed poorly over time (Yang et al., 2010).

Researchers are divided on whether psychopathy should be conceptualized in terms of risk assessment per se or as an important clinical construct relevant to its determination. In fact, the PCL-R was one of the first measures used for risk assessment (Hare, 1991, 2003), although it was originally developed only to measure a specific personality construct. The next section discusses the construct of psychopathy as it relates to risk assessment.

Psychopathy and Risk Assessment

Contrasting Perspectives in the Development of Psychopathy

Early descriptions of psychopathy clearly recognized the syndrome as a deficit, separate from psychosis and other major mental or emotional disorders that were understood at the time (Lykken, 1995; Kraepelin, 1915, as cited in Arrigo & Shipley, 2001). Although the term “psychopathic personality” had previously been used to refer to any abnormal personality type, Kraepelin is credited with its modern meaning. He was the first to add the concepts now considered core features of the disorder, including lack of guilt, poor experience of emotion, and lack of lasting bonds (McCord & McCord, 1964). An extensive review of the historical

perspectives on psychopathy is beyond the scope of this paper but can be found elsewhere (e.g., Berrios, 1996; Coid, 1993; Cooke et al., 1998, McCord & McCord, 1964; Pichot, 1978).

The two most influential modern conceptualizations of psychopathy are represented by the Cleckley (1941, 1976) and Hare (1991, 1993, 2003) models. Cleckley is often considered the father of modern psychopathy; his highly influential monograph outlined 16 core psychopathy characteristics gathered from case studies. Hare is the author of the most frequently used measure of psychopathy, which has in many ways shaped the research on psychopathy over the last 30 years. Each author presents versions of psychopathy that are quite similar, with some important differences (see Table 1). Ten of Cleckley's original 16 characteristics are represented at least partially by one or more of Hare's 20 PCL-R items. The remaining six Cleckley items include absence of delusions and nervousness, poor judgment, lack of insight, and infrequent suicide. One explanation for the absence of these characteristics on the PCL measures is their decidedly subjective nature. Indeed, Hare's original attempt to quantify Cleckley's criteria was abandoned due to the difficulty in measuring such subjective qualities (Hare, 1980).⁴

Hare's list of criteria, found on the PCL-R, is notable for its inclusion of antisocial behaviors, which were not directly mentioned by Cleckley. The measure includes at least seven items that do not correspond to Cleckley's criteria, five of which can be considered variations on the theme of antisocial behavior. Some authors (Cooke, Michie, & Hart, 2006; Skeem & Cooke, 2010) claim that Hare's conceptualization overemphasize these behavioral, antisocial aspects associated with the disorder. While Cleckley lists "inadequately motivated antisocial behavior" as one of his criteria, the description of this item emphasizes the lack of reasoning behind this behavior, rather than the seriousness of the behaviors themselves (Cleckley, 1976). Cleckley believed psychopathic traits to be associated with a life of frequent social misconduct, though not

often to the severity that would lead to a significant prison sentence. Much of the current disagreement on the characteristics of psychopathy centers on the role of antisocial behaviors, with Hare and colleagues viewing it as a central component, and others (Cooke, et al., 2006) viewing it rather as a consequence of the interpersonal and emotional deficits. Regardless, its inclusion has undoubtedly increased the PCL's ability to predict violent risk.

Table 1
Comparison of Hare Facets and Corresponding Cleckley Traits

Hare (1991)	Cleckley (1976)
<u>Facet 1: Interpersonal</u>	
1. Glibness/Superficial Charm	1. Superficial charm and good "intelligence"
2. Grandiose self-worth	9. Pathological egocentricity
4. Pathological lying **	5. Untruthfulness and insincerity **
5. Conning/Manipulative **	
<u>Facet 2: Affective</u>	
6. Lack of remorse or guilt	6. Lack of remorse or shame
7. Shallow affect	10. General poverty in major affective reactions
8. Callous/Lack of empathy	9. Incapacity for love
16. Failure to accept responsibility for own actions *	4. Unreliability *
<u>Facet 3: Lifestyle</u>	
3. Need for stimulation/Proneness to boredom	No Cleckley Equivalent
9. Parasitic lifestyle	No Cleckley Equivalent
13. Lack of realistic, long-term goals	16. Failure to follow any life plan
14. Impulsivity (no mention of alcohol)	13. Fantastic and uninviting behavior with drink and sometimes without
15. Irresponsibility *	4. Unreliability *

<u>Facet 4: Antisocial</u>	
10. Poor behavioral controls	13. Fantastic and uninviting behavior with drink and sometimes without
12. Early behavioral problems	No Cleckley Equivalent
18. Juvenile delinquency *	No Cleckley Equivalent
19. Revocation of conditional release	No Cleckley Equivalent
20. Criminal versatility	No Cleckley Equivalent

<u>Unloaded items</u>	
11. Promiscuous sexual behavior	15. Sex life impersonal, trivial, and poorly integrated *
17. Many short-term marital relationships	No Cleckley Equivalent

<u>No Hare Equivalent</u>	
	2. Absence of delusions and other signs of irrational thinking
	3. Absence of “nervousness” or psychoneurotic manifestations
	7. Inadequately motivated antisocial behavior
	8. Poor judgment and failure to learn by experience
	11. Specific loss of insight
	14. Suicide rarely carried out

Note. * denotes items associated with deception. ** denotes items directly tapping deception.

Factor Models Using PCL Measures

Psychopathy exhibits a strong association – both theoretically and empirically – with increased violent and criminal risks (Hemphill, Hare, & Wong, 1998; Porter & Porter, 2007; Salekin, Rogers, & Sewell, 1996). Conceptually, this connection is observed in historical

accounts of the disorder and the core dimensions described by leading writers (Cleckley, 1941; Hare, 1991, see Psychopathy and Risk Assessment section above), with lifelong histories of irresponsible, socially deviant, and antisocial behavior. Empirically, the past twenty years of research have found a moderately strong relationship between psychopathy and risk for violence (Salekin et al., 1996; Gendreau, Goggin, & Smith, 2002; Walters, 2003). This association is evident by the frequent use of the PCL-R to assess risk, even though it was not originally intended to do so (Hare, 1998).

A large number of meta-analyses have been conducted using psychopathy measures as risk assessment methods over the last 15 years. Salekin et al. (1996) first reviewed 18 studies and found effect sizes of .79 for violent behavior both while incarcerated and after release and .55 for general recidivism. This initial analysis has since been criticized for its broad inclusion of studies (see Gendreau et al., 2002). More recently, Leistico, Salekin, DeCoster, and Rogers (2008) cite at least nine additional meta-analyses between the Salekin study and 2007 alone, comprised of dozens of individual studies. For instance, Leistico and colleagues (2008) included 95 separate studies in their inclusive meta-analysis, a further testament to the amount of research conducted on the PCL-R and violence. Generally, they found that PCL Total score ($M d = .55$) as well as both Factor 1 ($M d = .38$) and Factor 2 ($M d = .60$) were moderately associated with increased antisocial conduct.

As a brief review, the two-factor model was the original structure for the PCL-R conceptualization of psychopathy (Hare, 1980, 1991). Factor 1 included interpersonal and affective features of the disorder while Factor 2 was more behaviorally based, emphasizing psychopathic individuals' social deviance (Hare, Harpur, Hakstian, et al., 1990; Harpur, Hakstian, & Hare, 1988). The two-factor solution puts as much emphasis on behavior as on

personality traits, which is a departure from earlier descriptions of psychopathy (Cleckley, 1976; McCord & McCord, 1964). The model has shown good reliability and both construct and predictive validity, particularly with respect to Factor 2's ability to predict violence (Hare, 1996).

A consistent finding across almost all studies is the greater effect of Hare's (2003) Factor 2 as compared to Factor 1 to predict violence (Gendreau et al., 2002, Salekin et al, 1996, Leistico et al., 2008). Meta-analyses (Walters, 2003; Walters, Knight, Grann, & Dahle, 2008) have revealed that Factor 2 has a weighted effect size (r_w) of .28, in the moderate range, while Factor 1 is significantly weaker at .18. Yang et al. (2010) found similar results when using a different metric, with double the effect sizes for Factor 2 ($d = .71$) than Factor 1 ($d = .34$). Even more telling, Factor 1 was the only one of 16 scales investigated in the Yang et al. (2010) study to have an effect size overlapping zero in its 95% confidence interval. Most, but not all, studies suggest Factor 1 does not add any incremental validity after accounting for shared variance with Factor 2 (Harris, Rice, & Quinsey, 1993; Hicks, Rogers, & Cashel, 2000; Skeem & Mulvey, 2001).

Cooke and Michie (2001) questioned the validity of the two-factor model based mainly on conceptual grounds. They noted that while the two-factor model may be useful for research, it is not likely the structure of the underlying syndrome. Their main point of contention is that deviant, antisocial behavior is a consequence, not a characteristic, of psychopathy. They also point out that deviant behavior was not an original feature of psychopathy. Cooke, Michie, and Hart (2006) state psychopathy predisposes one to crime because many of the core features result in a failure to inhibit antisocial thoughts and actions. Instead, they proposed a three factor model based on a confirmatory factor analysis utilizing 13 selected PCL-R items that deemphasized the antisocial aspect of the original model. In this formation, the prototypic psychopath showed high

scores on the factors termed Arrogant and deceitful interpersonal style, Deficient affective experience, and Impulsive and irresponsible behavioral style. According to this model, personality features are particularly important to psychopathy while the presence of antisocial behavior is not necessary.

Very few studies have been conducted regarding the three-factor model's association with violent risk. Douglas, Yeomans, and Boer (2005) analyzed both the two and three factor models, finding Factor 2 of the original model ($r = .50$) and Factor 3 of Cooke and Michie's model ($r = .54$) to be strongly correlated with violence. Factor 1 of the original model ($r = .19$), as well as Cooke and Michie's first ($r = .16$) and second ($r = .16$) factors had much lower correlations. In this way, the factors which measure the behavioral manifestations of psychopathy are clearly linked to violence, while those measuring personality and affective components are not. Furthermore, Douglas et al. (2005) noted a Cohen's d of 1.34 between violent and nonviolent offenders on Factor 3, with much smaller, though still significant, effect sizes for the other two factors.

Hare and colleagues, not satisfied with the coverage of the three factor model, reformed the original two factor model into what they term a two-factor, four-facet model (Hare, 2003; Hare & Neumann, 2006). This model retains the two original factors, but further elaborates on them by including two facets within each factor. For instance, Factor 1 includes interpersonal and affective facets, while Factor 2 includes lifestyle and antisocial facets. Subsequent research conducted using this two-factor, four-facet model has found it useful in accounting for maximum security patients' aggression (Hill, Neumann, & Rogers, 2004). In that study, the four-facet model accounted for 31% of the variance in an aggression factor (created by combining all aggression items), while the three-factor model accounted for 27% of this factor. Using a similar

methodology, Vitacco, Neumann, and Jackson (2005) found the four-facet model accounted for 21% of aggression variance when examining psychiatric patients' subsequent violence and aggression in the community, while the three-factor model accounted for only 12%. Given that the first three facets of this model correspond to Cooke and Michie's three-factor model, with the added antisocial facet, the four-facet model of the PCL-R may be considered superior with regard to risk assessment.

Use of Psychopathy on Existing Risk Assessment Measures

Psychopathy has consistently been found to be one of the strongest single predictors of violent and general risk (Steadman, 2000), and it is therefore included as a formal part of many modern risk assessment measures. These measures include structured professional judgment (SPJ) guides such as the HCR—20 (Webster et al., 1997b), Sexual Violence Risk-20 (SVR-20; Boer et al., 1998), and Risk for Sexual Violence protocol (RSVP; Hart, Kropp, Laws, Klaver, Logan, & Watt, 2003). It also includes actuarial measures, such as the Violence Risk Assessment Guide (VRAG; Harris, Rice, & Quinsey, 1993) and the decision-tree based on the MacArthur violence study (Steadman et al., 2000). Two of these measures (HCR-20 and VRAG) even include the specific scores of the PCL-R and/or the PCL:SV as part of their scoring.

The PCL-R⁵ has been found to predict recidivism at rates similar to many actuarial measures, but the inclusion of PCL-R scores within these measures brings doubt regarding the independence of these comparisons. While the use of the PCL-R as a stand-alone risk assessment measure is problematic on conceptual grounds, it may still be examined empirically for incremental validity. Hemphill and colleagues (1998) conducted a meta-analysis that compared the ability of the PCL-R and early actuarial tools (i.e., VRAG, Harris et al., 1993; Salient Factor Score, Hoffman, 1983; Level of Supervision Inventory, Andrews, 1983) to predict recidivism.

Importantly, the researchers removed PCL-R scores from the VRAG before comparisons were conducted to avoid confounding results. They found the PCL-R to be equally predictive of general recidivism when compared to the risk-specific measures; however, it was correlated more strongly with violent recidivism ($r = .27$; Hemphill et al., 1998) than the other measures. Other early (i.e., mid to late 90's) studies typically found similar results, with the PCL-R performing equally or slightly better than its counterparts (Douglas, Vincent, & Edens, 2006, see also Salekin et al., 1996).

Recent studies have found more encouraging results for actuarial measures when compared to the stand-alone PCL-R. A large meta-analysis (Gendreau, Goggin, & Smith, 2002) found the Level of Service Inventory (LSI-R; Andrews & Bonta, 1995) to be a better predictor of both general and violent recidivism. However, their results were questioned based on methodological concerns (Hemphill & Hare, 2004 for reply). For instance, Hemphill and Hare (2004) point out many studies in the Gendreau et al. (2002) analysis compared measures rated by the same researchers. This design leaves open the possibility that ratings on both measures were based on information gathered across the entire interview, a significant confound (Hemphill & Hare, 2004). The latest large-scale meta-analysis found roughly equivalent results to Gendreau et al. for nine of the most frequently used general (i.e., non-sexual) violent risk measures (Yang, Wong, & Coid, 2010). Specifically, their analysis found two measures, the Offender Group Reconviction Scale (OGRS; Copas & Marshall, 1998) and the HCR-20, slightly edged out the PCL-R when predicting violence. However, these differences were small and all nine measures in the analysis predicted at a medium level (AUCs from .65 to .70; Yang et al., 2010). These two meta-analyses appear to continue the long line of studies showing little to no difference among well-validated, published risk assessment measures. The slight differences that exist from study

to study may be the result of sample and setting differences that are similar to a particular instrument's validation. Examiners should be careful to assess how well their population matches validation samples. Closer matches can indicate a greater likelihood of accuracy.

Psychopathy and Deception

Deception is a common occurrence in many different settings, especially when the incentives are high (Frank & Ekman, 2004). Nowhere is this observation more true than in forensic settings. Likewise, psychopathy appears to be a particularly influential factor for frequency and success of deception. Despite the large independent literatures on psychopathy and deception, few studies have been published on the association between these two concepts. The following sections will review the theoretical and empirical evidence that does exist.

As discussed, deception plays a pivotal role in defining the core features of psychopathy. Not only have leading theorists and researchers (Cleckley, 1976; Hare, 2003) listed deception directly as a defining feature of psychopathy, but it can be considered a core component of many other psychopathy features. For example, Cleckley listed “untruthfulness and insincerity” (Cleckley, 1976, p. 338) as one of sixteen core components of psychopathy. Also included in this list are descriptions of superficial charm, unreliability, and “inadequately motivated antisocial behavior” (Cleckley, 1976, p. 338). Each of these characteristics requires purposeful lying.

Cleckley (1976) described the psychopath as having a remarkable disregard for truth when recollecting the past, speaking of the current situation, and when making promises about the future. He or she is “at ease and unpretentious” (p. 342) when making promises or lying and can be especially convincing in their portrayal. According to Cleckley, the usual signs that others notice in a clever liar are not evident, meaning the psychopath's lies are often undetected.

Cleckley believed the very concept of keeping one's word has only intellectual meaning to the psychopath, and is devoid of the emotion that most non-psychopaths have attached to related concepts of honesty and trustworthiness. To Cleckley, a male psychopath would "keep his word" only if doing so was to his benefit. In his description of the psychopath's antisocial behavior, Cleckley (1976) further expounded on circumstances in which deceit may occur, noting a willingness to lie for "astonishingly small stakes."

Hare (1991, 2003) covered some of the same basic concepts as Cleckley, though he used different terms and provided somewhat dissimilar descriptions in his PCL-R scoring. First, "pathological lying" is the PCL-R item most directly related to deception. The item describes a likelihood of characteristic lying and deceit when interacting with others. The psychopath's readiness and ease of lying are described as being remarkable, and if caught, he or she is not anxious, but simply changes the story as needed (Hare, 2003, p. 37). Unlike Cleckley, Hare believed psychopaths might freely discuss and even brag about their lies. Hare also included a description of "Conning/Manipulative" behavior, which shares elements with the previously-discussed PCL-R item and Cleckley's items on untruthfulness and superficial charm. In particular, this item measures deceit used to cheat or manipulate others, whether in extravagant or simple ways. Like Cleckley, its description shows a willingness to lie in many different circumstances. Aside from the interpersonal and affective uses of deceit, Hare (2003) believed psychopathy included antisocial behavioral traits to a greater extent than Cleckley (1976). These behaviors do not always directly involve lies, but a certain amount of deceit is necessary to successfully carry out most crimes.

Forensic experts, community members, and offenders alike recognized the importance of deception to psychopathy, though they differ in their assessment of the centrality of this

characteristic. Rogers and colleagues conducted three studies (Rogers, Dion, & Lynett, 1992; Rogers, Duncan, Lynett, & Sewell, 1994; Rogers, Salekin, Sewell, Cruise, 2000) on the prototypical features of psychopathy and DSM-III Antisocial Personality Disorder as rated by three groups. Groups of community volunteers, forensic experts, and adult offenders all recognized the importance of deceit in these disorders, but important differences also existed. Community volunteers rated “no regard for the truth” and “pathological lying” as highly prototypical descriptors of adult APD, with only “lack of remorse” and “unlawful behavior” ranked higher (Rogers et al., 1992, Table 1, p.683). In comparison, forensic experts rated “no regard for the truth” even higher than lay persons (Rogers et al., 1994, Table 1, p. 478). When examining the pattern of factors found in an EFA from the two studies, it appeared nonprofessionals grouped unstable relationships and manipulateness together, while the experts rated them as two separate constructs.

In sharp contrast, adult offenders ranked untruthfulness as less important and aggression as more important than experts and members of the community. In both childhood and adulthood, relatively little emphasis was placed on interpersonal factors compared to experts and community raters. As one possible reason for this difference, inmates may lack insight into the importance of deceit in relation to antisocial behavior more generally. Then again, offenders may see deception as so common that it does not differentiate psychopaths from non-psychopaths.

