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Psychopathy Factors and Risk for Aggressive Behavior: A Test of the "Threatened Egotism" Hypothesis

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The primary purpose of this study was to examine psychopathy within a model of aggressive behavior that encompasses narcissism and "threatened egoism." This model was advanced by Baumeister and his colleagues (e.g., R. F. Baumeister, L. Smart, & J. M. Boden, 1996; B. J. Bushman & R. F. Baumeister, 1998). We examined whether the threatened egotism model extends to the construct of psychopathy and whether the two factors underlying psychopathy exhibit different associations with aggression within this model. Self-report data, correctional officer and counselor reports, and disciplinary report information obtained for 98 male inmates provided partial evidence that psychopathic individuals tend to respond aggressively when confronted with an ego threat. Moreover, psychopathic individuals exhibited this pattern of aggression more strongly than did narcissistic individuals. These findings bear potentially useful implications for the understanding and treatment of aggression in forensic populations.

KEY WORDS: psychopathy; narcissism; ego threats; threatened egotism; correctional setting aggression.

The understanding of aggressive and violent individuals has long posed a challenge to forensic psychologists and researchers (Monahan & Steadman, 1994; Webster, Harris, Rice, Cormier, & Quinsey, 1994). Although personality traits are not the sole predictors of aggression, they are an integral component of a nomological network of causal variables (e.g., demographics, social factors). Moreover, the ways in which personality features interact with situational variables to predict aggression bear useful implications for violence risk assessment.

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THE THREATENED EGOTISM MODEL OF AGGRESSIVE AND VIOLENT BEHAVIOR

Many psychologists and sociologists have espoused the view that low self-esteem plays a causal role in aggression and violence, whereby individuals with low self-esteem turn toward aggression to enhance self-esteem (Toch, 1969/1993; Vogal & Brown, 1983). Questioning this long-held assumption, Baumeister and colleagues developed an alternative model of aggression. In a multidisciplinary literature review, Baumeister, Smart, and Boden (1996) concluded that evidence supporting the association between low self-esteem and aggression was mixed at best. They argued that the motivation to seek self-enhancement is more related to aggression than is global self-esteem and that violence sometimes results from "wounded pride" (see also Baumeister, Bushman, & Campbell, 2000). Hypothesizing that an unstable sense of self-esteem is more related to violence than is either low or high self-esteem, Baumeister and colleagues examined narcissism as a predictor of aggression (Bushman & Baumeister, 1998).

Narcissism encompasses grandiose self-concepts, an inflated sense of entitlement, and a tendency toward establishing superiority (American Psychiatric Association, 2000; Raskin & Terry, 1988). Narcissism has been linked empirically to self-esteem, aggression, and violence, and is largely characterized by unstable self-esteem (Baumeister, 2001; Raskin, Novacek, & Hogan, 1991). Nevertheless, even if narcissism and self-esteem are positively related, this does not necessarily imply that high self-esteem is related to aggression.

Baumeister and colleagues' model explains how inflated, yet unstable, self-concepts lead to violence. According to their threatened egotism model, when individuals confront external negative evaluations, they experience ego threats. Baumeister and colleagues posited that because narcissistic individuals have unstable, inflated self-appraisals, they are vulnerable to experiencing ego threats (Baumeister, 2001). In addition, the threatened egotism model predicts that the presence of an ego threat moderates the association between narcissism and aggression, whereby narcissism and ego threat presence significantly interact to predict aggression.

Bushman and Baumeister (1998) gave undergraduate participants either positive or negative feedback about essays they had written and allowed participants to retaliate against the presumed evaluator with a noise blaster. Findings revealed that the association between narcissism and aggressive behavior was significantly stronger for individuals who confronted an ego threat (i.e., negative feedback) than for those who did not. In a separate undergraduate sample, they examined whether "perceived ego threat" mediated the relation between narcissism and aggression when faced with an ego threat. To assess perceived ego threat, they asked participants to rate how threatening they found the essay evaluation (B. Bushman, personal communication, April 2001). Structural equation modeling revealed that perceived ego threat was a significant mediator. The findings from these studies indicated that (1) ego threat moderates the relationship between narcissism and aggression and (2) perceived ego threat mediates the relationship between

narcissism and aggression. Global self-esteem was not significantly related to aggression in either study.