Beyond Descriptions: The Actual Use of Deception by Psychopaths

Conceptual descriptions indicate psychopaths lie frequently, but an interesting question involves psychopaths’ actual (i.e., empirically tested) likelihood of lying compared to non-psychopathic criminals. Many of the early “studies” of deception in psychopaths were based on clinical case studies and anecdotal reports (e.g., Cleckley, 1941; Hare, 1993). The limited

number of studies to date has yielded inconsistent findings on the likelihood that psychopaths will lie in a variety of contexts. For instance, Porter, Birt, and Boer (2001) reviewed the correctional records of psychopathic and nonpsychopathic murderers. They found those higher on psychopathic traits were twice as likely to change the details of their version of the crime during incarceration. In one of the few studies of general deception by psychopaths, Seto, Khattar, Lalumiere, and Quinsey (1997) found a moderately strong connection between PCL-R scores and sexual ($r = 0.36$) and nonsexual (0.49) deceptive tactics. The criterion was assessed via self-report measures of the frequency of particular deceptive practices. The significance of sexual deceptive practices was erased when accounting for general deceptiveness, suggesting deception occurs similarly across domains. However, given the self-report methodology and the grandiosity often seen in psychopaths, it is possible they were bragging about deception, rather than reporting actual deceptive practices. Interestingly, this same study showed a moderately large negative correlation between impression management and psychopathy, suggesting these offenders were not concerned with presenting themselves in a positive light.

A small number of studies have also indicated there is little or no association between psychopathic traits and a specific type of deception called malingering (e.g. Edens, Buffington, & Tomicic, 2000; Poythress, Edens, & Lilienfeld, 1998; Poythress, Edens, & Watkins, 2001). For instance, Kucharski, Duncan, Egan, and Falkenbach (2006) found criminal defendants with psychopathic traits were not likely to malingering; the authors warned against using these traits as possible evidence of malingering. Gacono, Meloy, Sheppard, Speth, and Roske (1995) attempted to examine the presence of psychopathic traits in a small sample of insanity acquittals. They found acquitees with higher levels of psychopathic traits were more likely to admit to previous malingering. The authors suggest this relationship may indicate that psychopaths have a higher

willingness to use deception or a greater fluency at it. However, this study was flawed in a number of ways, including the use of self-reported malingering and retrospective data, and the incentive to admit feigning to be released from the hospital (Rogers & Cruise, 2000).

Rogers (1990) has argued the idea that malingering occurs more frequently in psychopathic and antisocial individuals is a methodological artifact. Most malingering studies are conducted in criminal forensic settings. Similarly, most psychopathy studies are also conducted in correctional or forensic settings. Therefore, both concepts occur at increased rates in the same setting (Rogers, 1990). While few studies exist to resolve this question directly, Rogers (1990) found similar portions of APD-diagnosed individuals in groups of malingerers (20.8%) and genuine patients (17.7%).

Cooper and Yuille (2007) hypothesized the primary use of laboratory studies is responsible for the disconnect between empirical findings and the classic description of psychopaths as deceptive. In such studies, participants with psychopathy are volunteers with poor intrinsic motivation. As Feeley and DeTurck (1998) pointed out, laboratory studies use sanctioned lies, which occur under experimental instructions to do so. Sanctioned lies are quite different, cognitively and affectively, from unsanctioned lies. Psychopaths may have no need to lie in these settings, thereby making it appear they lie less frequently than would be found in field studies or anecdotal reports. As discussed earlier, clinical case studies that led to the core characteristics of psychopathy indicate frequent use of lying (Cleckley, 1941; 1976; Hare, 1991; 2003). On this point, Cooper and Yuille (2007) suggest that although anecdotal evidence is not ideal, it may offer superior evidence than laboratory studies regarding lying until further field studies are conducted. Regardless of the frequency of and willingness to use deception, classic

psychopathic descriptions also describe an ability to do so successfully (i.e., without detection), which will now be discussed.

Success at Deception

Anecdotally, psychopaths are not only more likely to engage in deceptive and manipulative practices, but are also more skilled in their duplicity (Hare, 2001). The first part of this assumption is not firmly supported in clinical forensic contexts, as discussed above, but remains a common perception held by most forensic experts (Rogers et al., 1994). Regarding psychopaths' actual success, or skill, at deception, the literature has again been heavy on theory and anecdotal evidence and low on empirical findings. Until recently, the few available studies have focused on malingering. However, new and exciting general deception studies have recently emerged that examine the issue in a variety of ways. These studies have had inconsistent results with a general trend toward poor performance by psychopathic individuals.

Researchers have found psychopaths appear to be either no more or marginally more success at malingering than non-psychopaths. For example, Kropp (1994) found psychopaths were no better than other inmates at simulating mental illness in an analogue design study using the Structured Interview of Reported Symptoms (SIRS; Rogers, Bagby, & Dickens, 1992). While they were no better at doing so, Kropp (1994) noted there was a disproportionately high number of psychopaths in a "good" group of malingerers, defined as avoiding detection on multiple SIRS scales. Poythress, Edens, and Watkins (2001) similarly reported that no significant correlations were found between scores on the Psychopathic Personality Inventory (Lilienfeld & Andrews, 1996) and three major malingering indexes.

Methodologically, while both of these previous studies offer important information, no studies using known groups of malingerers (see Rogers, 2008) have been conducted. Therefore,

as noted above, it is possible that the lack of significant findings is heavily dependent on the use of laboratory studies. Alternatively, the act of malingering is quite different than other forms of deception and requires skills that may take away any advantage psychopaths otherwise have at lying. For instance, a basic understanding of detection strategies and how to avoid elevating them has been found to be helpful to successful malingerers (Rogers, Dolmetsch, & Cavanaugh, 1983; see Rogers, 2008 for an overview of this literature). Psychopath's use of charm and grandiosity may be useful when deceiving others in interpersonal situations, but is not beneficial when dealing with such structured methods of detection. Regardless, studies using polygraph testing and general deception detection techniques have also been conducted.

Two research groups (Hare and colleagues, Patrick and Iacono) have found psychopaths' deception can be detected by polygraph tests just as easily as nonpsychopaths. Raskin and Hare (1978) conducted a mock crime study with groups of psychopathic and nonpsychopathic offenders. They instructed all participants, guilty and innocent, to deny the crime. Both groups were detected at similar rates (> 90% correct classifications in each group). Patrick & Iacono's (1989) results agreed with the comparability between groups but not the overall classification rate. Specifically, psychopaths were detected at exactly the same rate as nonpsychopaths (i.e., 91.7% of guilty suspects for both psychopaths and nonpsychopaths; 58.3% of innocent suspects for both psychopaths and nonpsychopaths correctly classified). Their study also differed from Raskin and Hare (1978) in that a threat, as opposed to a possible reward, was used as motivation. These results generally agree with the aforementioned research from malingering studies indicating psychopaths are no more successful than nonpsychopaths when structured or standardized detection methods are used.

Results are mixed regarding psychopaths' ability to hide details of previously committed crimes. Two studies (Cogburn, 1993; Billings, 2004) have used naïve judges to rate the believability of offender statements. In one of the earliest and more cited studies, Cogburn (1993) found psychopaths, as classified on the PCL-R, had no improvements in "successful" deception when compared to non-psychopaths. Furthermore, naïve judges rated psychopaths as less credible regardless of the actual veracity of their statements. This finding contradicts Cleckley's (1976) assertion that psychopaths are particularly adept at appearing honest and able to avoid typical signs exhibited by liars. In contrast to Cogburn, Billings (2004) found that individuals with higher psychopathy scores on both the PCL:SV and PPI were better able to deceive naïve judges when making false statements. Judges rated verbal styles, such as the use of illustrations, as well as nonverbal behaviors, such as fidgeting.

Klaver, Lee, Spidel, and Hart (2009) recently bolstered Cogburn's (1993) earlier conclusions by studying raters' observations of psychopaths' story telling behavior. Specifically, the undergraduate participants in their study viewed videotapes of psychopathic and nonpsychopathic offenders telling true and false stories. They then rated the credibility of the statements and the nonverbal signs of deceptions, such as appearing to think hard and nervousness. Psychopaths were not successful at lying. In fact, unlike Cogburn (1993), psychopaths' deceptions were detected *more* often than non-psychopaths. Like Cogburn (1993), psychopaths were generally viewed as less credible. In direct contrast, the same researchers (Lee, Klaver, & Hart, 2008) found psychopaths were more successful at avoiding detection when only verbal indicators were rated. Specifically, psychopaths used more appropriate details when lying, suggesting a focused attempt to appear credible. Still, the psychopathic group was far more likely to be judged as noncredible when actually telling the truth.

The studies by Hart and colleagues (Lee et al., 2008; Klaver et al., 2009) suggest psychopaths are somewhat proficient at lying in a verbal manner, but are unable to control successfully their non-verbal behaviors. This disparity shows an apparent adeptness at using verbal skills, while many behavioral indicators are neglected. Given the scripted, analogue design of these two studies, an alternative hypothesis is that real-world lying would be easier to accomplish for psychopaths. Additionally, the aforementioned studies suggest psychopaths are often unable to appear credible when telling the truth. Although untested, a lack of emotional expression may account for this observation under the honest condition, while this same characteristic may be beneficial when telling lies (i.e., under the deception condition).

The interpersonal facet of psychopathy may facilitate deception. Lee et al. (2008) found Factor 1 was associated with credibility when discussing false information ($B = 0.47$, $SE B = .20$), while Factor 2 was not. The authors suggest an arrogant and grandiose behavioral presentation may distract the listener from lies that content-wise are not particularly sophisticated. Theoretically, in order to lie competently, it would seem advantageous to appear confident and avoid displaying affective arousal related to the deception. On this matter, it has been suggested that psychopaths have very little emotional investment in the words they use. For instance, Williamson, Harpur and Hare (1991) presented offenders with affective and neutral words and nonwords. Nonpsychopaths were able to distinguish emotional words from nonwords very efficiently; the authors theorized that the affective content facilitated their cognitive processes. In contrast, psychopaths failed to show this same pattern. The lack of emotional investment by psychopaths frees them to talk without regard for the affective significance of the topic. As Pegay (1943, as cited by Hare, 1993) stated, psychopaths can talk about the deepest of topics and “[pull] the words from their overcoat pocket” (p. 124).

Verbal and behavioral changes have been found to occur when psychopaths are placed in experimental situations requiring deception. Regarding verbal behaviors exhibited while lying, Louth, Williamson, Alpert, Pouget, and Hare (1998) found differences in the volume of psychopaths' voices when compared to nonpsychopaths. When discussing deceptive neutral, negative, and positive topics, psychopathic inmates spoke more quietly than other inmates. While not examining the volume of speech, Klaver, Lee, and Hart (2007) found differences in non-verbal behavior between psychopathic and non-psychopathic offenders while speaking. More specifically, psychopathic offenders spoke faster and engaged in more blinking and head movements when lying. Differences in non-verbal behaviors and orientation toward the listener also occur. Rime, Bouvy, Leborgne, and Rouillon (1978) examined male adolescents with behavior problems and found that psychopaths appeared more invested during the interview than non-psychopaths (i.e. leaned forward more and looked at the interviewer longer) and the interviewer spoke less when interacting with psychopathic adolescents. Unfortunately, it is not possible to conclude whether these verbal and nonverbal changes by psychopaths were intentionally chosen.

Intentional Minimization

No research has been conducted on the effects of intentional minimization on risk assessment results. Only one study could be located that analyzed the closely related concept of socially desirability with psychopaths. Book, Holden, Starzyk, Wasylkiw, and Edwards (2006) studied participants who successfully portrayed socially desirable personality (i.e., were not detected by the validity scale cut scores) on the Holden Psychological Screening Inventory (HPSI; Holden, 1996). Successful deceivers had significantly higher psychopathy scores than those detected as faking. This issue is a major aspect of the current investigation.

Two studies using offenders have examined intentional minimization on one self-report risk assessment questionnaire, the Self-Appraisal Questionnaire (SAQ; Loza, 2005). Loza, Loza-Fanous, and Heseltine (2007) compared responses under two conditions: (a) presumably genuine (i.e., confidentiality-guaranteed instructions) and (b) presumably intentional minimization (i.e., psychological evaluations being used to determine early release). Contrary to expectations, the scores in the real evaluation group were slightly higher on scales measuring substance use and past criminal conduct. However, the results of this study are unreliable due to the use of differential prevalence design, a weak design due to assumed motivation in each group (Rogers, 2008). A second study by the same authors (Loza et al., 2007) used a simulated differential prevalence design, with participants first receiving “research only” instructions, then simulated “release evaluation” instructions. While high correlations were found between each administration (i.e., scores did not change significantly), the results are difficult to interpret due to the weak design. Furthermore, as no manipulation check was administered, it is possible that the instructions were not followed in the second study. Neither of these studies address the contributions that psychopathic traits have on intentional minimization, but are the only known studies of this type of deception with risk assessment measures.

Current Study

In the last two decades, the use of risk assessment measures has exploded, but the vulnerability of such measures to intentional minimization has remained untested. These procedures include both actuarial (e.g., VRAG and LSI-R) and structured clinical judgment (HCR-20 and PCL-R) measures.

The accuracy of all risk assessments can be thwarted by intentional minimizations, especially by offenders with psychopathic traits, whose core characteristics include deception and manipulateness (Cleckley, 1976; Hare, 2003). However, research has found that psychopathic traits are not associated with more skill at successful deception (e.g., Lee, Klaver, & Hart, 2008). To practitioners, it may seem clear that psychopaths are manipulative and deceitful in the interpersonal realm and in forensic settings. Importantly, no studies exist examining how effectively offenders with psychopathic traits can lower their risk assessment scores. The current study addresses this gap. As the first investigation, many hypotheses are based on conceptual, rather than empirical grounds.

Research Questions and Hypotheses

Research Question #1:

Research Question #1 investigates the susceptibility of a structured professional judgment guide, the HCR-20, and two self-administered questionnaires, the PICTS and SAQ, to intentional minimization and compares offenders with low and high levels of psychopathy.

Hypothesis 1: Offenders in the IM condition will significantly decrease their perceived level of risk on all three risk assessment measures when compared to the control condition under standard instructions.

Hypothesis 2: Offenders high in psychopathic traits will decrease their perceived level of risk significantly more than those low in psychopathic traits.

Hypothesis 3: Offenders high in psychopathic traits will decrease their risk scores to a greater extent on the interview-based HCR-20 than on the self-administered PICTS or SAQ.

Research Question #2:

Research Question #2 will examine the association between baseline PCL-R factor scores and offenders' ability to lower their perceived level of risk on three risk assessment measures.

Hypothesis 4: Offenders high in PCL-R Factor 1 traits of psychopathy will be more successful at minimizing their level of risk on the HCR-20 than those lower in Factor 1 traits.

Hypothesis 5: Offenders high in PCL-R Factor 1 traits of psychopathy will not have significantly different PICTS or SAQ scores when compared to those lower in Factor 1 traits, as these self-administered scales are less susceptible to interpersonal forms of deception.

Hypothesis 6: PCL-R Facet 1 (interpersonal) will exhibit the strongest association with successfully decreased risk assessment scores.

Research Question #3:

Research Question #3 will address the item content that offenders minimize in the IM condition across all three risk assessment and criminality measures. Questions have been raised about the susceptibility of some items to minimization, especially those on self-report measures of risk (Hanson & Bussiere, 1998, Hare, 1985). These researchers claim offenders are unlikely to divulge information when using self-report and that these measures are susceptible to self-presentation bias. Possibly supporting this claim, self-report risk measures generally produce weaker effect sizes than interview-based actuarial and SPJ measures (Loza, Conley, & Warren, 2004; Loza, MacTavish, & Loza-Fanous, 2007).

Hypothesis 7: Larger effect sizes will be found between Impression Management and Control groups for items with criminal content than for attitudinal and mental health content on the PICTS and SAQ.

Supplementary Questions

The supplementary questions examine two general themes: (a) the inability of those with high psychopathic traits to recognize certain problematic areas included on risk assessment measures, and (b) the relationship between offenders' level of confidence in reducing their risk assessment scores and their ability to do so under IM instructions. Regarding the first, Cleckley (1976) theorized psychopaths had little insight into the nature of their impairment in life. However, this formulation has never been tested empirically. Items on the HCR-20 that may be most affected by this hypothesis include negative attitudes, personality disorder symptoms, lack of personal support, and psychopathy itself.

Supplementary Question #1: Will the high psychopathic traits group be less successful than the low psychopathic traits group at minimizing items that require insight, such as negative attitudes, impulsivity, and psychopathy itself?

Supplementary Question #2: Will the high psychopathic traits group exhibit more confidence than the low psychopathic traits group in their ability to intentionally minimize?

Supplementary Question #3: Will level of confidence be related to an actual decrease in risk assessment scores?

CHAPTER 2

METHODS

Design

The study was conducted using a mixed, repeated measures, simulation design to test the specific hypotheses. Two conditions were administered to each offender in counter balanced order. The standard (e.g., honest responses) condition, or Phase 1, established genuine appraisals of psychopathy and risk, while the experimental condition, or Phase 2, was conducted under instructions for intentional minimization (IM).

The design allowed for between-subject comparisons involving individuals classified as high and low on psychopathic traits using the PCL-R (see below for classification criteria). Additionally, it allowed a within-subject analysis of how well all participants were able to lower risk from Phase 1 to Phase 2. Independent variables included (a) genuine level of psychopathic traits (operationalized into low psychopathic trait and high psychopathic trait groups for some analyses), and (b) assessment method (interview vs. paper and pencil risk assessment formats). The dependent variables included (a) change in risk assessment scores on the HCR-20, (b) change in SAQ scores, and (c) change in PICTS scores.

Participants

The initial sample consisted of 90 offenders recruited from the general population at Tarrant County Jail in Fort Worth, Texas. Further demographic description can be found below in the Results. However, the methods for choosing participants is described in the next sections.

Inclusion and exclusion criteria. Inmates with felony charges or behavioral problems were selected because (a) moderately high levels of psychopathy were needed for the study, and

(b) risk assessment is most relevant for offenders with serious criminal charges. In addition, participants had to have at least an 8th grade reading level to ensure adequate comprehension of instructions, as well as the PICTS and SAQ. Both of these measures are written at a Flesch-Kincaid reading level of 8.2 or below.

Exclusion criteria recognized the same overarching goal of obtaining offenders with more severe criminal histories, but were balanced with protecting the safety of researchers and the institution. For example, participants without any history of aggression were excluded, as were those who represented an assault or elopement risk at the time of interview. Information regarding current risk for violence toward staff, the researchers, or other inmates in the surrounding area was gathered from correctional officers, who had access to each inmate's behavior during their current incarceration. Exclusions regarding mental health were minimal to increase external validity, as risk assessment is performed on offenders with and without major psychiatric diagnoses. However, offenders could not participate if they were exhibiting current disorganized thinking or speech that would interfere with the interview process. Similarly, if hallucinations were present, they could not be so severe as to impair communication or attention to written materials.

Materials

Instructional sets for simulation research. All simulation research includes at least two sets of instructions, one regarding the honest condition and one for each simulated scenario. As recommended by Rogers (2008), all instructions in this study were written at a relatively low reading grade level (Flesch-Kincaid grade level = 6.5 for both sets). Each participant received both sets of instructions, though as mentioned above, the order was balanced to assess for order

effects. During the honest condition, detainees were assured confidentiality to avoid the belief that they were in an adversarial situation with possible real-world negative consequences.

Honest Instructions. The instructions are reproduced:

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 for this research study only. It is important that you present yourself as you really are.

Instructional sets are an integral part of all simulated conditions because participants are asked to become actively involved, envisioning the setting and relevant issues “as if” the scenario were true (Rogers, 2008). Adequate instructions for a simulation condition must take at least six elements into account:

- *Comprehension:* The instructions must clearly explain the task in a way that is accessible to the participants. Easy comprehension requires easy to moderate reading levels and concise wording.
- *Specificity:* The instructions must explain the task in enough detail that the results can be meaningfully interpreted as measurements of the desired concepts. Care should be taken to provide a level of detail to approximate real-world situations.
- *Context:* The context or scenario must be relevant to the participants’ life experiences.
- *Motivation / Incentives:* The participants must be motivated to participate fully. Motivation can be accomplished via ego involvement (e.g., framing the task as a challenge to beat) as well as with external rewards.
- *Believability:* Participants should be warned that their presentation should not be “too good to be true.” (see Rogers, 2008 for in-depth discussion).

An intentional minimization scenario was developed that was relevant to this sample of detainees. Specifically, a scenario involving two significantly different sentencing possibilities was created because all offenders were familiar with the sentencing phase. This familiarity increased the likelihood that participants would respond in a realistic and motivated way (Rogers & Gillard, 2010). In addition, further motivation included a challenge to participants to “beat the tests” and prove they deserved a shorter sentence (see Rogers, 2008). Although a small monetary incentive was also originally planned, institutional policy would not allow such a reward.

Lastly, a brief caution warned participants not to appear so “adjusted” as to be unbelievable. The purpose of this warning was to remind detainees that unrealistically positive answers would arouse the suspicion of the examining psychologist. Cautionary warnings have been found to cause less severe and less detectable malingering (Storm & Graham, 2000), but have not been specifically examined with intentional minimization or defensiveness.

Intentional Minimization Instructions. The scenario and instructions are reproduced:

Scenario

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 your 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 person so you can get a short sentence or even probation.

Your Task

Please pretend the questions you are about to be asked are for your report. Think about what you should hide about yourself. How can you make yourself seem like a peaceful, calm person? What things might others think make you a risk for future crime?

Caution

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

Measures

Psychopathy Assessment

Two well-validated measures, one using an interview format and the other self-administered, were used to assess level of psychopathy.

Psychopathy Checklist – Revised. The Psychopathy Checklist – Revised (PCL-R; Hare, 2003) consists of 20 items measuring two factors and four facets (Interpersonal, Affective, Lifestyle, and Antisocial) of core psychopathic traits. The semistructured interview and file information are scored on a 3-point scale, with the follow ratings: “0” if it is not at all present, “1” if it is moderately applicable to the individual, and “2” if it is significantly applicable. While PCL-R scores are dimensional (Hare, 2003), they are typically categorized as “psychopathic” and “nonpsychopathic” for research purposes (Hare & Neumann, 2006).

The PCL-R has demonstrated good reliability and validity in European Americans samples (Hare, 1996; Hare et al., 1990; Lorenz & Newman, 2002; Kosson, Smith, & Newman, 1990) and is often considered the “gold standard” for psychopathy assessment. Internal consistency estimates of the PCL-R are high across a variety of samples, with an alpha of .84 for the pooled validation sample (Hare, 2003). Interrater reliability estimates are relatively high in a variety of samples (ICC of .86 for the pooled validation sample). As previously mentioned, a wide array of studies have demonstrated the construct validity and predictive utility of the PCL-R with respect to criminality, dangerousness, and recidivism (see Leistico et al., 2008).

Levenson Self-Report Psychopathy (LSRP) Scale. The LSRP (Levenson, Kiehl, & Fitzpatrick, 1995) is a 26-item self-report measure originally designed to assess psychopathy in noninstitutional settings. Items are scored on a 1 (*Disagree Strongly*) to 4 (*Agree Strongly*) scale. Subsequent to the original validation, the LSRP has been found to be effective in correctional samples as well (see Poythress et al., 2010). Multiple factor analyses have shown two primary factors: (a) primary psychopathy, which consists of selfish, callous, and manipulative personality traits, and (b) secondary psychopathy, which includes impulsivity, irresponsibility, and poor behavioral control (Levenson et al., 1995). Secondary Psychopathy appears to correspond highly with Factor 2 of the PCL-R, but some have raised questions on whether Primary Psychopathy is conceptually the same as PCL-R Factor 1 (Lilienfeld & Fowler, 2006).

The reliability and validity of the LSRP have been supported across various samples. In previous studies (Poythress et al., 2010), coefficient alphas were high for the LSRP total score (.83 - .86), and Primary (.82 - .84), but marginal for Secondary psychopathy (.61 - .73). Research on the LSRP suggests good criterion-related validity with moderate correlations with the PCL-R and measures of psychopathy (e.g., Brinkley, Schmitt, Smith, & Newman, 2001). Its construct validity is also supported by its relationship with conceptually relevant variables such as sensation seeking, substance abuse, and antisociality (Levenson et al., 1995).

Risk Assessment Measures

Three measures will assess risk in offenders. The HCR-20 uses an interview format, while the SAQ and PICTS are self-administered measures.

Historical-Clinical-Risk Management-20 (HCR-20). The HCR-20 is a structured professional judgment guide for the assessment of violent risk. The 20 items of the HCR-20 were chosen for their relationship to violence in the empirical literature, as well as by consulting with

forensic mental health professionals (Webster et al., 1997). Each item is rated on a 3-point scale, with “0” for not present, “1” indicating its possible presence, and “2” indicating the definite presence of the item. The HCR-20 contains 10 Historical (H) items, comprised of largely static risk factors; five Clinical (C) items concerning current mental and clinical status; and five Risk Management (R) items concerning future situational risk factors such as lack of plan feasibility and treatment noncompliance. The HCR-20 does not provide cut-scores or formulas that categorize individuals into risk levels. Rather, clinicians decide on a risk level of low, moderate, and high based on their assessment of all items.

The reliability of the HCR-20 has been firmly established based both on the scale scores and final ratings. The HCR-20 evidences good internal consistency (H alpha = .94, C alpha = .90, R alpha = .95; Dunbar, Quinones, & Crevecoeur, 2005). Additionally, interrater reliability has been found to be excellent across more than 25 studies, with an overall IRR of .85 and median scores for all three scales that are in the moderate to high range (Douglas & Reeves, 2010). Clearly, the rating of past behaviors (H) is more reliable than that of current clinical or future risk factors.

Validity studies have focused on the connection between the HCR-20 total score and its prediction of violence. The area under the curve (AUC) is the most commonly used metric for the HCR-20. An average AUC of .69 has been found across studies and settings (Douglas & Reeves, 2010). Median AUC scores for the three subscales range from .62 to .68 (Douglas & Reeves, 2010, Table 8.2). For clinical assessment, the summary risk ratings have also been validated, with similar AUC values to the scale scores (.70; Fujii, Lichten, & Tokioka, 2004).

Self-Appraisal Questionnaire (SAQ). The SAQ (Loza, 2005) is a paper and pencil measure consisting of 72 true or false items designed to assess risk for violent and nonviolent

recidivism. It uses an actuarial approach and provides users with seven clinical subscales: (a) Criminal Tendencies (CT), measuring antisocial attitudes and beliefs; (b) Antisocial Personality Problems (AP), assessing characteristics of APD; (c) Conduct Problems (CP), measuring behavioral problems during childhood; (d) Criminal History (CH), regarding the offender's history of criminal involvement; (e) Alcohol/Drug abuse (AD); (f) Anti-Social Associates (AS), assessing associations with other antisocial individuals; and (g) Anger (AN), regarding anger reactions.

The reliability of the SAQ via internal consistency and test-retest reliabilities has been found to be adequate, with an average unweighted Cronbach's alpha of .70 across subscales based on research across five countries (Loza, Cumbleton, Shahinfar, Neo, Evans, Conley et al., 2004). Test-retest reliability in a sample of Canadian offenders was found to be .95 for the total score and ranged from .69 to .93 for subscales (Kroner & Loza, 2001).

Past research has also supported the concurrent and predictive validity of the SAQ (Loza, Conley, & Warren, 2004; Loza, MacTavish, & Loza-Fanous, 2007; Summers & Loza, 2004). Loza, Cumbleton, et al. (2004) found an unweighted mean correlation of .36 between SAQ scores and number of prior offenses. More importantly, the SAQ has shown predictive validity involving rearrest for nonviolent ($r = .50$) and violent crimes ($r = .30$; Kroner & Loza, 2001; Loza & Green, 2003) and similar classification accuracy to other risk assessment measures, such as the LSI-R and VRAG.

Psychological Inventory of Criminal Thinking Styles (PICTS). The PICTS (Walters, 2001) is a paper and pencil, self-report inventory originally designed to assess criminal thinking styles but also used in risk assessment. Its 80 items are scored on a four-point Likert-type scale, from strongly agree to disagree. The PICTS generates eight thinking style scales with 8 non-

overlapping items each – (a) Mollification (Mo), (b) Cutoff (Co), (c) Entitlement (En), (d) Power Orientation (Po), (e) Sentimentality (Sn), (f) Superoptimism (So), (g) Cognitive Indolence (Ci), and (h) Discontinuity (Ds).

The PICTS' eight scales have evidenced acceptable reliability and validity. Moderate levels of internal consistency have been found, with alpha coefficients ranging from .55 to .78 (Walters & Geyer, 2005). Research has also supported the convergent and criterion validity of the PICTS. Convergent validity with the PAI antisocial scales is low to moderate, with correlations ranging from .26 to .54 for the eight thinking-style scales. Regarding criterion validity, The PICTS composite scales have shown AUCs of .61 to .68 when predicting offenders' violent behavior while incarcerated. Additionally, unweighted mean effect sizes (r) for predicting future crime have ranged from .16 to .32 (Walters, 2002).

Other Measures

One additional measure was administered to aid in the scoring of the HCR-20 personality disorder rating.

Iowa Personality Disorder Screen (IPDS). The IPDS (Langbehn, Pfohl, Reynolds, Clark, Battaglia, Bellodi, et al., 1999) is a brief screening interview for DSM-IV personality disorders. Its 11 items were chosen by analyzing responses to various combinations of items from existing structured personality disorder interviews (i.e., the Structured Interview of DSM-III-R Personality Disorders; Pfohl, Blum, Zimmermann, & Stangl, 1989). Symptoms were chosen that maximized discrimination between interviewees with and without personality disorders. Each item is evaluated with one or two questions for a total of 19 questions and scored dichotomously (0 or 1).

Past research supports the reliability and validity of the IPDS. A study using the Norwegian version of the IPDS found internal consistency ranged from .68 to .72. Importantly, reliability data have not been reported in any other published studies. The IPDS has shown moderately good convergent validity with the SIDP (.68 to .71; Langbehn et al., 1999) as well as other personality disorder screening measures, including the Interview of Interpersonal Problems – Personality Disorder scale ($r = .77$; Pilkonis, Kim, Proietti, & Barkham, 1996). Additionally, classification accuracy has been better for the IPDS than for other similar measures, with sensitivity values between .66 and .97 and specificity between .46 and .64 in the prediction of diagnoses (Morse & Pilkonis, 2007).

Criterion groups for low and high psychopathy

Offenders' PCL-R psychopathy scores under instructions for genuine responding were the main independent variables for several of the research questions in the current study. PCL-R scores were used to measure genuine level of psychopathy. As discussed in the Measures section, Hare (2003) has recommended a PCL-R cut-score of 30 for classifying psychopaths, based on validation in high-security prison settings. However, high levels of psychopathy were not expected in the current jail setting. Past studies in settings other than high-security institutions have used lowered cut-scores for psychopathy (DeMatteo, Heilbrun, & Marczyk, 2006; Harris et al., 1993; Serin, 1996; Serin, 1991), ranging from 17 to 29. In the current study, cut-scores of <19 and >19 were used to create groups of low and high psychopathic offenders, respectively, based on the mean (19.1) in a minimum security inmate sample from the 2nd Edition manual of the PCL-R (Hare, 2003).

Procedure

Institutional Review Board approval was obtained from the University of North Texas. Following this, officials at Tarrant County Jail were contacted to discuss the purpose and relevance of the study. They provided administrative approval for data collection.

A Lieutenant at the jail provided a list of offenders who had at least one felony and were new to the institution since the previous day of data collection. Research assistants first checked the list against the names of past participants to ensure no duplication from returning inmates. Each potential participant was then located and approached individually in the pod-style housing units to discuss possible participation. Alternatively, detainees in their cells were called by intercom to come to the front desk to avoid research assistants entering cells alone.

For participants who agreed to participation, a more detailed explanation of the study procedures was discussed as part of informed consent. If still agreeing to complete the study, written informed consent was obtained (Appendix A). Any questions regarding the study procedures, confidentiality, and potential risks and benefits were answered before beginning the assessment. At that time, a randomized research number was assigned to each participant to preserve the anonymity of his data. All participants were informed of the option to discontinue the study at any time without negative consequences.

Although only detainees with felonies were approached, they were first asked further about the nature and number of criminal charges and aggression to ensure at least a minimum amount of violence in the past. Offenders without a history of even minor violence were excluded; however, this procedure eliminated only three detainees. As noted, this dissertation is part of programmatic research on psychopathy and deception that requires a large number of participants with psychopathic traits. The short screening procedure ensured the collection of

adequate data with minimal participant involvement. Following the initial screen, demographic data were gathered via a short, interview-based questionnaire (Appendix B).

Research for this dissertation was conducted in two phases. The purpose of Phase 1 was to establish a genuine level of psychopathy and other risk variables for each participating detainee. The measures of Phase 1 were administered in the following order: PCL-R, IPDS, SAQ, HCR-20, and PICTS. The rationale for this order was to (a) initially establish rapport with the PCL-R interview and then (b) avoid extended periods without verbal interactions by alternating between interview-based procedures (IPDS and HCR-20) and shorter, self-administered measures (SAQ and PICTS). The PCL-R was used as a measure of genuine psychopathy for group assignment (i.e., low and moderate-high psychopathy). The HCR-20 was administered to establish a genuine level of each risk variable, with the IPDS administered to establish the presence of personality disorders, which is required for the HCR-20 scoring. The PICTS and SAQ provided additional information on risk assessment and allowed for comparisons with the HCR-20.

The purpose of Phase 2 was to assess the amount of change to HCR-20, IPDS, SAQ, and PICTS scores when instructed to minimize risk. Following a five to ten minute break, the instructions for Intentional Minimization were read by the participant and discussed with the researcher. To enhance participant involvement and understanding, each was asked to state the task and incentives in his own words. Any misconceptions were corrected. Each participant was then given several minutes to think about how he wanted to present himself in order to fulfill the intentional minimization task. The order of measures for the second phase was as follows: HCR-20, IPDS, SAQ, and PICTS.

Following completion of Phase 2, a 9-question manipulation check (Appendix C) was used in order to evaluate compliance with the study instructions. This procedure is essential in all simulation design studies (see Rogers, 2008). Free recall of the Intentional Minimization instructions was utilized to avoid simple recognition of the correct instructions. In addition, a rating of effort and success and an inquiry about the participant's strategy for IM were completed.

CHAPTER 3

RESULTS

General Manipulation Check

To ensure adherence to the instructions, all participants were required as a part of the manipulation check to recall the basic instructions and indicate at least moderate effort. Only two participants who completed the study were unable to recall the basic instructions regarding impression management. This small number is likely due to the concerted effort made by research assistants to explain the experimental instructions to participants at the outset of Phase 2. One hundred percent of those remaining recalled at least the basic instructions for both portions of the study. Importantly, all participants were able to recall the key hypothetical incentive of receiving a less severe sentence by improving their perceived risk. Two additional participants indicated they “didn’t try at all.” These four participants (4.4%) were removed from all subsequent analyses. Although the small group size makes analysis difficult, they did not significantly differ from the final group of participants on major demographic variables.

Descriptive Data

The final sample was composed of 85 male inmate participants with ages ranging from 18 to 63. The high psychopathy group was slightly younger, with a mean age of 37.05 ($SD = 2.08$), compared to the low psychopathy group ($M = 38.84$, $SD = 2.15$), $F(1, 79) = 0.36$, $p = .55$. As expected for a correctional sample, many participants had not completed high school at the time of testing (mean years of education = 10.47, $SD = 1.97$, range 6-16 years). Psychopathy groups were nearly equally regarding education, with a mean of 10.61 years for low psychopathy ($SD = 1.70$) and 10.37 years for high psychopathy ($SD = 2.20$), $F(1, 79) = 0.28$, $p = .60$. Overall,

roughly one-quarter (27.2%) received a high school diploma, while an additional 32.8% had obtained a GED.

The sample was quite diverse on several demographic variables, representing many segments of the U.S. population. More than half of the sample had never been married (49 or 57.6%), while smaller percentages were married (20 or 23.5%) or divorced (16 or 18.8%). The ethnic composition of the sample included a higher percentage of European Americans and a comparatively lower percentage of African American and Hispanic individuals than the total United States jail population in 2010 (BJS, 2010). Specifically, the current sample consisted of 44 (51.8%) European American, 28 (32.9%) African American, and 10 (11.8%) Hispanic American participants. An additional three (3.5%) identified themselves as biracial. In comparison, the U.S. jail population is 37.2% European American, 38.8% African American, and 22.6% Hispanic (BJS, 2010). All of the detainees, regardless of race or ethnicity, were fluent in English and nearly all (82 or 96.5%) listed English as their first language. Importantly, psychopathy groups did not differ significantly in their racial or ethnic make-up or English fluency.

Participants were asked about the characteristics of their instant offense, as well as a brief history of past offenses. The time since arrest for the instant offense varied widely from one to 915 days, with an average detention period of 144.26 ($SD = 207.48$) days. This average was greatly affected by a small number of outliers with very long stays. Half of the sample was arrested between 5 and 150 days before the study date, with a median of 72 days. Only one participant was serving time for his first arrest; most participants had extensive arrest histories, with the mean number of arrests at 15.09 ($SD = 13.91$). The high psychopathy group had more arrests ($M = 17.60$, $SD = 17.40$) than the low psychopathy group ($M = 11.89$, $SD = 8.27$),

although this difference was not significant, $F(1, 79) = 3.41, p = .07$. As another metric of experience with the criminal justice system, the mean length of life-time incarceration was 8.67 years ($SD = 7.88$), with no difference based on psychopathy, $F(1, 79) = 0.09, p = .76$.