EXTENDING THE THREATENED EGOTISM MODEL TO PSYCHOPATHY

Baumeister and colleagues noted in passing that "psychopaths seem to fit the view of highly favorable opinions of self as a source of violence" (Baumeister et al., 1996, p. 14; see also Baumeister, 2001; Baumeister & Boden, 1998). The literature on psychopathy provides an argument for incorporating psychopathy within Baumeister and colleagues' model of aggression. Psychopathy is a constellation of personality features found among certain antisocial individuals (Hare, 1996). This condition is not in the *Diagnostic and Statistical Manual of Mental Disorders* (American Psychiatric Association, 2000) and there is even controversy over whether it is a psychiatric illness. Nevertheless, a substantial body of literature indicates that this construct is moderately to strongly associated with risk for criminality, violence, substance abuse, and other forensically relevant outcomes (Hare, 2003). In his classic clinical description, Cleckley (1941/1988) observed that psychopaths are superficially charming, unreliable, deceitful, and remorseless. Cleckley also included "pathologic egocentricity" among his 16 criteria for this condition and argued that a propensity toward "ego-enhancement" (Caldwell, 1944; cited in Cleckley, 1941/1988, p. 259) is characteristic of psychopathy. Some psychodynamic writers have asserted that psychopaths engage in violence partly to project feelings of inferiority onto their victims, which leads to increases in self-esteem (e.g., Kernberg, 1975). These claims are germane to Baumeister and colleagues' notion that the motivations for self-enhancement and regaining pride are associated with aggression. Psychopaths have also been depicted as having grossly inflated self-concepts and as overreactive to insults (Hare, 1993).

The Two-factor Model of Psychopathy

When considering psychopathy in tandem with the threatened egotism model, one must consider the factor structure of this condition. Hare and colleagues have developed the Psychopathy Checklist—Revised (PCL-R; Hare, 1991, 2003). In the format of a semi-structured interview combined with an institutional file review, the PCL-R is the most extensively construct validated of all psychopathy measures. Initial factor analytic studies indicated that the PCL-R measures two moderately correlated dimensions. Factor 1 items reflect affective and interpersonal features of psychopathy (e.g., callousness, grandiosity, manipulativeness), whereas Factor 2 items reflect features of social deviance (e.g., poor behavior controls, impulsivity, need for excitement; Hare et al., 1990; Harpur, Hakstian, & Hare, 1988). Confirmatory factor analyses of PCL-R data and item response theory (IRT) analyses by Cooke and Michie (2001) have called into question the two-factor structure. These authors argue that three factors underlie psychopathy: Arrogant and Deceitful Interpersonal Style, Deficient Affective Experience, and Impulsive and

Irresponsible Behavioral Style (but see Hare, 2003, for an alternative four-factor model of psychopathy).

Nevertheless, the two-factor structure of psychopathy has been by far the most widely researched. In addition, well-validated self-report measures of psychopathy, such as the Self-Report Psychopathy Scale—II (Hare, 1991), Primary and Secondary Psychopathy Scales (Levenson, Kiehl, & Fitzpatrick, 1995), and Psychopathic Personality Inventory (Lilienfeld, 1990), assess these two factors. Factors 1 and 2 also differ in a variety of personality, cognitive, and demographic correlates (Harpur, Hare, & Hakstian, 1989). Examining the correlates of both global psychopathy scores in conjunction with these two factor scores can clarify the differential associations of psychopathy subcomponents with external variables.