The detained participants provided information about their current and most serious offenses, with more detailed information subsequently gathered on the PCL-R. Table 2 lists frequencies and percentages for current and most serious crimes. Roughly equal percentages of the sample were currently detained for the following violations or charges: violent offenses (25.9%), property offenses (24.7%) or parole or probation violation (24.7%). Of the 24.7% that remained, most were serving time for drug-related offenses (14.2%), while 10.5% had offenses that were not otherwise categorized, such as fraud and gun possession.

Regarding their most serious charges, offenses fell into one of three basic categories – property, violent, or drug offenses. Slightly over one-third of detainees (38.8%) listed their most serious crime as a property offense, with roughly the same number being arrested for violent offenses (36.4%). Drug-related offenses were less commonly listed as the most serious offense (16.4%). Overall, this sample differs from the U.S. jail population as a whole, where 48% of individuals are incarcerated for drug-related crimes (BJS, 2011). This is likely because we sought a sample with serious criminal histories with at least one felony, eliminating many detainees who had *only* drug-related misdemeanor offenses.

Table 2
Current and Most Serious Criminal Offenses Among Sentenced Jail Inmates

Category	Offense type	Current offense		Most serious offense ^a	
		<i>N</i>	%	<i>N</i>	%
Violent/Sexual	Assault	6	7.1	6	7.1
	Sexual Assault	6	7.1	7	8.2
	Aggravated Assault	7	8.2	11	12.9
	Murder	3	3.5	7	8.2
Drug/Alcohol	DWI/DUI	2	2.4	3	3.5
	Drug Possession	5	5.9	3	3.5
	Drug Distribution	4	4.7	7	8.2
	Drug Trafficking	1	1.2	1	1.2
Property	Theft	4	4.7	1	1.2
	Burglary	10	11.8	16	18.8
	Robbery	7	8.2	16	18.8
Other:	Firearm possession	2	2.4	2	2.4
	Fraud	3	3.5	2	2.4
	Parole Violation without new charge	21	24.7	-	-

Note. ^aThe most serious charges were compared to background checks on each participant following the study. No changes were necessary, because the most serious charge was reported accurately in each case on which records were available.

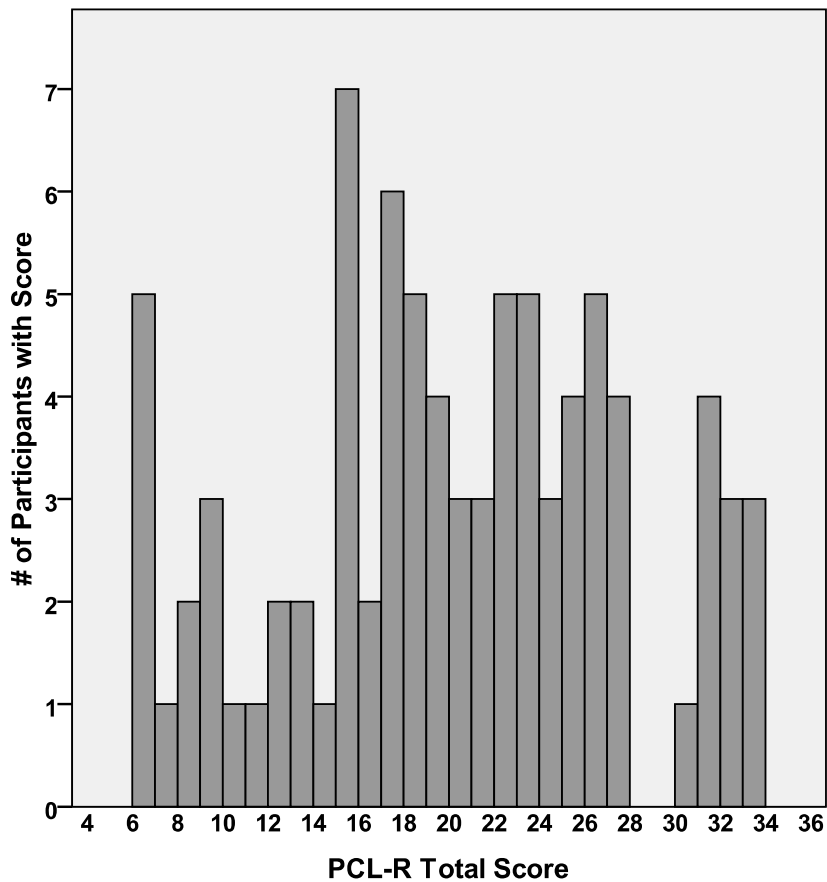
The length of sentences was assessed as another metric of experience with the correctional system and to further gauge the seriousness of each offender’s criminal history. With two individuals with life sentences being excluded, the current sample had an average “longest sentence” of 14.08 years ($SD = 17.00$), ranging from 180 days to 75 years. This number was greatly affected by outliers that increased the mean and standard deviation. In contrast, the median longest sentence length was 6.00 years, with an interquartile range from 3.00 to 20.00 years.

Assignment of PCL-R Psychopathy Groups

The PCL-R was administered and scored only during the honest condition to establish an appraisal of genuine psychopathy, which served as an independent variable in many subsequent analyses. PCL-R Total scores for the entire sample ranged from a minimum of six to a high of

33, with a mean of 19.70 and *SD* of 7.40. These scores were calculated with both a clinical interview and review of available records. As described in the Methods, two groups were created based on PCL-R scores: A “Low” group composed of those at or below 18 and a “Moderate-High” group of those 20 and above. The cut-scores of <19 and >19 were used based on the current mean (19.7), which corresponds closely to the mean of 19.1 found in the minimum security inmate sample from the 2nd Edition manual of the PCL-R (Hare, 2003).

Figure 1.



Research Question Analyses

Research Question # 1

Research Question #1 investigates the susceptibility of a structured professional judgment guide, the HCR-20, and two self-administered questionnaires, the PICTS and SAQ, to intentional minimization. Low and High Psychopathy groups were compared to evaluate the effects psychopathy has on intentional minimization.

Hypothesis 1: *Offenders in the Impression Management condition will significantly decrease their perceived level of risk on all three risk assessment measures when compared to the control condition under standard instructions.*

The HCR-20 was found to be highly vulnerable to positive impression management when examined via a within-subjects, repeated measures Analysis of Variance (ANOVA). HCR-20 scores range from 0-40; however, the manual and later studies do not provide cut or classification scores. Rather, clinicians are asked to decide on a low, moderate, or high level of risk based on clinical judgment that is guided by the items of the HCR-20. As a bench mark for the current study, past studies of offenders have found mean Total HCR-20 scores clustered closely between 19.1 ($SD = 7.8$, Coid et al., 2011) and 20.1 ($SD = 7.9$, Douglas et al., 2005). Under honest instructions, HCR-20 Total scores in the current study were considered moderately high, with an average of 21.15 (see Table 3). During the positive impression management administration, scores changed by an average of 7.74 points, resulting in a mean of 13.41 and producing a very large effect size ($d = 1.20$).

Table 3

Differences on HCR-20 Scale Scores Between Honest and Positive Impression Management Conditions

Scale	Honest		PIM		<i>F</i>	<i>p</i>	<i>d</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
Historical	11.37	3.38	6.86	3.47	100.25	.0001	1.32
Clinical	4.33	1.72	2.48	1.77	57.15	.0001	1.06
Risk	5.49	2.39	4.11	2.24	25.87	.0001	0.60
Total	21.15	6.38	13.41	6.49	110.68	.0001	1.20

Note. $N = 75$; For HCR-20 subscales, Historical = 10 items, Clinical = 5 items, Risk = 5 items.

All HCR-20 subscale scores followed the same basic pattern and were vulnerable to positive impression management. The Historical scale yielded the largest decrease in scores, resulting in a large effect size ($d = 1.32$) that even exceeded that of the HCR-20 Total score. Likely due to the restricted range under the Honest condition, mean changes on the Clinical and Risk scales were comparatively small, averaging less than two points and producing small effects ($d = 1.06$ and 0.60). Interestingly, the large differences in effect sizes may highlight the type of material that participants found most relevant to their task. Historical items (e.g., previous violence, age of first violence, substance use, and supervision failure) may appear to be clear indicators of violent risk. On the other hand, Clinical and Risk items (e.g., lack of insight, negative attitudes, and lack of personal support) may have been less clearly linked to risk level and, therefore, were less suppressed during the impression management phase. This idea is explored further in later hypotheses.

Jail detainees were also able to considerably suppress scores on self-report risk measures during impression management. The scales followed the predicted pattern for both the SAQ total scale (Table 4) and GCT (Table 5). However, SAQ subscales varied markedly in their susceptibility to positive impression management. For instance, impression management had the greatest effect on subscales measuring antisocial history, including antisocial personality

problems ($d = 1.23$), criminal history (1.10) and conduct problems (1.01). On the other hand, scales measuring other problematic, but nonviolent traits, such as anger, alcohol and drugs, and criminal tendencies ($M d = 0.94$) were somewhat lower. The greatest outlier, measuring antisocial associates (AA), is the only scale assessing relationships and was much lower ($d = 0.36$). This concept likely requires more insight and will be explored further in later sections. However, another likely explanation is the greatly restricted range (i.e., 0-3) of AA, which created a floor effect.

Table 4
Differences on Self Assessment Questionnaire (SAQ) Scale Scores Between Honest and Impression Management Conditions

Scale (items)	Honest		PIM		<i>F</i>	<i>p</i>	<i>d</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
CT (27)	12.49	4.23	8.83	3.70	43.69	.0001	0.92
AP (5)	2.87	1.10	1.48	1.16	64.00	.0001	1.23
CP (18)	9.43	4.20	5.30	3.95	47.28	.0001	1.01
CH (6)	3.98	1.30	2.43	1.51	55.09	.0001	1.10
AD (8)	4.25	1.88	2.54	1.79	45.40	.0001	0.93
AA (3)	1.70	0.80	1.38	0.97	4.94	.03	0.36
AN (5)	2.33	1.89	0.78	1.29	35.59	.0001	0.96
Total (67)	34.73	9.93	21.95	9.11	73.06	.0001	1.34

Note. $N = 75$; For SAQ scales, CT = Criminal Tendencies, AP = Antisocial Personality Problems, CP = Conduct Problems, CH = Criminal History, AD = Alcohol/Drugs, AA = Associates, AN = Anger.

Offenders, on average, had much greater difficulty simulating prosocial attitudes on the PICTS than what was previously reported on the HCR-20 and SAQ. General Criminal Thinking (GCT; the total score) yielded a mean of 131.10 under the honest condition (i.e., moderately high range based on the original validation group; see Walters, 2001). Under positive impression management, scores decreased moderately to a mean of 111.56 ($d = 0.61$). This PIM average is at the low end of the moderate range suggested by Walters (2001) and is equal to the 50th percentile of the original validation group's scores. It is interesting that scores were not decreased

more drastically. Effect sizes for the PICTS subscales ranged from 0.10 to 0.83, a range that is almost entirely below the effect size range for the SAQ subscales. As its name implies, the Psychological Inventory of Criminal Thinking focuses on primarily cognitive behavior. Offenders may be less proficient at deciding which thinking errors are “risky” as compared to what behaviors are risky.

Table 5
Differences on the Psychological Inventory of Criminal Thinking Styles (PICTS) Scales Between Honest and Impression Management Conditions

Scale (items)	Honest		PIM		<i>F</i>	<i>p</i>	<i>d</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
<u>Individual Scales</u>							
Mo (8)	13.65	4.24	13.21	4.34	0.49	.49	0.10
Co (8)	15.11	5.15	11.46	4.45	32.31	.0001	0.76
En (8)	14.61	4.56	12.29	4.32	13.66	.0001	0.52
Po (8)	14.62	5.27	12.25	4.83	12.61	.001	0.47
Sn (8)	19.05	5.31	17.56	4.79	5.27	.03	0.29
So (8)	17.80	4.93	14.67	4.87	20.45	.0001	0.64
Ci (8)	18.84	5.59	14.97	5.25	31.15	.0001	0.71
Ds (8)	17.27	6.35	14.60	5.06	21.22	.0001	0.47
<u>Factor Scales</u>							
CUR (13)	27.27	9.82	22.31	8.08	24.32	.0001	0.55
HIS (12)	26.34	8.57	19.61	7.53	38.01	.0001	0.83
<u>Composite Scales</u>							
P ^a	87.54	27.64	67.96	23.38	30.77	.0001	0.76
R ^a	90.30	31.03	72.14	24.17	31.33	.0001	0.65
<u>Total Scale</u>							
GCT (64)	131.10	32.62	111.56	31.12	28.37	.0001	0.61

Note. *N* = 75; For individual scales, Mo = Mollification, Co = Cutoff, En = Entitlement, Po = Power Orientation, Sn = Sentimentality, So = Superoptimism, Ci = Cognitive Indolence, Ds = Discontinuity. For content scales, CUR = Current Criminal, HIS = Historical Criminal Thinking. For composite scales, P = Proactive Criminal Thinking, R = Reactive Criminal Thinking. For total score, GCT = General Criminal Thinking. ^aP and R are composed of a combination of weighted individual scales rather than individual items.

The factor scales of the PICTS were, on average, more resistant to change than the scales of the HCR-20 and SAQ. Offenders lowered historical items to a greater degree than current items, a pattern also seen on the HCR-20 scales. However, compared to the HCR-20, effect sizes were much smaller. At the content level, all scales were lower than the average change found on the SAQ and HCR-20, and thus can be considered less vulnerable to PIM. Two scales were particularly resistant to change during impression management – Mollification (Mo) and Sentimentality (Sn). These scales measure tendencies to blame criminal attitudes on adverse life events, like a chaotic childhood (i.e., Mo), and the use of prosocial acts to compensate for antisocial ones (i.e., Sn). The average scores under honest instructions for both scales are relatively low. The low effect sizes and lack of significant change may therefore indicate that offenders did not see a need to suppress these scores. Like the Antisocial Associates scores of the SAQ, Mo and Sn may not have been seen as risky items, or alternatively, items may have been less face valid and obvious to detainees.

***Hypothesis #2:** Offenders high in psychopathic traits will decrease their perceived level of risk significantly more than those low in psychopathic traits.*

In general, the high psychopathy group evidenced a greater capacity to mask their appraised risk when compared to the low psychopathy group. However, effects were not as consistent or large as found with Hypothesis 1. Three conceptually significant findings are described in subsequent paragraphs: (a) the HCR-20 is the most susceptible to impression management, (b) while the high psychopathy group underwent more change, mean scores in Phase 2 were similar for both psychopathy groups, and (c) the PICTS is more difficult to fake during PIM than other measures across both levels of psychopathy.

High psychopathy offenders were able to reduce their HCR-20 scores much more dramatically than low psychopathy offenders. Larger differences between groups were found for the HCR-20 than the SAQ and PICTS (i.e., $M d_1 - d_2 = 0.56$ vs. 0.24 and 0.20, respectively; see Tables 6, 7, and 8, as well as Appendix D for descriptive data and ANOVA statistics). The HCR-20 was the only measure that had statistically significant differences between psychopathy groups.

The most dramatic difference between high and low psychopathy offenders occurred with the HCR-20 Risk scale, with smaller differences on the other two subscales. Those in the high psychopathy group were easily able to recognize risky content on all scales. In stark contrast, those in the low psychopathy group created comparatively small changes. Interesting, even though the largest difference between groups occurred on the Risk scale, it actually had a lower effect size within each group (see Table 6). The large difference between groups appears to be a product of the very low change produced by the low psychopathy group (i.e., $d = 0.24$). Item level analysis shows that those low in psychopathy have better social support and plans for the future, leading to a low honest condition level of risk, and thus, little change during PIM.

Table 6
Effect of High and Low Psychopathy Scores on Impression Management on the HCR-20

Scale	<u>High Psychopathy</u> ($n = 34$)		<u>Low Psychopathy</u> ($n = 33$)		$d_1 - d_2$
	<i>Change score</i>	d_1	<i>Change score</i>	d_2	
Historical	5.73	1.62*	3.48	1.10*	0.52*
Clinical	2.40	1.39*	1.41	0.93*	0.46
Risk	2.27	0.97*	0.48	0.24*	0.73*
Total	10.04	1.55*	5.37	1.01*	0.54*

Note. High Psychopathy is PCL-R > 19, Low Psychopathy is PCL-R < 19. Change scores measure PIM condition minus Honest condition. * indicates statistically significant change ($p < .01$). See Appendix D for descriptive data and exact p values.

Both high and low psychopathy offenders appeared to heed the caution about making their scores too-good-to-be-true. This finding is exhibited by a pattern in which the high psychopathy group obtaining higher scores in the honest condition than the low psychopathy group, while both groups obtained similar scores during the impression management condition. This pattern occurred on all four HCR-20 scales and the SAQ Total scale and suggests a general floor that all offenders, regardless of psychopathy level, felt was appropriate for positive impression management. For example, the HCR-20 total score decreased 10.4 points on average for the high psychopathy group but only 5.37 points in the low psychopathy group. A closer examination reveals the high psychopathy group obtained similar PIM scores to the low psychopathy group (14.08 vs. 12.33; see Appendix D). Thus, it was much higher scores during the honest condition (24.47 vs. 17.70) that were responsible for the large effect size.

Table 7
Effect of High and Low Psychopathy Scores on Impression Management on the SAQ

Scale	High Psychopathy (n = 34)		Low Psychopathy (n = 33)		$d_1 - d_2$
	Change score	d_1	Change score	d_2	
CT	4.70	1.17	2.48	0.62	0.55
AP	1.53	1.34	1.04	0.99	0.35
CP	4.47	1.15	3.93	1.04	0.11
CH	1.90	1.33	1.26	0.90	0.43
AD	1.80	0.90	1.59	0.93	-0.03
AA	0.20	0.23	0.52	0.54	-0.31
AN	2.00	1.22	1.11	0.73	0.49
Total	14.60	1.50	10.81	1.20	0.30

Note. High Psychopathy is PCL-R > 19, Low Psychopathy is PCL-R < 19. Change scores measure PIM condition minus Honest condition. CT = Criminal Tendencies, AP = Antisocial Personality Problems, CP = Conduct Problems, CH = Criminal History, AD = Alcohol/Drugs, AA = Associates, AN = Anger.

The high psychopathy group produced appreciably higher effect sizes (i.e., > .30) on four of the eight SAQ scales. Specifically, higher psychopathic traits led to greater change during

PIM for scales measuring a history of criminal behaviors (i.e., CT and CH) and personality characteristics associated with violence (i.e., AP and AN). As the d_1-d_2 values in Tables 7 indicate, those four scales produced an average effect size of 0.46. In direct contrast, differences were either trivial or in the opposite direction (i.e., AA $d_1-d_2 = -0.31$) for the remaining four scales. This pattern is not surprising: these scales measured childhood behavioral problems (CP) and drug use (AD), which were common in both groups. These problems were clearly seen as “risky” historical variables worthy of changing during impression management by both psychopathy groups (see Appendix D for descriptive data).