Psychopathy and Narcissism

Psychopathy's associations with narcissism lend support for incorporating psychopathy within Baumeister and colleagues' model. Measures of psychopathy tend to be positively and significantly correlated with measures of narcissism and *DSM* narcissisistic personality disorder (NPD; e.g., Cale & Lilienfeld, 2002; Lilienfeld & Andrews, 1996; Reise & Oliver, 1994; Reise & Wink, 1995; Rutherford, Alterman, Cacciola, & McKay, 1997; Salekin, Trobst, & Krioukova, 2001; Zagon & Jackson, 1994; but see Shine & Hobson, 1997). However, findings concerning the differential relations of PCL-R Factors 1 and 2 to narcissism have been inconsistent (e.g., Hare, 1991; Hart, Forth, & Hare, 1991; Hart & Hare, 1989; Shine & Hobson, 1997). Although some narcissistic traits (e.g., Superiority/Arrogance; Zagon & Jackson, 1994) correlate significantly with both psychopathy factors, certain components of narcissism, such as egocentricity and grandiosity, may be associated primarily with Factor 1. In contrast, components of narcissism that reflect Negative Emotionality (NE; Tellegen, 1982), such as envy and resentment, may be associated primarily with Factor 2 (Lilienfeld, 1990).

Although narcissism is informative to the threatened egotism model, some features of narcissism, such as self-sufficiency, exhibitionism, and fantasies of ideal love (Raskin & Terry, 1988), do not fit clearly within this model. According to Cleckley (1941/1988), psychopaths exhibit a marked lack of insight, an incapacity for love, and an absence of remorse. These psychopathic features appear to coincide better with the predictions of the threatened egotism model than does narcissism. Indeed, some psychodynamic authors have referred to psychopathy as the most severe form of "pathological narcissism," a brand of narcissism particularly related to aggression and retaliation (see Kernberg, 1975, 1998; Meloy, 1988; Meloy & Gacono, 1998). Kernberg (1984) asserted that psychopaths relate to others through aggression, particularly when their grandiose self-concepts are challenged. These depictions further suggest that psychopathy is relevant to the threatened egotism model.

Psychopathy and Aggression

A large body of research revealed a strong association between psychopathy and concurrent violent behaviors, regardless of the demographic characteristics

or associated diagnoses of the sample (Hemphill, Hare, & Wong, 1998; Salekin, Rogers, & Sewell, 1996; Simourd & Hoge, 2000). Studies also suggest that compared with nonpsychopaths, psychopaths exhibit elevated rates of aggressive behaviors in prisons and other forensic settings (e.g., Edens, Buffington, & Tomicic, 2000; Hare & McPherson, 1984; Heilbrun et al., 1998; Wong, 1984). Nevertheless, the question of whether Factor 1 or Factor 2 is more associated with aggression or violence is unresolved.

Psychopathy is also a good predictor of violent recidivism (e.g., Hart, 1998; Hemphill et al., 1998; Salekin et al., 1996). Some evidence suggests that both psychopathy factors correlate significantly with future violence (e.g., Grann, Långström, Tengström, & Kullgren, 1999; Grann & Wedin, 2002; Hemphill et al., 1998). Hart, Hare, and Forth (1994) argued that Factor 1 scores are predictive of violence and, in some cases, more predictive of violence than Factor 2 scores. Serin (1996) found that Factor 1 scores predicted violent recidivism above and beyond Factor 2 scores. In contrast, a number of studies have found that Factor 2 is more associated with violent recidivism than is Factor 1 (e.g., Salekin et al., 1996; Skilling, Harris, Rice, & Quinsey, 2002).

THIS STUDY

This study was designed to investigate the construct of psychopathy within Baumeister and colleagues' model, whereby psychopathy replaced narcissism as the primary independent variable. We predicted that the relation between psychopathy and aggression would be mediated by perceived ego threat. We also examined whether psychopathy Factors 1 and 2 differ in their relationships with aggression in response to ego threats. We used two well-validated measures of psychopathy, both of which provided scores for Factors 1 and 2, to ascertain whether our findings were replicable and generalizable across different measures of this construct. Although mono-operation bias (i.e., using only one measure of a construct) should be avoided in all areas of psychopathology research (Shadish, Cook, & Campbell, 2002), it is especially problematic in research on psychopathic personality, given that ostensibly interchangeable measures of this construct have been found to be only weakly or moderately correlated (Lilienfeld, 1998).

We tested our hypotheses in a sample of convicted offenders given that these hypotheses are relevant to forensic and correctional populations. We also wished to examine whether the findings of Baumeister and colleagues extend to a more severe sample, for which associations regarding risk for aggression are critical.