One surprising finding was the greater amount of change to a scale measuring relationships with antisocial associates (AA) among the low psychopathy group ($d_1-d_2 = -0.31$). When examining means, it becomes clear that the scale had a very low honest score in both groups, leaving little room for impression management. The low variability on this three-item scale makes very small differences (0.32 points) in change scores influential to the effect size calculation.

Table 8
Effects of High and Low Psychopathy Scores on Impression Management on the PICTS

Scale	High Psychopathy (n = 34)		Low Psychopathy (n = 33)		$d_1 - d_2$
	Change score	d_1	Change score	d_2	
Mo	0.60	0.13	-0.45	-0.11	0.24
Co	3.00	0.60	3.09	0.67	-0.07
En	2.20	0.46	1.56	0.38	0.08
Po	3.47	0.64	0.21	0.05	0.59
Sn	1.90	0.33	0.69	0.15	0.18
So	4.20	0.81	0.67	0.15	0.66
Ci	3.97	0.66	2.29	0.47	0.19
Ds	2.10	0.34	2.96	0.56	-0.22
CUR	4.57	0.47	4.00	0.48	-0.01
HIS	7.30	0.84	4.05	0.55	0.29
GCT	21.43	0.59	9.67	0.36	0.23

Note. High Psychopathy is PCL-R > 19, Low Psychopathy is PCL-R < 19. Change scores

measure PIM condition minus Honest condition. Mo = Mollification, Co = Cutoff, En = Entitlement, Po = Power Orientation, Sn = Sentimentality, So = Superoptimism, Ci = Cognitive Indolence, Ds = Discontinuity, CUR = Current Criminal Thinking, HIS = Historical Criminal Thinking, GCT = General Criminal Thinking.

The PICTS has comparatively little vulnerability to PIM. Even offenders with high psychopathic traits had virtually no advantage in their attempts to deceive (see Table 8). Thinking styles may be more difficult to lie about than the behavioral content found on the other two measures. The only two exceptions on the PICTS involved Power Orientation (Po) and Superoptimism (So). Po is elevated by those who seek power and control. Therefore, Po may tap into the psychopathic traits of conning and manipulateness, while being fairly uncommon among non-psychopathic offenders. Indeed, means (see Appendix D) indicate that Po had the second lowest endorsement of any scale by the low psychopathy group, allowing little change in the PIM condition. So (Superoptimism) was one of the most elevated scales in the honest condition in both groups, but was only reduced greatly by the high psychopathy group. This pattern may indicate that So was not seen as risky except at the very high rates endorsed by psychopaths in the honest condition.

***Hypothesis #3:** Offenders high in psychopathic traits will decrease their risk scores to a greater extent on the interview-based HCR-20 than on the self-administered PICTS or SAQ.*

Based on the findings of Lee et al. (2008), it was hypothesized the interview-based approach would afford high psychopathy offenders more of an opportunity to use their skills of interpersonal deception than non-interactive self-report scales. Lee and colleagues (2008) found those higher in psychopathic traits were able to convincingly deceive members of the community more frequently than those lower in psychopathic traits. Using $d \geq .30$ as a benchmark for an appreciable difference in effect sizes, the high psychopathy group in the current study changed

scores significantly on the HCR-20 when compared to the self-report PICTS (HCR-20 $d_1-d_2 = 0.54$ vs. PICTS $d_1-d_2 = 0.23$; see final column, Table 9). The same was not true for the SAQ ($d_1-d_2 = 0.30$), which also uses a self-report format. Thus, it is unlikely the mode of administration alone is responsible for the larger differences found in the high psychopathy group. One possible explanation for differences in impression management ability involves the level of insight required to respond to an item, which is explored in Hypothesis 7.

Table 9

Differential Effect of Psychopathy on Total Scores for Interview-Based vs. Self-Report Measures.

Scale	<u>High Psychopathy</u> (n = 34)		<u>Low Psychopathy</u> (n = 33)		d_1-d_2
	<i>Change score</i>	<i>d</i>	<i>Change score</i>	<i>d</i>	
HCR Total	10.04	1.55	5.37	1.01	0.54
SAQ Total	14.60	1.50	10.81	1.20	0.30
PICTS GCT	21.43	0.59	9.67	0.36	0.23

Note. Change scores are Impression Management condition minus Honest condition. HCR = Historic, Clinical, Risk-20, SAQ = Self Assessment Questionnaire, GCT = General Criminal Thinking.

Research Question #2

Research Question #2 examined the association between genuine PCL-R factor scores and offenders' ability to lower their perceived level of risk on three risk assessment measures. The effects that the interpersonal and affective traits of psychopathy have in aiding deception were compared to the antisocial and lifestyle components of psychopathy.

Hypothesis #4: *Offenders high in PCL-R Factor 1 traits of psychopathy will be more successful at minimizing their level of risk on the HCR-20 than those lower in Factor 1 traits.*

The interpersonal and affective traits of psychopathy, such as glibness, manipulateness, and callousness, are theorized to assist lying more than antisocial behaviors. Pathological lying itself is one item of PCL-R Factor 1. To assess the effect that Factor 1 traits had on change scores

of the HCR-20, two sets of hierarchical regressions were employed. In the first, Factor 1 scores were entered as the first independent variable, followed by Factor 2 scores (see Table 10). The second regression was created by entering the factor scores in the reverse order, starting with Factor 2 alone. Before the analyses were performed, the independent variables were examined for collinearity. Examination of the variance inflation factor (all less than 1.6), and tolerance (all greater than .86) suggest a lack of collinearity for the following two models.

Interpersonal and affective traits retained their importance in predicting the level of deception used even when taking antisocial behaviors into account. When assessing the effect of Factor 1 alone, it was found to predict roughly one-third of the variability in HCR-20 Total scores ($R^2 = .34$). The strength of association between Factor 1 and HCR-20 scores was not greatly effected by the addition of Factor 2 ($\Delta R^2 = .02$, not statistically significant). This finding appears to indicate that not only was Factor 1 a better predictor of change during impression management, but it does not lose value when antisocial and criminal lifestyle traits are added. This result is interesting because the HCR-20 measures some of these same basic characteristics. Therefore, while these antisocial traits were likely being lowered during the impression management condition, they were themselves not predictive of this ability. Rather, initial levels of Factor 1 were predictive.

When antisocial behavior was accounted for first, it was still greatly outweighed by the added effect of interpersonal and affective traits. With only Factor 2 entered, roughly 12% of the change in HCR-20 scores was predicted. The addition of Factor 1 resulted in an R^2 increase of .24 (i.e., 36% total variability predicted). Taken together, the two models clearly support the connection between Factor 1 of the PCL-R and deception. Although deception is an important aspect of Factor 2 behaviors (criminal versatility, irresponsibility, parasitic lifestyle),

endorsement of these behaviors does not predict the use of deception in the risk assessment context.

Table 10

Predition of HCR-20 Risk Assessment Scores by the Two Factors of Psychopathy.

	<i>R/r</i>	<i>R</i> ²	ΔR^2	<i>St B</i>		<i>R/r</i>	<i>R</i> ²	ΔR^2	<i>St B</i>
Model 1	.584	.341	.341*			.350	.123	.123*	
	F1			.584*	F2				.350*
Model 2	.601	.361	.020			.601	.361	.239*	
	F1			.527*	F2				.154
	F2			.154	F1				.527*

Notes. HCR-20 = Historical Clinical Risk - 20, F1 = PCL-R Factor 1 (Affective/Interpersonal), F2 = PCL-R Factor 2 (Antisocial Lifestyle); * indicates statistical significance at $p < .01$.

Hypothesis #5: *Offenders high in PCL-R Factor 1 traits of psychopathy will not have significantly different PICTS and SAQ scores when compared to those lower in Factor 1 traits.*

The interpersonal and affective traits of psychopathy are theorized to assist with deception less on self-report measures than on interviews. Hypothesis 4 showed these traits positively affected deception on the interview-based HCR-20 much greater than antisocial (i.e., Factor 2) traits. However, self-report measures do not allow the individual to use these interpersonal traits to their advantage. Interpersonal deceptive skills such as glibness, superficial charm, and a tendency to con are not useful on pen-and-paper assessments. Like Hypothesis 4, this hypothesis was investigated via two hierarchical regressions. In the first equation, Factor 1 scores were entered first, followed by Factor 2. The order of entry was reversed in the second equation. This process was repeated for the SAQ and PICTS.

Affective and interpersonal traits did not aid deception on the SAQ to nearly the extent they did on the HCR-20. In fact, when Factor 1 was entered alone, R^2 was 0.13 (Table 11), while the same traits predicted nearly one-third of the change in HCR-20 scores. The addition of Factor 2 scores resulted in a small but important change ($\Delta R^2 = .06$). Clearly, affective and interpersonal

traits were more strongly related to deception during the interview than during self-report due to the interaction with the examiner. Interestingly, it appears that both types of traits were roughly equal in predicting SAQ change, whereas interpersonal traits had a much larger effect on the HCR-20 (see above).

Table 11
Effect of PCL-R Factors on Deception on SAQ and PICTS Self-Report Measures

	<i>R</i>	<i>R</i> ²	ΔR^2	<i>St B</i>		<i>R</i>	<i>R</i> ²	ΔR^2	<i>St B</i>
<u>SAQ</u>									
Model 1	.365	.133	.133**			.359	.129	.129**	
F1				.365*	F2				.359**
Model 2	.437	.191	.058*			.437	.191	.062	
F1				.268*	F2				.259
F2				.259	F1				.268*
	<i>R</i>	<i>R</i> ²	ΔR^2	<i>St B</i>		<i>R</i>	<i>R</i> ²	ΔR^2	<i>St B</i>
<u>PICTS</u>									
Model 1	.198	.039	.039			.211	.044	.044	
F1				.198	F2				.211
Model 2	.250	.062	.023			.250	.062	.018	
F1				.143	F2				.162
F2				.162	F1				.143

Notes. SAQ = Self Assessment Questionnaire, PICTS = Psychological Inventory of Criminal Thinking Styles, F1 = PCL-R Factor 1 (Affective/Interpersonal), PCL-R F2 = Factor 2 (Antisocial Lifestyle). The dependent measures utilize change scores from the honest to impression management condition. For significance, * indicates $p < .05$, ** indicates $p < .01$.

The PICTS differs substantially from the SAQ in that neither PCL-R Factor 1 nor 2 appeared to have advantaged offenders. Utilizing both Factors accounted for only a minimal 6.2% of the variance (Table 11). The lack of predictive ability is not surprising given earlier findings showing that the PICTS was not very susceptible to positive impression management for either group. Psychopathy, and especially Factor 1, did not affect either self-report measure as much as the interview-based HCR-20. These findings likely have two explanations. First, the PICTS may be resistant to change due to its focus on thinking styles (i.e., internal processes that

may require insight) rather than observable events or behaviors. This type of content is theorized to be less “fakable” and thus, its items undergo less change between experimental conditions. Psychopathy likely does not affect the ability to fake such traits. Second, the differential effects on the HCR-20 versus the self-report measures support the hypothesis that impression management may be easier during verbal interviews.

***Hypothesis #6:** PCL-R Facet 1 (interpersonal) will exhibit the strongest association with successfully decreased risk assessment scores.*

In line with the thinking for Hypothesis #5, interpersonal traits captured by Facet 1 were judged to be core characteristics for successful PIM. However, affective traits were found to have a greater predictive ability than interpersonal traits on interview-based deception (Table 12). Because previous analyses found little support for the effect of Factor 1 on the SAQ and PICTS, only the HCR-20 was included in this more fine-grained analysis concerning the facets that contribute to Factors 1 and 2. When examining semi-partial correlations, it is clear that affective traits (F2), such as a lack of empathy and remorse and shallow emotions, were the best predictors of positive impression management. This interesting finding suggests a lack of intense emotional experience is more important than interpersonal charm and glibness to a detainee’s use of deception.

Lifestyle traits, such as need for stimulation, a lack of goals, and impulsivity, were found to have no predictive utility for PIM. As Table 12 shows, all facets except 3 (lifestyle) had semipartial correlations greater than .17. In fact, after accounting for the effects of the other three facets, Facet 3 has no connection with changes in HCR-20 scores. While individuals high in Facet 3 use deception frequently in support of their parasitic lifestyle, it is likely the other traits of psychopathy allow their successful deceptions. As a final note, the overall strength of the

model ($R^2 = .403$) is not surprising given the known relationship between psychopathy and violent risk prediction.

Table 12
Ability of the Four-Facet Model of Psychopathy to Predict Changes in HCR-20 Scores.

Variable	Zero-Order r					β	Sr^2
	HCR	F1	F2	F3	F4		
F1	.45					.20	.17
F2	.55	.45				.37	.32
F3	.26	.34	.23			.01	.00
F4	.46	.34	.38	.45		.25	.21
						Model Totals:	
<i>Mean</i>	7.74	3.54	3.49	5.26	6.07	$R =$.64
<i>SD</i>	5.74	2.40	2.38	2.09	2.34	$R^2 =$.403

Note. HCR = Historical Clinical Risk-20, F1 = Facet 1 (interpersonal), F2 = Facet 2 (affective), F3 = Facet 3 (lifestyle), F4 = Facet 4 (antisocial), sr^2 = semipartial correlation coefficient.

Research Question #3

Research Question #3 addresses the item content that offenders minimize in the PIM condition across all three risk assessment measures. Items that emphasize historical behaviors were expected to decrease to a greater extent than cognitive and affective items, which require more insight to recognize.

Hypothesis #7: *Larger effect sizes will be found between Impression Management and Control groups for items with criminal content than for attitudinal and mental health content on the PICTS and SAQ.*

As predicted, detainees exhibited more deception on scales measuring criminal involvement than those measuring attitudes or clinical history. For example, the Cohen's d of the Historical scale of the HCR-20 was 0.26 higher than the Clinical scale and 0.72 higher than that of the Risk scale, both of which contain fewer items measuring specific behaviors (see Table 3). Furthermore, all of the PICTS scales measure various forms of criminal thinking, rather than

direct behaviors, and underwent less change than other measures. The PICTS effect sizes ($M d = 0.50$) are, on average, only half those found on the HCR-20 ($M d = 0.99$) and the SAQ ($M d = 0.93$), both of which contain more items measuring criminal behavior.

PICTS subscales addressing specific behaviors were more affected by impression management than scales that discussed attitudes directly, without clear behavioral anchors. For example, item #70 (“When frustrated I will throw rational thought to the wind with such statements as ‘F*** it’ or ‘the hell with it’”) was more vulnerable to impression management than item #66 (“There is nothing worse than being seen as weak or helpless.”). The same vulnerability to PIM can be seen on the Cutoff (Co) and Superoptimism (So) scales, both of which contain items pertaining to cognitive strategies for justifying crimes. Most of the items on these scales require an initial admission that criminal activity has occurred (“After committing a crime, I often...”). The effect of impression management on these two scales was higher than most other scales, with effect sizes of 0.76 for Co and 0.64 for So, compared to a mean of 0.42 for the remaining content scales.

Unlike the PICTS, the SAQ scales did not reliably follow the same pattern of higher vulnerability for behavioral content scales. For example, the mean d of 0.99 on criminal behavior scales (CT, CP, CH, and AD) was similar to the d for affective/cognitive scales ($M d = 0.85$ for AP, AA, and AN). The small difference was entirely due to one scale – AA, with a d of 0.36 – far below the other scales. AA (Antisocial Associates) is the only scale across any of the three dependent measures that assesses the effect that interpersonal relationships have on the individual. As briefly mentioned previously, it may be difficult for detainees, especially those with high psychopathy traits, to understand the adverse impact their relationships have on their own functioning. This evident lack of insight might lower honest condition scores (i.e.,

unrealistically positive view) or fail to lower scores during impression management (i.e., lack of perceived need to improve relationship quality).

Table 13

SAQ scale content and its effect on impression management

Scale	<i>M</i> Δ	<i>F</i>	<i>P</i>	<i>d</i>
Criminal behavior content				
CT	3.66	43.69	<.0001	0.92
CP	4.13	47.28	<.0001	1.01
CH	1.55	55.09	<.0001	1.10
AD	1.71	45.40	<.0001	0.93
<i>Mean</i>	2.76			0.99
Affective/Cognitive content				
AP	1.39	64.00	<.0001	1.23
AA	0.32	4.94	.030	0.36
AN	1.55	35.59	<.0001	0.96
<i>Mean</i>	1.09			0.85

Note. CT = Criminal Tendencies, CP = Conduct Problems, CH = Criminal History, AD = Alcohol/Drugs, AP = Antisocial Personality Problems, AA = Antisocial Associates, AN = Anger.

Supplementary Questions

Supplementary Question #1: *Will the high psychopathic traits group be less successful than the low psychopathic traits group at minimizing items that require insight, such as negative attitudes, impulsivity, and psychopathy itself?*

Supplementary Question #1 is an extension of Hypothesis 7 and asks whether offenders high in psychopathic traits will have difficulty minimizing risk assessment items that require insight to recognize. The HCR-20 includes insight-oriented items that are not clearly attached to specific objective behaviors (negative attitudes, personality disorder symptoms, lack of personal support, and psychopathy itself) that will be compared to those on other, non-insight based scales⁶ (history of violence, previous arrests). During PIM, the scale of HCR-20 items requiring insight underwent a much smaller change than the non-insight scale ($d = 0.72$ and 1.22 ,

respectively). This indicates a greater ability or willingness to hide content that does not require insight to modify.

Table 14
Change in Insight and Non-Insight Scale Scores from Honest to Positive Impression Management Conditions

Scale	Honest		PIM		F	p	d
	M	SD	M	SD			
Insight	3.64	1.84	2.33	1.84	29.26	.0001	0.72
Non-Insight	17.61	5.09	11.22	5.42	97.16	.0001	1.22

Note. N = 65.

Supplementary Question #2: *Will the high psychopathic traits group exhibit more confidence that the low psychopathic traits group in their ability to intentionally minimize?*

This question could not be effectively addressed because of a ceiling effect. Specifically, nearly all offenders (93.9%) were confident in their success. Although the percentage was numerically higher for offenders with high psychopathy, the difference was insignificant, $\chi^2(1) = 0.31, p = .57$ (see Table 15). The lack of significance was primarily due to all but three participants believing that they were successful at lowering their risk.

Table 15
Differences in Confidence of Success Based on the Presence of Psychopathy Traits

	Psychopathy		Mean
	Low	High	
Self-assessment at deception			
Successful %	92.0	95.8	93.9
Unsuccessful %	8.0	4.2	6.1

Supplementary Question #3: *Will level of confidence be related to an actual decrease in risk assessment scores?*

Past research indicates that deception *detection* is unrelated to the confidence of the rater (DePaulo, Charlton, Cooper, Lindsay, & Muhlenbruck, 1997; Klaver et al, 2009; Sporer, Penrod, Read, & Cutler, 1995), but confidence in minimizing risk has not been investigated in relation to

the actual deceiver. Evidence from malingering studies suggest confidence is not associated with more success.