Hypotheses

1. We predicted that psychopathy total, Factor 1, and Factor 2 scores would be positively and significantly associated with aggression in response to ego threats. Our hypotheses regarding aggression extend to anger (see also McBride, 2003). Although there are important distinctions between anger and aggression, we focused on the commonalities between them for the

purposes of testing the threatened egotism model given that this model makes similar predictions for both constructs. We included self-reported anger, informant reports of aggression, and prison disciplinary reports of aggression as dependent variables. We considered measures of anger, verbal aggression, and physical aggression to all reflect a latent construct of aggression, the commonalities of which have well been established empirically (Novaco & Renwick, 1998; Spielberger, Reheiser, & Sydeman, 1995). The ego threatening situations in this study were based on participants' and informants' perceptions of events that naturally occur in prison settings. Therefore, the ego threats examined in this study were perceived rather than objectively defined (i.e., experimentally manipulated) ego threats.

2. We predicted that perceived ego threat would be significantly associated with psychopathy total, Factor 1, and Factor 2 scores and with measures of aggression in response to ego threats. We did not predict that either psychopathy factor would be more highly associated with perceived ego threat given that components of both Factor 1 and Factor 2 are related to this construct.
3. We predicted that perceived ego threat would mediate the relationship between psychopathy and aggression in response to ego threats. We proposed that if psychopathy were significantly associated with aggression (Hypothesis 1) and if psychopathy and aggression were significantly associated with perceived ego threat (Hypothesis 2), then a significant proportion of the association between psychopathy and aggression in response to ego threats would be accounted for by perceived ego threat.
4. Corollary hypotheses were as follows:
   (a) We predicted that prior findings in support of the threatened egotism model would be replicated in a sample with high levels of antisocial behavior. More specifically, we predicted that perceived ego threat would mediate the relationship between narcissism and aggression in response to ego threats.
   (b) We predicted that both Factors 1 and 2 would be positively and significantly associated with narcissism. We did not predict that the magnitudes of these associations would differ significantly because the research suggests that certain components of narcissism are differentially associated with these factors.
   (c) We predicted that self-esteem would not be significantly associated with aggression.

METHOD

Participants

Inmates from Lee Arrendale State Prison (LASP), a state prison within the Georgia Department of Corrections (GDC), participated in this study. One hundred

and thirteen male inmates were recruited, 111 of whom consented to participate. Participants obtained a score of at least 70 on the Culture Fair Intelligence Test (Cattell, 1973) and demonstrated a fourth grade reading level on the Wide Range Achievement Test (WRAT-3) when first in GDC custody. In a few cases, inmates who scored lower than the fourth grade were recruited because supplemental testing and prison schooling strongly suggested that they were able to read above a fourth grade level. We excluded all participants with chart diagnoses of psychotic disorders, organic mental disorder, or mental retardation.

The final sample of 98 (see Preliminary Data Analyses section) represented a wide range of security levels and demographics. Seven inmates were minimum security, 36 inmates were medium security, 53 inmates were close security, and 2 inmates were maximum security. Eighty-four participants were classified as general population inmates, whereas 14 were classified as mental health inmates, meaning that they received psychotropic medications, counseling from mental health staff, or both. Participants had been at LASP from 1 to 92 months ($M = 37.3$; $SD = 28.8$). Ages ranged from 18 to 59 years ($M = 23.7$; $SD = 7.7$). Sixty-three inmates were African American, 28 inmates were European American, and 7 inmates were Asian American, Middle Eastern, Hispanic, Native American, or self-classified as two or more races. Intelligence Test scores ranged from 73 to 133 ($M = 99.5$; $SD = 13.0$).[4] Self-reported grade levels ranged from Grade 4 to graduate school.

We also recruited individual counselors and correctional officers by asking them to complete informant reports concerning the inmates' aggressive tendencies. Five correctional officers (all male) and 14 counselors (10 males and 4 females) participated.

Measures

Demographics Page

A 1-page, 4-item questionnaire asked participants to self-report their age, race, schooling, and duration of time at LASP.