When assessing the connection between self-assessed success at deception and actual impression management ability, results were not statistically significant. Interestingly, all three measures had slightly higher change scores for those who rated themselves as unsuccessful (Table 16). The fact that only four participants rated themselves as unsuccessful, while the remainder felt they were successful, makes these results difficult to generalize. However, it generally supports past research showing that confidence has little to do with deception ability.

Table 16
The Effect of Self-assessed Confidence in Successful Positive Impression Management

Scale	<u>Successful</u> (<i>n</i> = 51)		<u>Non-Successful</u> (<i>n</i> = 4)		<i>F</i>	<i>p</i>	<i>d</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
HCR-20 Total	7.80	5.81	8.50	5.07	0.55	.82	-0.12
SAQ Total	12.73	11.81	15.25	12.61	0.17	.12	-0.21
PICTS GCT	18.65	29.65	23.25	8.62	0.09	.76	-0.16

Note. HCR-20 Total = Historic, Clinical, Risk-20 Total Score, SAQ Total = Self Assessment Questionnaire Total Score, PICTS GCT = Psychological Inventory of Criminal Thinking - General Criminal Thinking. Data represent change scores from the honest to PIM conditions.

Post-hoc Manipulation Check

A series of manipulation check questions assessed participants' perception of their effort and success. Almost all participants reported very good to excellent effort, with 94.6% rating their effort as a 7 or higher out of 10, with a modal rating of 9. Similarly, most (91.1%) believed they were successful at lowering their risk and deserving of the lesser sentence they were instructed to work towards in the Impression Management (IM) condition.

As a qualitative analysis, detainees described a variety of personal information they chose to change during positive impression management. Not surprisingly, the most frequently noted

changes were to history of violence (endorsed by 28.6% of participants). This risk-raising quality was followed by other traits that have clear connections to risk, namely difficulty managing anger and history of drug use, which were lowered by 19.0% and 17.5% of participants, respectively. Smaller percentages reported they increased their endorsement of “rational thinking” items (14.3%), reduced criminal thinking or attitudes (11.1%), or reduced the number of charges they admitted having (11.1%). While reducing charges might seem like an obvious choice, offenders were likely aware that this could be easily checked by the examiners. A small number of participants reported they actually used the opposite approach and increased their childhood maladjustment or adversity in an attempt to justify later crime.

CHAPTER 4

DISCUSSION

The growing number of Americans under the supervision or custody of the criminal justice system is staggering and annual estimates have shown no signs of slowing (FBI, 2009). More than 2.2 million people are currently incarcerated in federal, state, and local jails and prisons, representing a 500% increase over the last 30 years (The Sentencing Project, 2010). More than double that number are under community supervision, with an estimated 5 million supervisees under the watch of 100,000 probation and parole officers (Byrne, 2006). Considered longitudinally, over 95% of incarcerated persons will eventually be released and are liable to offend again. Over the last thirty years, recidivism rates have remained relatively stable, with approximately two-thirds (62.5% to 67.5%) of those released being rearrested within 3 years (BJS, 2002). Re-arrest of violent offenders specifically is only slightly lower, with prevalence estimates from 59.6% to 61.7%.

The solutions to lowering such shocking statistics on recidivism are hotly debated and depend on the perceived goals of incarceration (Cornell, 2011). If the stated goal is to rehabilitate, recidivism should be lowered with an increased emphasis on treatment while incarcerated, as well as improving post-release training and planning. If the goal is deterrence or incapacitation, increased sentence lengths should theoretically lower rates. A debate about the most effective methods is beyond the scope of this discussion. Instead, I focus here on making the most well-informed and effective choices when deciding to release an offender from custody. When such decisions rely directly on offender-provided data, a major emphasis is the avoidance of misinformation due to intentional deception. These decisions are particularly pertinent to psychological assessment due to the prevalence of mental disorders in correctional settings. As

discussed in the Introduction, non-forensic inpatient hospitalizations have dropped by 90% over the last 40 years (Althouse, 2010). Many mentally disordered patients, who would have been housed in state hospitals half a century ago, are now incarcerated in prison or jail at some point in their lives (American Psychiatric Association, 2004). The incarceration of the mental disordered no doubt contributes to the rampant growth of the correctional system discussed previously. With over 7 million individuals passing through our criminal justice system, risk assessment can be considered one of the most important decisions in corrections and community supervision today (Byrne, 2006).

The Increased Need for Risk Assessments

Simon (2005) suggested the acceptance and use of risk assessment procedures is unprecedented in the history of forensic psychology. In the last three decades, political demand for crime prevention has led to concomitant increases in research and policy to support the use of such procedures. Consequently, risk assessments (RAs) are conducted at one stage or another of almost every felony criminal case (Conroy & Murrie, 2007). Initially, RAs may be completed to determine the conditions of sentencing (i.e., sentence length, security level for the correctional facility, and need for treatment). Later, risk assessments are often used upon release either at the correctional facility or by parole or probation officials to determine the requirements of supervised or conditional release. As an illustration of its prevalence, almost two-thirds of our sample reported having undergone a formal assessment of risk at some point in the past.

Beyond the sentenced time period, civil commitment can occur if risk is seen as substantial and connected to mental illness (see, e.g., 18 USC Section 4246 and Section 4248). Clearly, jurisdictions are aware that protecting the public after sentences end is an important goal

worthy of the time and effort needed. Similar decisions about release must be made for individuals in mental health facilities in general. Currently, all 50 states use “dangerousness to others” as an integral part of their civil commitment criteria.

Vulnerability of Risk Assessment Measures to Deception

A key conclusion of the current study is that the implicit assumption held by many forensic practitioners and researchers that deception does not greatly affect risk assessment is tenuous at best. While risk assessment is one of the most commonly occurring referral issues in forensic psychology, the effects of deception on such measures has largely been ignored. The main reason for the lack of research on intentional minimization of violent risk involves assumptions that offenders cannot substantially threaten the validity with false responses. Most actuarial and structured clinical judgments rely on a combination of interviews and records review, the latter of which are considered by many forensic scholars to be an adequate guard against falsification (see Hare, 2003; Webster, Douglas, Eaves, & Hart, 1997). Records are indeed valuable sources of information regarding the presence of past offenses, behavior while institutionalized, and to a certain extent, medical and mental health treatment. However, these records are often unreliable for two main reasons: (a) the absence of complete records and (b) the lack of records based on truly objective information.

Most risk assessment items cannot be scored from complete and reliable records. As an exception, a few variables, such as those pertaining to criminal convictions, can be gleaned from national databases such as the FBI Criminal Justice Information Services (CJIS); with recent advances in search technology, these methods are quite reliable. On the other hand, variables such as mental health history are typically found in records that are sometimes glaringly

incomplete. Consider Douglas and Skeem's (2005) list of dynamic factors associated with violent risk that consists of impulsivity, negative affect, psychosis, antisocial attitudes, substance abuse, problematic interpersonal relationships, and treatment noncompliance. While several of these seven variables might be found in treatment or correctional records, these records are occasionally missing and sometimes incomplete. As a complicating factor, the source and estimated accuracy of such records are often not available at the time of risk assessment. Furthermore, information on mental disorders and related syndromes like psychopathy can only be scored from records if psychological treatment has been sought or past assessments completed. Recorded information about interpersonal relationships and family support are even less likely to be intact and reliable. All of these clinical variables weigh heavily in risk assessment decisions.

Even when records do exist, their findings are often based on earlier interviews with the same offender. Examples from the HCR-20 include H3 Relationship Instability, H7 Psychopathy, H8 Early Maladjustment, and H9 Personality Disorder. For example, some court records (e.g., pre-sentence investigation reports) may contain collateral interviews completed with family members regarding the offender's background, education, and personality. As official entries in offender's central files, these records are likely perceived to be the ground truth, instead of being susceptible to the same biases as information accessed via direct interviews. This caution is not intended to discourage the use of records, but rather to acknowledge the continued reliance on interviews whether past or current. Therefore, forensic psychologists must ensure the accuracy of clinical data gather via such interviews.

Offenders' Underreporting of Static Variables

The literature contains a few past attempts to measure systematically the prevalence of general underreporting in criminal offenders. Two early studies by Wallerstein and Wylie (1947) and Short and Nye (1957) found that across socioeconomic groups, offenders were willing to disclose “delinquent” behaviors and rarely hid such information. However, these early studies only measured the willingness to divulge such information, without independently assessing the accuracy of the claimed number of delinquent acts. Kroner, Mills, and Morgan (2007) addressed this question much more recently when they compared the accuracy of self-reports to official records on two parameters: the seriousness of offenses and the type of sample studied. For example, offenders are understandably less likely to report more serious offenses than less serious offenses (Huizinga & Elliott, 1986). When the type of sample is considered, research has found that mentally disordered offenders underreport their number of arrests in as many as 50% of cases (Lafayette, Frankle, Pollock, Dyer, & Goff, 2003). This percentage is dramatically higher than the 11.4% found in a general offender sample (Kroner et al., 2007). Of course, such studies were only possible because self-reported arrest history can be checked against official, reliable records. It is likely that a study involving the underreporting of other antisocial or interpersonal characteristics would be much more difficult to complete with independently verifiable criteria.

The current study confirmed that underreporting of criminal history occurred in a significant number of cases; however, it was not particularly influential in the overall risk assessment results. When honest condition results were compared to online criminal background checks, 15.7% of participants had omitted at least one arrest from their report. However, these omissions may have been inadvertent because they were frequently committed by offenders with

long arrest records. Interestingly, the omitted offenses resulted in changes to PCL-R ratings in only 5.3% of cases, and often by only one point based on the rescoring of items 18 (Juvenile Delinquency), 19 (Revocation of Conditional Release), and 20 (Criminal Versatility). These omissions were also applied to the HCR-20, but in only three cases were changes in HCR-20 scoring necessary.

Comparisons between criminal background checks and the Positive Impression Management (PIM) condition had, expectedly, much more divergent results. Nearly two-thirds (62.3%) hid at least one offense. This finding is in marked contrast to past research (Kroner et al., 2007) described previously wherein 11.4% of participants underreported crime in real-life conditional release evaluations. The use of real-life examinations gave the Kroner participants motivation to fake; however, it also meant that they were likely aware staff would be double-checking their self-reports. Based on the Kroner et al. article, it is unclear whether their deception would have resulted in adverse consequences. It is important to note that one main difference between the current study and the past investigation was the explicit instructions given here to lower risk. In contrast, the study by Kroner and colleagues was naturalistic in design. It is very likely the instruction for positive impression management created a higher rate of underreporting than would be found in an adversarial setting alone.

Many clinical variables, such as interpersonal relationship history and the presence of personality disorders, cannot be independently confirmed as accurately as history of arrests. As stressed earlier, comparisons to reliable records are not possible for many clinical variables. In the current study, each of the individual HCR-20 Historical scale items was significantly suppressed during impression management, with Cohen's *d* effect sizes at 0.60 and above. I did not attempt to correct these HCR-20 items via record review, as many of these items are not

addressed in legal or correctional records. Four items contain content that may be easy to locate: previous violence (arrest records), young age of first violent incident (assuming an arrest occurred), employment problems (Social Security records), and prior supervision failure (parole/probation records). The other six Historical scale items are difficult to verify in the absence of extensive clinical records: relationship instability, substance use problems, major mental illness, early maladjustment, psychopathy, and personality disorder. The current examination of such self-reported content clearly suggests many offenders do try to modify their risk ratings.

Offenders Ability to Lower Perceived Risk

Only one previous study, by Loza et al. (2007), has examined the susceptibility of risk assessment measures to deception and they concluded participants did not change their answers significantly. According to their design, one group asked to complete the SAQ with a guarantee of confidentiality was compared to a second group of inmates who were participating in real-life correctional pre-release evaluations. The authors interpreted the lack of score changes as strong evidence that the SAQ was not susceptible to faking. The results may indicate that Canadian inmates are *not likely* to lie on the SAQ, but the results do not indicate whether they (a) perceived the SAQ as an obstacle to their release or (b) would be effective at impression management if motivated for this goal.

The current findings clearly disagree with the conclusions of Loza et al. (2007). When offenders were instructed to management their impressions as part of a simulated pre-sentence investigation, the SAQ, as well as other risk and criminal thinking measures, underwent moderate to large score reductions. Loza et al. (2007) found slightly higher SAQ Total scores

(Cohen's d of 0.11) for inmates undergoing pre-release evaluations. In stark contrast, the current study produced a very large effect size ($d = 1.34$) for the SAQ under Impression Management condition. Furthermore, SAQ subscales in Loza's sample resulted in modest effect sizes ranging from -0.27 to 0.23. In the current study, the same scales had d 's ranging from 0.36 to 1.23. Methodologically, it is important here to note that the two offender groups in Loza did not differ demographically, in crime, or in sentence length from each other.

The most obvious distinction between these two studies, and one that likely explains the divergent findings, is the differing designs. Loza and colleagues used a group comparison design, while the current study used a within-subjects simulation design. Specifically, I gave instructions to inmates to lower their risk in a believable way during the second administration instead of relying on the "natural" adversarial nature of a pre-release evaluation, as Loza and colleagues did. The current findings, therefore, do not indicate the likelihood of deception, as analogue studies can never do, but rather the *ability* to deceive and the *type* of deception that likely occurred, both of which will be discussed in depth below.

No past studies of PIM on risk assessment measures have been published, but other studies have been conducted using other forensically-relevant measures. Examples include the State Trait Anger Expression Inventory (STAXI-2; Spielberger, 1999) and MMPI-2 (Butcher, Dahlstrom, Graham, Tellegen, & Kreammer, 1989). Such measures are often used as adjuncts to risk assessments measures. In general, results from these studies support the current conclusions: offenders can and do use impression management effectively. These studies are reviewed below and compared to the current findings.

McEwan, Davis, MacKenzie, and Mullen (2009) noted that little research had been completed on impression management of forensically-relevant measures, despite the ease with

which offenders can recognize desirable answers. They examined impression management on the STAXI-2 for examinees undergoing forensic evaluations in a community referral center using a known-groups comparison design. Those offenders exhibiting impression management on the Paulhus Deception Scales were compared to genuine responders. McEwan et al. found the socially desirable group consistently scored lower on all subscales of the STAXI-2, with effect sizes from 0.64 to 0.75. Interestingly, their effect sizes are smaller than those found in the current study using the HCR-20 ($M d = 0.95$ on subscales, $d = 1.20$ on Total scale) and most SAQ scales ($M d = 0.93$), but larger than the current results on the PICTS ($M d = 0.50$).

The most notable difference between McEwan et al. (2009) and the current study is their use of a known-groups comparisons design. Comparisons between simulation and known-groups designs in this area are unavailable; however, the two designs have been compared in malingering research before, with mixed but slightly larger mean effect sizes for known groups (see Rogers et al., 2010). With this in mind, another study aspect that may explain the lower PICTS and STAXI-2 effect sizes compared to the SAQ and HCR-20 is the differences in scale content. The expression of anger and one's thoughts about it (measured on the STAXI-2) are similar in nature to the items of the PICTS, each of which measures attitudes and thinking styles. In contrast, the HCR-20 contains 20 items that measure broad concepts (e.g., violence, impulsivity, psychopathy) and combines the items for an overall decision on risk. Likewise, the SAQ measures a similarly wide range of risk-related variables. It is therefore not surprising that the resulting effect sizes on the latter two risk assessment measures are much larger, given the broader coverage.

Other researchers have examined simulation on the MMPI-2 in the selection of police recruits, a situation with some commonalities to forensic evaluations. Weiss, Weiss, Cain, and

Manley (2009) asked undergraduates in a simulation study to complete the MMPI-2 twice, under honest and impression management instructions. Results indicate a widely varying amount of deception was used depending on scale content. For instance, scales measuring symptomatology that might impair a police officer's fitness, such as Scales 1 (Hypochondriasis), 2 (Depression), 3 (Hysteria), 6 (Paranoia), 8 (Schizophrenia), and 0 (Social Introversion) were reduced significantly, with a mean effect size of $d = 0.90$. Scales 4 and 9 (Psychopathic Deviance and Hypomania) were reduced, but not nearly as much ($M d = 0.28$). Lastly, Scale 5 (Masculinity/Femininity) resulted in a d of 1.61 in favor of masculine/dominant traits, despite the sample being 80% female. The results overall seem to indicate a tendency to respond to appear "tough." It is difficult to directly compare their results to the current study because we were not interested in clinical difficulties; however, the results point to a similar tendency across samples to manage their answers only on certain scale content. For instance, while police thought it important to elevate or reduce scales in order to look "tough," offenders took the opposite tack and lowered many of those same traits. Thus, "well adjusted" is a relative term that is dependent on the setting and expressed goals.

Psychopathy's Role in Deception

Deceptive responses to testing can occur for a wide variety of reasons, but are generally found to occur at higher rates in forensic settings where the incentives are high (Frank & Ekman, 2004, Rogers, 2008). Context aside, many personality factors affect the likelihood and ability to deceive, with psychopathy theorized to be a particularly influential factor. As discussed in depth in the Introduction, deception is a key component in the conceptualization of psychopathy, which in turn has a strong relationship to risk assessment. As noted, Cleckley (1976, p. 338) listed the

item “untruthfulness and insincerity” as one of sixteen core components of psychopathy. He also described several related qualities that require deception, such as superficial charm, unreliability, and “inadequately motivated antisocial behavior” (Cleckley, 1976, p. 338). Hare (1991, 2003) covered similar descriptors, such as “pathological lying,” and “conning/manipulative” behavior. A tendency to use deceit to cheat or manipulate others in both major and minor ways was emphasized by both scholars.

Forensic experts, community members, and offenders alike also appear to recognize the theoretical importance that deception holds in the prototypical psychopath, even though they disagree on its relative importance to the syndrome. Rogers and colleagues conducted three studies (Rogers, Dion, & Lynett, 1992; Rogers, Duncan, Lynett, & Sewell, 1994; Rogers, Salekin, Sewell, Cruise, 2000) on the prototypical features of psychopathy and DSM-III Antisocial Personality Disorder as rated by these three groups. Community participants, forensic experts, and adult offenders all recognized the importance of deceit in these disorders, but important differences also existed. Community volunteers rated “no regard for the truth” and “pathological lying” as highly prototypical descriptors of adult APD, with only “lack of remorse” and “unlawful behavior” ranked higher (Rogers et al., 1992, Table 1). In comparison, forensic experts rated “no regard for the truth” even higher than lay persons (Table 1, Rogers et al., 1994). When examining the pattern of EFA factors from the two studies, it appeared nonprofessionals grouped unstable relationships and manipulateness together, while the experts rated them as two separate constructs.

In sharp contrast, Rogers et al. (2000) found adult offenders ranked untruthfulness as less important than other samples. In both childhood and adulthood, relatively little emphasis was placed on interpersonal factors compared to experts and community raters. The likely

explanation is that inmates view deception as a factor necessary for antisocial conduct, but do not rate it as an essential component of psychopathy by itself, while those viewing deception from the outside (i.e., in a non-correctional settings) see it as a more central characteristic. Studies like these established that deception is a generally accepted characteristic of psychopathy for most individuals; however, studies empirically evaluating the use of deception by psychopaths are another matter.

Psychopaths clearly have motivation to maximize their positive self-presentation toward others. As Cooper and Yuille (2007) and others have pointed out, psychopaths are often opportunists and must attempt to appear trustworthy to take advantage of circumstances. However, while research, including the current study, shows psychopaths attempt to manage their traits in a socially desirable manner, little evidence supports any increased skill or ability to do so in a believable manner.

Despite the strong association between psychopathy and lying, little empirical research exists on the actual ability and likelihood of deception among psychopaths (Ray, Hall, Rivera-Hudson, Poythress, Lilienfeld, & Morano, 2012). Many of the early “studies” of deception in psychopaths were simply based on clinical case reviews and anecdotal reports (e.g., Cleckley, 1941; Hare, 1993). The limited number of empirical studies to date have yielded inconsistent findings on deceptive abilities that appear to vary by setting. For example, Seto et al. (1997) found a positive correlation between psychopathy and both sexual deception ($r = .36$) and socially desirable responding ($r = .49$). Similarly, Woodworth and Porter (2002) reviewed the correctional records of murderers and found those higher on psychopathic traits were twice as likely to change their reported version of the crime over time.

Investigations have consistently found little to no connection between psychopathic traits and manipulative presentation for external gain, or malingering (e.g. Edens, Buffington, & Tomicic, 2000; Poythress et al., 1998; Poythress et al., 2001). For instance, Kucharski, Duncan, Egan, and Falkenbach (2006) found criminal defendants with psychopathic traits were not more likely to mangle than other offenders. Similarly, Hare et al. (1989) concluded that psychopaths were no more likely to elevate the validity scales of self-report measures than others. Taken together, these studies suggest psychopathic traits are not associated with malingering in these specific scenarios. On this point, Rogers (1990) has argued the idea that malingering occurs more frequently in psychopathic and antisocial individuals is a methodological artifact. Simply put, most malingering studies are conducted in criminal forensic settings. Similarly, most psychopathy studies are also conducted in correctional or forensic settings. Therefore, both concepts occur at increased rates in the same setting (Rogers, 1990).

Psychopathy's poor predictive ability regarding impression management is likely due to methodological considerations (Cooper & Yuille, 2007). Most laboratory investigations use participants who are volunteers with presumably low motivation to succeed. As Feeley and DeTurck (1998) pointed out, laboratory studies use sanctioned lies, which occur under experimental instructions to do so. Sanctioned lies are quite different from unsanctioned lies in the level of motivation (i.e., less fear of getting caught) and have been shown to result in different behavioral signs. In one study, sanctioned liars, as compared to unsanctioned liars, made more speech errors and hesitations, gazed more at the person they were lying to, and used more references to other subjects (Feeley & DeTurck, 1998). Psychopaths may have no motivation to lie in sanctioned settings because such lying is an act of conformity. Thus, it may appear they lie less frequently than would be found in field studies or anecdotal reports. The current study

avoided the missteps of most sanctioned-lie research through its emphasis on the real-world relevance of (a) the sample and (b) the motivational scenario. First, unlike sanctioned lie studies that often ask participants to lie about a subject irrelevant to that sample (e.g., lie about cheating on a simple test given as part of the study), all participants in the current study were offenders with multiple criminal convictions. Almost all had experience with formal risk assessment procedures in the past. Secondly, while sanctioned studies base motivation on the challenge of not being caught, each current participant was currently incarcerated or awaiting trial, making the relevance of risk assessment immediate. The simulation instructions did not ask offenders to lie, only to respond in a way they felt would garner the most favorable outcome (i.e., a reduced sentence; see Gillard (2010) for more discussion on the importance of relevant scenarios).

Edens, Buffington, Tomicic, and Riley (2001) conducted the first study on the impact of socially desirable responding on a psychopathy measure. Using a repeated-measure simulation design, they found that baseline level of psychopathy as measured by the PPI significantly increased the amount of socially desirable responding. Specifically, those with higher psychopathic traits in the honest condition reduced such traits much more than those with lower psychopathic traits when provided a realistic scenario (high psychopathy $d = 1.12$; low psychopathy $d = 0.07$). Both Edens et al. (2001) and the current study used a scenario regarding the length or severity of sentencing and both resulted in higher differences for psychopaths. However, while the discrepancy between low and high psychopathy was in the same directions, the discrepancy in the current study was not nearly as large. Using total scores from each measure (subscales were not analyzed in Edens et al., 2001), the current effect size differences regarding psychopathy level's impact on PIM ranged from 0.23 on the PICTS to 0.54 on the HCR-20, all significantly less than half that found on the PPI in Edens et al. (see Table 17).

Table 17

Effect of High and Low Psychopathy Scores on Impression Management on Measures of Psychopathy (Edens et al., 2001) and Risk Assessment (Current Study)

Study	Scale	High	Low	Change Score
		Psychopathy	Psychopathy	
		d_1	d_2	$d_1 - d_2$
Edens et al.	PPI	1.82	0.16	1.17
Current study	HCR-20	1.55	1.01	0.54
	SAQ	1.50	1.20	0.30
	GCT	0.59	0.36	0.23

Note. Change scores are Impression Management condition minus Honest condition.

The most obvious difference between Edens et al. (2001) and the current study is the outcome measures used (i.e., PPI vs. HCR-20, SAQ, and PICTS), which may explain the effect size differences. While I used psychopathy as an independent grouping variable, we did not specifically measure the change in psychopathy during impression management as Edens et al. (2001) did. It appears that level of psychopathy created a greater likelihood of changing psychopathic items specifically, as opposed to other risk assessment content. It should be noted that psychopathy is an important factor in risk assessment, thereby making both findings important.

Edens et al. (2001) used three simulation conditions, each of which led to different levels of impression management. Two of these scenarios involved seeking a job, and the third condition, much like our study, involved creating a favorable impression for a psychologist after committing a crime. Interestingly, while the group with higher psychopathic traits consistently used impression management more effectively than the low psychopathy group, this response style was used more extensively in the criminal scenario (i.e., $d_1 - d_2 = 1.66$) than in the job seeking scenarios (i.e., $d_1 - d_2 = 0.81$ and 0.67 for job scenarios). Comparing the current findings to the closely related criminal scenario in Edens' study, I found that the high psychopathy group

actually changed their scores slightly less (i.e., $d = 1.55$ and 1.50 on risk assessment measures; compared to 1.82 on the PPI), while the low psychopathy group changed more (i.e., $d = 0.54$ and 0.30 , compared to 0.16 on the PPI). Thus, the large difference between groups in Edens et al. (2001) is likely due to both high change for psychopaths and a near absence of positive impression management by those with low psychopathy traits. Despite the difference in scenario content, our effect size differences are closer to those in Edens' job-seeking groups listed previously.

Psychopathy Group Differences Disappear During Positive Impression Management

The current finding that higher psychopathic traits are associated with greater impression management may be partly a product of the strong relationship between psychopathy and violent risk in general, rather than the ability of psychopaths to deceive specifically. Psychopathy holds a strong association with violent risk, often being considered the most predictive characteristic after a history of violence (Harris, Rice, & Quinsey, 1993; Hemphill, Hare, & Wong, 1998); Salekin, Rogers, & Sewell, 1996). It is therefore not surprising that inmates with a higher number of psychopathic traits also had the highest scores on the HCR-20 under honest instructions. A close examination of means from the current results reveals that the larger effect sizes (i.e., the change from the Honest to PIM conditions) occurred primarily because the high psychopathy group had risk scores that were much higher than the low psychopathy group in the Honest condition (e.g., honest HCR-20 d between low and high psychopathy group = 1.09). When attempting to deceive under PIM instructions, the scores for each psychopathy group were much closer (e.g., PIM HCR-20 $d = 0.28$). Similar but more radical difference occurred in the aforementioned study by Edens and colleagues (2001). Specifically, honest PPI scores were higher in the high psychopathy group during the Honest condition ($d = 2.53$), but under the PIM

instructions, the difference was much less ($d = 0.27$) in the criminal arrest scenario. The small group differences during PIM were quite similar across studies (i.e., d 's of 0.27 and 0.28)

The pattern of similar means for both high and low psychopathy groups under impression management could indicate that scores reached a perceived “safe” levels of risk. This level might be low enough to receive a light sentence as the instructions indicated, but not so low as to be unbelievable. As a complication to interpretation, the HCR-20 manual (Webster et al., 1997) does not contain any data regarding mean scores for any validation sample. Furthermore, almost all HCR-20 studies are focused on classification and do not report scale means by specific groups. However, Douglas and colleagues (2005) provide data from their analysis of 188 Canadian federal inmates suggesting some general categories. In their sample, Total HCR-20 scores were positively associated with the following likelihoods of future violence: (a) 0-10 = 10.3%, (b) 11-20 = 29.3%, (c) 21-30 = 69.0%, and (d) 31-40 = 92.9%. The authors are careful to note these are not official risk categories and are provided only for comparative purposes. Based on the current data in Table 18, the high psychopathy group falls in the second highest risk category under honest instructions (i.e., 21-30), while the low psychopathy group falls in the third highest (i.e., 11-20). Both groups fall to the lower half of this latter risk category under the PIM condition. Almost every subscale followed a similar pattern, with highly divergent scores during the honest condition, and less divergent scores during PIM (see Appendixes D and E).

Table 18
Descriptive Statistics for HCR-20 Total Score Across Groups

Scale	Honest		PIM	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
High Psychopathy	24.47	6.39	14.07	7.01
Low Psychopathy	17.70	4.62	12.33	5.89

Note. See Appendix D for descriptive data for all measures and scales.

Factor and Facet Scores of Psychopathy that Predict the Use of Deception

The current findings suggest that the interpersonal facet of the 4-facet model of psychopathy is particularly useful for successful deceptions by offenders, which adds to a growing body of literature suggesting the importance of such traits (see Lee et al., 2008; Book et al., 2006). Descriptions of Factor 1, and Facet 1 items in particular, suggest they contribute to a higher propensity for, or skill at, lying. For instance, pathological lying, conning, manipulateness, and lack of remorse or guilt are all Factor 1 traits and deal with deceit or the easy use of deceit. Lee et al. (2008) found these traits were associated with being rated as “credible” by undergraduate judges who listened to false stories told by male offenders. Interestingly, when telling the truth, being seen as credible was not differentially associated with either factor of the 2-factor model and psychopaths were actually seen as seven times less credible than non-psychopaths.

Book and colleagues (2006) analyzed the affect of psychopathy on deception on a clinical measure (i.e., Holden Psychological Screening Inventory; Holden, 1996) and found that Primary psychopathy traits, as measured by the LSRP, were associated with successful deception more than Secondary traits. Primary and Secondary traits have been found to correspond closely to Factor 1 and 2 of the Hare measures (Lalumiere & Quinsey, 1996). Using the HPSI in a simulation design, Book et al. (2006) compared participants detected as faking good by the HPSI validity scales to those not detected. In male evaluatees, Primary psychopathy scores had a *d* of 1.07, indicating higher scores in those who avoided detection on the validity scales, while Secondary psychopathy scores had a *d* of 0.68. Thus, Secondary traits were also helpful with deception, but not to the same extent as Primary traits.

The interpersonal and affective aspects of psychopathy were also particularly predictive of deception in our study. Factor 1 alone accounted for 34% of the variance in risk change on the HCR-20. When Factor 2 (antisocial and lifestyle characteristics) was added, it assisted very little with prediction (i.e. R^2 increased by only .02). Even when the model was reversed and Factor 1 was entered second after accounting for the effect of Factor 2, it was clear that Factor 1 was still the most important (i.e., Factor 1 predicted roughly twice the variance in change scores). The same was not true for the SAQ and PICTS. For these self-report measures, Factors 1 and 2 were roughly equal in their predictive capacity. This last point contrasts with the findings of Book et al. (2006), who used the self-report HPSI but found clear support, roughly double the effect, for Factor 1 as compared to Factor 2.

The strong effect of Factor 1 over Factor 2 on deception makes conceptual sense because these traits more directly measure deception itself. Items of Factor 2 criminal behaviors, such as a parasitic lifestyle, juvenile delinquency, irresponsibility, and impulsivity, may sometimes *make use of* deception. However, they are not themselves indicative of a propensity for deception. The description of Factor 1 traits – superficial charm, pathological lying, manipulateness, and shallow affect – either *require* deception or *are* examples of deception. A review of Cleckley’s classic description, which did not include a focus on antisocial behavior and criminality, makes the centrality of Factor 1 to deception clear: Psychopaths have a “remarkable disregard for truth” when recollecting the past, speaking of the current situation, and when making promises about the future. They are “at ease and unpretentious” (Cleckley, 1976, p. 342) when making deceptive promises or lying. As noted in the Introduction, he described a willingness to lie for “astonishingly small stakes.” Mealey (1995) furthered this description by noting psychopaths are

likely to use social deception to exploit others, thus suggesting that Factor 2 traits, such as a parasitic lifestyle, make use of Factor 1 traits, like manipulateness and lying.

Factor 1 traits increase the likelihood or extent of deception, but they are not the most likely traits to be concealed when psychopaths must present themselves in a good light. In our study, many risk variables found on Factor 2 were changed to a greater extent during impression management. This finding may be due to the higher amount of insight needed to recognize the interpersonal traits of Factor 1. Cleckley (1976) theorized psychopaths had little insight into the nature of their impairment in life and therefore would be unlikely to lie about some traits. However, debate exists as to whether psychopaths truly have a lack of insight, or simply hide their least acceptable traits, which can appear to be a lack of insight (Miller, Jones, & Lynam, 2011). The role of insight in psychopaths' self-assessment has undergone only one previous empirical evaluation (Miller et al., 2011), which concluded that self- and other-ratings on the PPI and LSRP were strongly correlated ($r = .64$) in a community-based sample. However, important scale differences also existed between the ratings by individuals with elevated levels of psychopathic traits and their friends. Specifically, both the Primary and Secondary Psychopathy scales of the LSRP evidenced low to moderate effect sizes ranging from 0.35 to 0.58, with raters always giving themselves a lower score than their friend. Effect sizes in that range meant informants were rating the target four to five points higher on each scale of the LSRP, a statistically and clinically significant difference. Thus, while some insight into psychopathic traits was present, underrating of psychopathy was also common.

We do not have ratings from informants to measure their insight directly; nonetheless, some scales used in the current study require more insight than others, and in general, these scales were not changed as drastically in the PIM condition. In the current study, almost all scales

across the three outcome measures were higher for the high psychopathy group than the low group at baseline, with a few exceptions (see Appendix D). These exceptions include Alcohol/Drugs (AD), Antisocial Associates (AA), Cutoff thinking style (Co), and Discontinuity thinking style (Ds). Logically, AA and Ds likely require more insight than any other scales included in the current study. AA measures the examinee's relationships with others, which may be a blind spot for those with high psychopathic traits. Their lack of endorsement may indicate they simply could not see the truth behind the items, whereas those with lower levels of psychopathy were more insightful regarding their negative relationships. This may adversely affect the veracity of self-reports regarding relationship difficulties, which are included on most risk assessment measures. The Discontinuity scale, as described by Walters (2001), measures the tendency to become side tracked and lose sight of goals. He describes it as "the most difficult [thinking style] to challenge because the individual is often oblivious to the inconsistencies that pervade his or her thinking." (p. 47). Psychopaths may be more likely to have a lack of insight into this tendency and therefore did not endorse it very much during the honest condition.

The relationship between psychopathy and a lack of insight was also supported by the greater suppression of items regarding overt antisocial behaviors as compared to those addressing attitudes, beliefs, or thinking styles. Among the HCR-20 subscales, Historical items were by far the most frequently suppressed during impression management. Items pertaining this scale appeared to be easily recognized as "risk-increasing." They include criminal content such as age of earliest offense, total number of arrests, involvement in violence, and substance abuse. In contrast, the Clinical and Risk scale items were less reliably suppressed during PIM. Their content is more general: the presence of a personality disorder, negative attitude, and lack of personal support. The explanation for this disparity may be twofold. First, many of the

“historical” items that were often changed clearly measure criminal or risky behaviors, while the Clinical and Risk scale items measure attitudes or life events that are not necessarily illegal. Therefore, it is possible these items were not seen as necessary to change. Second, as Cleckley (1976) suggested, it may be that more insight is required to recognize personal and interpersonal issues than historical behaviors. The approach taken here (i.e., comparing scale content for the level of insight into personal functioning needed) is quite different from Miller et al. (2011), who assessed agreement between self and other ratings of psychopathic traits. In both studies, participants with higher psychopathic traits had more difficulty hiding insight items than their low psychopathy counterparts. However, the current study adds to the literature by assessing insight during PIM, as opposed to just during genuine responding.

Vulnerability to Deception Exists for Both Self-Reports and Interviews

Many psychopathy researchers have questioned the effectiveness of self-report measures based on the assumption that such scales would be more susceptible to deception than interview-based measures, such as the PCL-R (Edens, Hart, Johnson, Johnson, & Olver, 2000; Hanson & Bussiere, 1998; Hare, 1985; Hart, Forth, & Hare, 1991). Many of these same researchers also believe the accuracy of self-reports is further complicated by psychopaths’ lack of insight. Despite this concern, multiple self-report psychopathy measures have been developed in the last two decades, such as the PPI (Lilienfeld & Andrews, 1996), with initial positive results. Although actual empirical analysis of deception on self-report psychopathy measures is scant, one study found the PPI to be greatly affected by simulated impression management (Edens, Buffington, Tomicic, & Riley, 2001, see previous discussion).

When assessing the ability to predict violent recidivism, studies of self-report measures have generally produced weaker effects than interview-based actuarial and SPJ measures (see

Loza et al., 2004; Loza et al., 2007; Walters, 2002). Researchers have attributed these comparatively weak findings to increased deceptive responding on self-report measures. In contrast, the current study found that the self-report method of administration was not associated with more extensive positive impression management. As the results of Hypothesis 1 made clear, scores on the interview-based HCR-20 were suppressed much more during impression management than the PICTS, but less than the SAQ. Thus, something other than simply the method of administration affected the differences in PIM. Two other considerations appeared to be more relevant to the level of change found during impression management. First, detainees with high levels of psychopathic traits found the interview-based HCR-20 to be more easily faked than the self-report measures. Second, scale content that was behavioral was predictive of greater PIM, as compared to content that was emotional or cognitive.