Self-Report Psychopathy Scale (SRP-II; see Hare, 1991*)*

The original Self-Report Psychopathy Scale (SRP) was constructed deductively (i.e., using item selection based on a priori grounds) and empirically using PCL scores as an external criterion. The SRP-II was further refined using item analytic techniques. It consists of 60 items, scored on a 7-point Likert scale. In addition to providing an overall psychopathy score, the SRP-II contains items assessing Factor 1 (9 items) and Factor 2 (13 items). In this study, Cronbach's alpha was .89 for the SRP-II total scores, .55 for Factor 1 scores, and .81 for Factor 2 scores. Hare (1991) reported that SRP-II total scores correlated moderately and significantly ($r = .54$) with PCL-R total scores in a sample of 100 male inmates. In the *DSM-IV* field trials for antisocial personality disorder, correlations between SRP-II total scores and

[4]Because the correlations between intelligence scores and psychopathy total, Factor 1, and Factor 2 scores were negligible and nonsignificant, we did not control for intelligence in the other analyses of this study.

prototypicality ratings of psychopathy based on the PCL-R ranged from $r = .23$ to $r = .68$ (Widiger et al., 1996).

Because psychopathy self-report measures are susceptible to response sets such as malingering (i.e., "faking bad"), 10 items from the Deviant Responding validity scale of the Psychopathic Personality Inventory (Lilienfeld, 1990) were interspersed among the SRP-II items. Designed to assess malingering, careless responding, or difficulty in understanding items, these items describe extremely bizarre experiences that do not reflect any known form of psychopathology (e.g., "When I am under stress, I sometimes see large, red rectangular shapes moving in front of my eyes").

Psychopathic Personality Inventory (PPI; Lilienfeld, 1990*)—Short Form*

The PPI was developed to assess the core features of psychopathy in nonclinical samples, although it has also been used to assess psychopathy in incarcerated samples (e.g., Poythress, Edens, & Lilienfeld, 1998; Sandoval, Hancock, Poythress, Edens, & Lilienfeld, 2000). In addition to the total score, the PPI contains eight factor-analytically developed subscales. For this study, we used the 56-item form of the PPI, which has been found to correlate $r = .90$ or above with the full PPI in several samples (Lilienfeld & Andrews, 1996). Using principal components analyses (initially reported in Wilson, Frick, & Clements, 1999; see also Lilienfeld & Hess, 2001), items from the PPI subscales have been designated as assessing Factor 1 and Factor 2. Social Potency, Coldheartedness, Fearlessness, Impulsive Nonconformity, and Stress Immunity items assess Factor 1, whereas Machiavellian Egocentricity, Blame Externalization, and Carefree Nonplanfulness items assess Factor 2.

Internal consistencies (Cronbach's alphas) for PPI total scores ranged from .85 to .94 (Edens, Poythress, & Lilienfeld, 1999; Lilienfeld & Andrews, 1996; Lilienfeld & Hess, 2001). In this study, PPI—Short Form total scores yielded an alpha of .70, and PPI Factor 1 and Factor 2 scores' alphas were .66 and .75, respectively. PPI total scores correlated highly with PCL-R scores in prisoners (e.g., Poythress et al., 1998). PPI total scores have also correlated moderately to highly with other self-report and peer-related measures of psychopathy (e.g., Cale & Lilienfeld, 2002; Edens, Buffington, Tomicic, & Riley, 2001; Lilienfeld & Andrews, 1996; Poythress et al., 1998).

Because psychopaths tend to lack insight into their symptoms and because self-report measures are susceptible to positive impression management (e.g., "faking good"), we interspersed 14 items from the full PPI's Unlikely Virtues scale among the PPI—Short Form items. The Unlikely Virtues scale, which derived from Tellegen's (1982) Multidimensional Personality Questionnaire (MPQ), consists of items that assess the tendency to deny minor frailties (e.g., "I have at times eaten too much").

Narcissistic Personality Inventory (NPI; Raskin & Terry, 1988*)*

Constructed deductively by Raskin and Hall (1979) to assess narcissism, the NPI consists of 40 True–False items. In this study, Cronbach's alpha for this measure was .84. NPI scores correlate positively and significantly with observer measures of

narcissism as well as with self-reports of narcissistic interpersonal interactions (e.g., Raskin & Terry, 1988).

Rosenberg Self-Esteem Scale (RSE; Rosenberg, 1965*)*

The RSE is a widely used measure of global self-esteem (Robinson & Shaver, 1972). It consists of 10 items in a 4-point Likert scale format. The RSE was developed deductively and validated with a sample of 5,024 high school students. In this study, the RSE's Cronbach's alpha was .78.

State–Trait Anger Expression Inventory—2 (STAXI-2; Spielberger, 1999*)*

The STAXI-2 consists of 57 items in a 4-point Likert format. It contains six factor-analytically derived primary scales and an overall Anger Expression Index. Studies of the STAXI-2 indicate that it is a reliable and valid measure of anger components. "Trait Anger" scale scores have correlated significantly with self-report measures of hostility (Spielberger, 1999; Spielberger, Sydeman, Owen, & Marsh, 1999) and trait anger (Novaco & Renwick, 1998). The STAXI-2 has also been used to assess anger in prisoners (e.g., Slaton, Kern, & Curlette, 2000; Spielberger et al., 1999).

The STAXI-2 subscale most relevant to this study is Angry Reaction (T-Ang/R), which is part of the Trait Anger primary scale. Factor analyses of item responses revealed that the T-Ang/R items reflect a separable dimension of anger (D. G. Forgays, D. K. Forgays, & Spielberger, 1997). This subscale consists of four items assessing the tendency to respond to criticism and negative evaluation (i.e., ego threats) with anger. Scores on this subscale correlated positively and significantly with such interpersonal features as harshness and entitlement (Slaton et al., 2000). In this study, Cronbach's alpha for the T-Ang/R subscale was .73.

Perceived Ego Threat Questionnaire

This measure was designed to assess the extent to which one perceives various ego threats as threatening to one's self-concept. The structure of the items was based on Bushman and Baumeister's (1998) perceived ego threat measure (B. Bushman, personal communication, April 2001), the only other known measure of perceived ego threat. For their study, Bushman and Baumeister used one item, which asked participants to rate, on a 10-point scale, how threatening they found the essay evaluation. Because we did not present participants with ego threatening situations, we considered suggestions from GDC staff concerning situations that tend to be common ego threats in prison. Our measure consists of four items scored on a 10-point Likert scale (1: *not at all*; 10: *extremely*). Cronbach's alpha for this measure was .75. The specific items were

1. If someone were to *insult you*, how much would you view the *insult* as a "stab" or "threat" to your reputation?
2. If someone were *disrespectful to you*, how much would you view the *disrespect* as a "stab" or "threat" to your reputation?

3. If someone were to tell you something *negative about yourself*, how much would you view the *negative feedback* as a "stab" or "threat" to your reputation?
4. If an authority figure were to *demand that you obey* him or her, how much would you view the *demand* as a "stab" or "threat" to your reputation?

Informant Reports of Aggression

We developed a 12-item questionnaire for correctional officers and counselors regarding participants' levels of aggression. This measure was also based on information obtained from GDC staff regarding ego threats in prison. Two items assess how long and how well the informant knew the inmate. The other items are scored on a 7-point Likert scale (1: *not at all*; 7: *yes, an extreme tendency*) and assess participants' tendencies to respond with physical or verbal aggression when faced with specific ego threats and when not faced with these threats. The ego threats included in this questionnaire are insults, disrespect, negative feedback, and orders.

Disciplinary Reports (DRs)

We designed a procedure for coding whether inmates committed aggressive offenses in prison following ego threats. For each DR in a participant's file, the DR date, offense name, and factual statement describing the DR in detail was recorded. This information was coded in three ways: whether (1) the DR was physically aggressive, verbally aggressive, or not aggressive; (2) the DR factual statement described an antecedent event to the offense; and (3) the inmate was responding to an ego threat. Following Edens et al. (1999), we delineated a priori categories of physically aggressive, verbally aggressive, and nonaggressive DRs. Physically aggressive DRs included physical contact or using an object to touch another person with the intent of hurting the person (e.g., assaulting a correctional officer, throwing items at a person). Verbally aggressive DRs included verbally threatening interactions. Other DRs were classified as not aggressive (e.g., smoking in a restricted area). An antecedent event was any incident that occurred prior to the DR offense that was not part of a normal routine or required of all inmates. For cases in which nothing was written in the DR file summary other than the offense (e.g., "Inmate was found smoking in his cell"), DRs were considered as if no antecedent event was present and were coded as "not at all," with respect to whether there was an ego threat. For each DR with an antecedent event, the antecedent event was coded, using a 4-point scale, based on the extent to which the event was an ego threat (0: *not at all*; 1: *possibly*; 2: *probably*; 3: *definitely*).