While mode of administration did not have a main effect for the low psychopathy group, the high psychopathy group had significantly higher levels of PIM on the interview-based HCR-20 compared to the self-report SAQ and PICTS. Interviews allow the psychopath to capitalize on interpersonal methods of deceptions, which cannot be used on paper-and-pencil self-report measures. Scholars have typically considered open-ended questions to be less susceptible to distortion (Meehl, 1945), but later research (Fiduccia, 2011) shows this is not always the case. On the other hand, the scant research conducted to date indicates poor PIM abilities on self-report measures (Poythress et al., 2001) and interviews that are primarily “yes-no” (Kropp, 1994). Poythress et al. (2001) and Kropp (1994) both indicated no significant relationship between psychopathy and the effectiveness of deception via questionnaire.

Psychopaths have been found to be more skilled at one method of deception involving verbal story-telling. Billings (2004) found high psychopathy to be predictive of the ability to

deceive naïve judges when recounting details of a crime. While our study did not measure success at deceiving an individual (i.e., raters were not masked), it did measure the amount of change inmates made to their clinical presentation and personal history. The results clearly indicate a willingness or ability to lie verbally during an interview, which was not possible when answering questionnaires. While PIM was still present, it was lesser in magnitude. This finding is also supported by Lee and colleagues (2008), who found psychopaths were more successful at avoiding detection when verbal indicators were rated. In their study, psychopaths used more plausible details when lying, suggesting an attempt to reduce suspicion in this manner. These past results and the comparison across measures in the current study support our contention that while self-report measures are vulnerable to deception, interviews are as well, especially when applied to offenders with elevated Factor 1 traits.

Limitations

Three limitations to the current study involved (a) potential scoring biases, (b) an absence of full record reviews, and (c) the use of an offender sample with few “high” psychopathy ratings. First, the HCR-20 administration requires the evaluator to rate 20 items that have varying levels of subjectivity. When rating such items, it is very important to avoid the potential biases that can arise when researchers are familiar with the hypotheses of the study. For the current study, steps were taken to shield researchers from these potential biases. When multiple researchers were available, a rater masked to the condition was used. While all researchers were familiar with the general nature of the study, masking them to condition lowered the chance of any intentional bias. In addition, items that pertain to factual, historical behaviors may offer protection against such unintentional biases, while more subjective items (i.e., presence of

negative attitudes on the HCR-20) may be more susceptible. On this issue, Rufino, Boccaccini, and Guy (2011) found an inverse relationship between the perceived level of subjectivity of items on the HCR-20 and rater agreement. To our knowledge, no researcher has applied this concept to research on response style; however, it highlights the possible role that a rating's subjectivity can have on its reliability.

Another potential limitation was the minimal record review that could be conducted at the research site. Ideally, institutional disciplinary records, substance abuse and treatment records, and confirmed family background interviews would be reviewed. In our case, reports from jail officials confirmed felony convictions and online background checks were completed on each participant following their interview to check the number and types of arrests. These background checks found that 15.2% of offender in the honest condition and 62.5% of those in the PIM condition omitted at least one past arrest. Consequently, re-scoring of three items was completed, as detailed previously. Record review is emphasized in the scoring criteria of the measures in our study (Hare, 2003; Webster et al., 1997), although we believe such reviews may create a false sense of security regarding the veracity of results. Nonetheless, a thorough record review would conform more fully to scoring protocol and to typical clinical practice.

Unfortunately, county jails like the one used in the current study often have fewer records than longer-term housing facilities, such as prisons or forensic hospitals. In many jail settings with high detainee turnover, it is unlikely that researchers or practitioners could ever have full or nearly full access to mental health, substance use, and background records.

As a final limitation, PCL-R scores in the current study ranged from six to 33, with a mean of 19.7, which is lower than the standard PCL-R cut-score for high psychopathy in maximum-security prisoners (Hare, 2003). Thus, the current study had low and high groups that

were primarily below the typical cut score for true psychopathy of 30. Only one-third of our high psychopathy group was in this range. However, we chose to use a dimensional approach with an emphasis on comparing levels of psychopathy, making this traditional cut-score less problematic. Additionally, past research in settings other than high-security institutions have used cut-scores for psychopathy ranging from 17 to 29 (DeMatteo et al., 2006; Harris et al., 1993; Serin, 1996; Serin, 1991). From this perspective, the current study is not out of the ordinary. However, inmate samples with very high levels of psychopathy may have responded differently to impression management compared to those with moderate and moderately high levels.

Future Directions

Risk assessment, psychopathy, and deception each have their own literatures with over 1,000 publications and dissertations. Each area has multiple meta-analyses that assess the best tests for measuring the concept. For psychopathy and risk, these analyses include Edens & Campbell, 2007; Salekin et al., 1996; and Yang et al., 2010. For deception, one recent meta-analysis was conducted by Driskell (2012). A substantial literature also exists regarding the use of psychopathy in the assessment of risk (Leistico et al., 2008). But as the current study underscores, the intersection between these three related fields needs more systematic investigation.

The main direction for future research regards the use of impression management on risk measures to assess how it affects the outcomes of such evaluations. Many studies over the last 30 years have focused on accurately identifying feigners on measures of cognitive ability (Sollman & Berry, 2011; Vickery, Berry, Inman, Harris & Orey, 2001) and psychopathology (Green & Rosenfeld, 2011; Rogers, Sewell, Martin, & Vitacco, 2003). Other researchers focused on the

measurement of impression management (Edens, Buffington, et al., 2001; Leary & Kowalski, 1990). Surprisingly then, only one previous study (Loza et al., 2007) and this dissertation have examined the effect of deceptive responding on risk assessment measures. Most practitioners assume record review is sufficient, by itself, to counteract deception on such measures. In some cases with full treatment and correctional records, this assumption may be mostly true. As discussed above, full records are often absent or at least incomplete, rendering accurate interviews important. Thus, we believe there are many potential avenues for future research in this field.

Future research is needed to establish more accurate estimates regarding the prevalence of deception on risk assessment in real-world settings. To do this, studies using the HCR-20, VRAG, and the emerging self-report measures should be conducted with matched groups of offenders, some of whom are guaranteed confidentiality and others of whom are participating in actual pre-release evaluations. Scores could then be compared to estimate the naturally-occurring amount of impression management being used in that population. Only two small studies exist that briefly touch on possible base rates. First, Kroner and colleagues (2007) concluded that 11.4% of their offender population underreported the number of arrests they had when compared to official records. However, offenders were not involved in any type of adversarial evaluation with potentially negative consequences. Negative consequences would add a major incentive for an increased the rate of underreporting. Alternatively, it is also possible that underreporting of arrests was low because arrests could so easily and obviously be checked by officials. Second, Loza et al. (2007) found very little deception being used on the SAQ based on a comparison of real-world examinees and research participants who were guaranteed confidentiality. Future

studies could remedy past problems and assess the rate of PIM in different clinical and correctional populations.

More research is also needed on the relative strengths of interview and self-report measures. As noted, many examiners assume interviews guard against deception via the incorporation of records and the ability of clinicians to follow-up on possible inaccuracies. However, the current results suggest the interview is the preferred avenue of deception for detainees with high Factor 1 psychopathic traits. More investigation is needed to determine (a) what information on standardized interviews is most susceptible to deception, and (b) what methods can be validated to evaluate this deception. As an example using personality disorder interviews, Fiduccia (2011) found that indiscriminate denial of symptoms and denial of commonly reported symptoms were useful in detecting defensive inpatients. Similar approaches might be modified and applied to risk assessment.

Conclusion

The current study can be seen as an initial but important step in understanding deception on risk assessment measures, as well as a continuation in forensic research regarding psychopath's ability to use deception (see Billings, 2004; Book et al., 2006; Cogburn, 1993; Klaver et al., 2007; Klaver et al., 2009; Lee et al., 2008; Patrick & Iacono, 1989). Results indicated that risk assessment measures are susceptible to positive impression management, even when correcting for the underreporting of criminal convictions. Additionally, the current study showed Factor 1 traits, especially those of the interpersonal facet, are associated with increased positive impression management. The study also adds to the previous literature by using risk assessment measures and assessing the ability to lower risk in a believable way. In addition, this

is the first study to assess psychopathy's role in deceiving on risk assessment measures. It is hoped future studies can continue to address this important issue to inform the further development of some of the most commonly used instruments in forensic assessment today.

FOOTNOTES

¹Goldberg (1968) and Oskamp (1965) offered general comments on the limits of clinical judgments, not specifically related to risk. However, the paradigm used in the Oskamp (1965) study and reviewed by Goldberg (1968) applies equally well to risk assessments.

²Structured Professional Judgments have also been termed Structured Clinical Judgment. We use “professional” here to be consistent with the recently published *Handbook of Violent Risk Assessment* (Otto & Douglas, 2010).

³ Skeem and Monahan (2011) actually propose that measures can be categorized more finely than this dichotomy. However, the dichotomy is used to be consistent with the published literature.

⁴ This fact is often overlooked by critics of Hare. However, while Hare initially stated (1991) that his criteria are predominantly modeled after Cleckley’s criteria, he has also noted that he gained influence from other early theorists (e.g., Buss, 1966; Craft, 1965; Karpman, 1961; McCord & McCord, 1964).

⁵The PCL-R is frequently referenced in this section due to near-dominance in major research studies on psychopathy.

⁶ The psychopathy item (item 7) of the HCR-20 was removed from these scales to avoid confounding with the grouping variable (high and low psychopathy).

APPENDIX A
INFORMED CONSENT

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: The Ability of Offenders to Lower Their Level of Risk

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

Key Personnel: Nathan Gillard, Katherine Kelsey, and Emily Robinson, UNT Department of Psychology

Purpose of the Study: You are being asked to take part in a research study that looks at certain personality traits and your ability to deceive when answering questions.

Study Procedures: You will be asked a series of questions and fill out short surveys about personality traits that cause trouble for some people. You will complete some surveys twice. People in court or jail are often asked these common questions. The study will take about 2 ½ to 3 hours of your time. It may take longer depending on your answers.

Foreseeable Risks: There are no known risks to completing these questions. You will be asked about past violence and some mental health problems you may have. These questions may be stressful to think about. If you feel distress or wish to stop this study for any reason, you can stop at any time.

Benefits to the Subjects or Others: This study will not really benefit you, but it may benefit the field of psychology.

Compensation for Participants: Following Tarrant County Jail rules, this study is 100% voluntary and your decision to help us will not affect on your case, charges, or stay in the Jail.

Procedures for Maintaining Confidentiality of Research Records: Information about your identity will not be recorded by researchers. A random number will identify your surveys so we know they all belong to the same person. The random number will not be connected to your name. During the interview portion of this study, we will try to protect your privacy by 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 Dr. 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 potential discomforts of the study.
- You understand that you do not have to take part in this study. If you refuse to participate or prematurely stop you will not be punished. The researchers may choose to end your participation at any time.
- You understand the purpose of the study and how it will be performed.
- You understand your rights as a research participant and 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
DEMOGRAPHIC INFORMATION

ID # _____

Current date and time:

Date and time of arrest:

Gender:

DOB (Age):

Ethnicity:

1st Language:

Highest grade completed:

Marital status:

Occupation:

Last year's gross income:

Current charges:

Most serious charge:

of total arrests:

of psychiatric hospitalizations:

Total time incarcerated during life:

Longest sentence:

APPENDIX C
MANIPULATION CHECK

Research number: _____

1. During the first half of the study, what were your instructions? ___ correct, ___ incorrect. If questionable, record verbatim:

2. During the first half, did you present yourself the way you really are?
___ yes, ___ no, ___ uncertain.

3. During the second half of the study, what were your instructions? ___ correct, ___ incorrect. If questionable, record verbatim:

4. What were your incentives?
Receive a less severe sentence for the crime: _____
Smart enough to lower risk: _____
Money for participation: _____

5. Compliance: Did you follow your instructions? ___ yes, ___ no

6. If yes – How would you describe your effort at following the instructions at a scale from 1 to 10, with 1 meaning you did not try and 10 meaning you tried your hardest?
1 2 3 4 5 6 7 8 9 10

7. Do you think you were successful at appearing like a safe, calm inmate who deserved an easier sentence?
___ yes, ___ no, ___ uncertain.

8. What kind of information did you attempt to hide in order to do this?

9. Have you ever been given this type of evaluation in real life?

APPENDIX D

ANOVA RESULTS AND THE EFFECT OF PSYCHOPATHIC TRAITS ON IMPRESSION
MANAGEMENT OF VIOLENT RISK

*ANOVA Results and the Effect of Psychopathic Traits on Impression Management of Violent Risk
(Used in Hypothesis 2 and connected with Tables 6-8)*

Scale	<u>High Psychopathy</u> (n = 34)				<u>Low Psychopathy</u> (n = 33)				<i>F</i> ^a	<i>p</i>
	Honest		PIM		Honest		PIM			
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
<u>HCR</u>										
Total	24.47	6.39	14.07	7.01	17.70	4.62	12.33	5.89	8.49	.005
H	12.60	3.17	6.87	3.87	10.07	3.34	6.59	2.99	3.17	.081
C	5.20	1.54	2.80	1.90	3.41	1.45	2.00	1.57	13.25	.001
R	6.67	2.23	4.40	2.46	4.22	1.97	3.74	2.05	8.95	.004
<u>SAQ</u>										
Total	36.67	9.95	22.07	9.57	31.89	9.44	21.07	8.60	2.29	.136
CT	13.77	4.13	9.07	3.89	11.41	4.18	8.93	3.81	2.00	.163
AP	3.10	1.06	1.57	1.22	2.41	1.01	1.37	1.08	3.69	.060
CP	10.13	3.65	5.67	4.10	8.22	4.29	4.30	3.18	4.46	.039
CH	4.00	1.39	2.10	1.47	3.85	1.29	2.59	1.50	0.32	.574
AD	4.07	2.18	2.27	1.78	4.26	1.61	2.67	1.80	.52	.476
AA	1.60	.67	1.40	1.00	1.74	.94	1.22	.97	.01	.920
AN	2.53	2.05	.53	1.07	2.00	1.69	.89	1.34	.08	.780
<u>PICTS</u>										
GCT	133.77	36.17	112.33	36.27	124.11	27.06	114.44	27.21	.12	.727
CUR	26.77	10.37	22.20	8.91	27.00	8.72	23.00	7.85	.08	.768
HIS	27.10	8.57	19.80	8.89	24.37	8.36	20.32	6.36	.23	.637
P	90.75	28.03	68.90	26.77	80.50	25.65	69.86	20.92	.44	.509
R	87.03	31.95	87.03	31.95	89.35	28.92	89.35	28.92	.44	.512
Mo	14.07	4.70	13.47	4.45	12.74	3.15	13.19	4.70	.64	.426
Co	14.73	5.19	11.73	4.81	14.81	4.90	11.72	4.33	.08	.786
En	15.30	4.89	13.10	4.63	13.37	3.93	11.81	4.20	2.33	.132
Po	15.53	5.61	12.07	5.26	13.33	4.22	13.12	4.66	.17	.679
Sn	20.07	6.01	18.17	5.50	17.93	4.67	17.24	4.29	1.60	.211
So	18.90	5.13	14.70	5.23	16.19	4.44	15.52	4.66	.52	.476
Ci	18.93	6.07	14.97	6.01	17.81	5.08	15.52	4.73	.01	.958
Ds	16.23	6.84	14.13	5.28	17.93	5.50	14.96	5.10	.86	.358

Note. ^a*F* statistics refer to between groups repeated measure ANOVA (comparison of change in scores for the HP group vs. the LP group). CT = Criminal Tendencies, AP = Antisocial Personality Problems, CP = Conduct Problems, CH = Criminal History, AD = Alcohol/Drugs, AA = Associates, AN = Anger. GCT = General Criminal Thinking, CUR = Current Criminal Thinking, HIS = Historical Criminal Thinking, P = Proactive Criminal Thinking, R = Reactive Criminal Thinking, Mo = Mollification, Co = Cutoff, En = Entitlement, Po = Power Orientation, Sn = Sentimentality, So = Superoptimism, Ci = Cognitive Indolence, Ds = Discontinuity.

APPENDIX E
MEANS FOR PSYCHOPATHY GROUPS UNDER HONEST AND IMPRESSION
MANAGEMENT CONDITIONS

Means for Psychopathy Groups Under Honest and Impression Management Conditions

	<u>Low</u>		<u>High</u>		<u>Honest</u>		<u>PIM</u>	
	Honest <i>M</i>	PIM <i>M</i>	Honest <i>M</i>	PIM <i>M</i>	$M_{hi} -$ M_{low}	d_1	$M_{hi} -$ M_{low}	d_2
<u>HCR-20</u>								
Total	17.70	12.33	24.46	14.06	6.76	1.21	1.73	0.27
Historical	10.07	6.59	12.60	6.86	2.53	0.78	0.27	0.08
Clinical	3.40	2.00	5.20	2.80	1.80	1.20	0.80	0.46
Risk	4.22	3.74	6.66	4.40	2.44	1.16	0.66	0.29
<u>SAQ</u>								
Total	31.88	21.07	36.66	22.06	4.78	0.49	0.99	0.11
CT	11.40	8.92	13.76	9.06	2.36	0.57	0.14	0.04
AP	2.40	1.37	3.10	1.56	0.70	0.68	0.19	0.16
CP	8.22	4.29	10.13	5.66	1.91	0.48	1.37	0.37
CH	3.85	2.59	4.00	2.10	0.15	0.11	-0.49	-0.33
AD	4.25	2.66	4.06	2.26	-0.19	-0.10	-0.40	-0.22
AA	1.74	1.22	1.60	1.40	-0.14	-0.17	0.18	0.18
AN	2.00	0.88	2.53	0.53	0.53	0.28	-0.35	-0.29
<u>PICTS</u>								
GCT	124.11	114.44	133.76	112.33	9.65	0.30	-2.11	-0.07
CUR	27.00	23.00	26.76	22.20	-0.24	-0.03	-0.80	-0.10
HIS	24.37	20.32	27.10	19.80	2.73	0.32	-0.52	-0.07
Mo	12.74	13.19	14.06	13.46	1.32	0.33	0.27	0.06
Co	14.81	11.72	14.73	11.73	-0.08	-0.02	0.01	0.00
En	13.37	11.80	15.30	13.10	1.93	0.44	1.30	0.29
Po	13.33	13.12	15.53	12.06	2.20	0.44	-1.06	-0.21
Sn	17.92	17.24	20.06	18.16	2.14	0.40	0.92	0.19
So	16.18	15.52	18.90	14.70	2.72	0.57	-0.82	-0.17
Ci	17.81	15.52	18.93	14.96	1.12	0.20	-0.56	-0.10
Ds	17.92	14.96	16.23	14.13	-1.69	-0.27	-0.83	-0.16

Note. CT = Criminal Tendencies, AP = Antisocial Personality Problems, CP = Conduct Problems, CH = Criminal History, AD = Alcohol/Drugs, AA = Associates, AN = Anger. GCT = General Criminal Thinking, CUR = Current Criminal Thinking, HIS = Historical Criminal Thinking, Mo = Mollification, Co = Cutoff, En = Entitlement, Po = Power Orientation, Sn = Sentimentality, So = Superoptimism, Ci = Cognitive Indolence, Ds = Discontinuity.

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