DR data extending back to January 2000 were recorded, and the number of DRs for each participant ranged from one to 30 ($M = 9.54$; $SD = 6.62$). After the primary investigator coded all DRs, we examined the interrater reliability of the DR coding procedure. Another research assistant randomly selected 276 DR coding sheets, which contained only the DR dates, offense names, and factual statements, and independently coded the DRs. For *level of aggressiveness*, there was 100% agreement (Cohen's kappa = 1.00) between the two raters. For *occurrence*

of an antecedent event and *level of ego threat* the interrater reliabilities (Cohen's kappas) were .80 and .79, respectively.

Procedure

This study was conducted in accord with the ethical standards of the American Psychological Association (1994), and with the approval of the Georgia Department of Corrections Commissioner's Office, Emory University Social, Humanist, and Behavioral Institutional Review Board, and prisoner advocate for the Emory Medical School Human investigations Committee. Inmates participated voluntarily and were not offered any incentives to participate.

Data collection involved four steps. First, we obtained a list of approximately 250 LASP inmates, and each inmate's file was reviewed to determine his eligibility to participate, based on intellectual functioning, reading level, and diagnoses. Demographic information was recorded, and a list of potential participants was generated. Second, all inmates who consented to participate completed the Demographics Page, SRP-II, PPI—Short Form, NPI, RSE, STAXI-2, and Perceived Ego Threat Questionnaire. The third step involved obtaining informant reports. All inmates had either a general counselor or a mental health counselor, and the counselor for each participant was asked to participate. For each participant, we also contacted two correctional officers who worked in locations where they would presumably have contact with the inmate. Each informant was given a $10 cash honorarium when given the informant questionnaires, and all recruited informants agreed to participate. The fourth step involved a second file review to obtain DR information.

RESULTS

Preliminary Data Analyses

We excluded participants who may have not responded honestly or consistently. First, we compared participants' Demographics Page responses with file data and found no discrepancies. Next, we omitted six participants' data for such reasons as failure to complete most of the questionnaires and obvious inattention to the items. For the remaining sample of 105, we omitted participants with elevated scores on the Deviant Responding and Unlikely Virtues validity scales, and we also constructed a Variable Responding scale, following procedures used to develop scales for identifying inconsistent responding (e.g., MPQ: Tellegen, 1988; PPI: Lilienfeld & Andrews, 1996). Seven participants scored at least two standard deviations above the means for the Deviant Responding, Unlikely Virtues, and/or Variable Responding scales. Their data were excluded, leaving a final sample of 98. The 13 omitted participants had significantly lower IQ scores and significantly lower WRAT-3 scores than did the remaining sample. All participants from the omitted sample were African American. We examined the correlations among the self-report measures, informant reports, and disciplinary reports separately for African American and European American inmates and found no substantial differences in findings across these two groups. We therefore present only the findings from the combined sample

here (analyses for separate African American and European American inmates are available from the first author on request). Other differences across demographics (e.g., security level, time at LASP) were nonsignificant.

To keep the total number of analyses to a minimum and thereby minimize the risk of Type I error, we created composite scores for the psychopathy measures. We standardized (into *z*-scores) the total psychopathy, Factor 1, and Factor 2 scores for the SRP-II and PPI—Short Form and summed them to create composite measures for total, Factor 1, and Factor 2 scores. As noted earlier, we used these composite scores for all subsequent analyses. We computed correlations, examining the relations between both SRP-II and PPI scores and the other variables in the study, but did not find substantial differences across the two psychopathy measures.

We excluded some informants' reports from the analyses. In cases in which an informant indicated that he or she did not know the inmate, that is, by circling "1" (not at all) for this item, we omitted his or her report. Among the 98 inmate participants, 84 had three informant reports and 14 had two informant reports.

We aggregated the correctional officer and counselor report data because averaging across informants decreased the total number of analyses and because aggregation has been found to enhance the validity of informant ratings of personality features (Cheek, 1982). Each participant had at least one correctional officer report and one counselor report. We averaged responses separately across correctional officers and counselors, leaving each participant with one set of correctional officer scores and one set of counselor scores, and then averaged the correctional officer and counselor scores. The intraclass correlations across informant type were .49 for verbal aggression in response to ego threats, .37 for physical aggression in response to ego threats, and .29 for aggression when no ego threat was present. Overall, these findings indicated modest agreement across informant type.

Before conducting the analyses described in the following sections, we examined differences across correctional officer and counselor scores. A *t*-test did not reveal a significant difference in how well correctional officers and counselors reported knowing participants ($t = 0.872$, $df = 191$, $p = .38$, $d = 0.13$). A significant omnibus multivariate analysis of variance (MANOVA; Wilks's lambda = .736, $p < .01$) and follow-up analyses of variance (ANOVAs) revealed that counselors reported higher levels of inmate aggression than did correctional officers (Cohen's *d* ranged from 0.92 to 1.18 for the measures of aggression). We computed correlations, examining the relations between both correctional officer and counselor reports of aggression and the personality variables. The correlations were typically larger for the correctional officer reports than the counselor reports, but no substantial differences were found. We also computed correlations controlling for the number of informants (i.e., two or three), but again, found no substantial differences.

For all the participants' DRs between January 2000 and March 2002, 127 were coded as Not at all, 417 were coded as Possibly, 26 were coded as Probably, and 1 was coded as Definitely, with regards to level of ego threat. Because of the small number of DRs in the latter two categories, we combined all DRs with ego threat levels coded as Possibly, Probably, and Definitely. Next, we examined time periods during which participants had been at LASP to determine what would serve as a reasonably long time period for examining DRs while maximizing sample size. Because

Table 1. Descriptive Statistics

	n	Mean	*SD*	Minimum	Maximum
SRP total	98	237.55	44.83	135	327
SRP F1	98	35.84	7.99	18	57
SRP F2	98	44.94	15.22	15	80
PPI total	98	132.26	13.63	103	175
PPI F1	98	85.16	10.31	63	112
PPI F2	98	47.07	8.27	28	69
NPI	98	22.93	6.49	7	39
RSE	95	32.30	4.85	16	40
PET	93	21.56	8.88	4	40
T-Ang/R	97	9.52	3.00	4	16
IR verbal	111	11.52	4.22	8	42.25
IR physical	111	7.75	2.78	4	25.50
DR verbal	50	0.96	1.6	0	6
DR physical	50	0.12	1.5	0	3

Note. SRP: Self-Report Psychopathy Scale—II (Hare, 1991); PPI: Psychopathic Personality Inventory—Short Form (Lilienfeld, 1990); F1: Factor 1; F2: Factor 2; NPI: Narcissistic Personality Inventory (Raskin & Terry, 1988); RSE: Rosenberg Self-Esteem Scale (Rosenberg, 1965); PET: Perceived Ego Threat Questionnaire; T-Ang/R: Angry Reaction scale from the State–Trait Anger Inventory—2 (STAXI-2; Spielberger, 1999); IR verbal and IR physical: Informant Reports of verbal and physical aggression, respectively, in response to ego threats; DR verbal and DR physical: Disciplinary Reports of verbal and physical aggression, respectively, in response to ego threats.

there were markedly greater ranges for the DR variables for 2 years as opposed to 1 year, we decided to conduct analyses for DRs recorded within 2 years prior to data collection. Fifty participants had been at LASP for at least 2 years. (Table 1)

Psychopathy's Associations with Aggression in Response to Ego Threats (Hypothesis 1)

As shown in Table 2, psychopathy total scores correlated positively and significantly with self-reported tendencies to become angry in response to ego threats, and this association was moderate in magnitude. The correlations differed between the psychopathy factors, such that Factor 1 scores were nonsignificantly associated with this measure and Factor 2 scores were positively and significantly associated with this measure. The negative correlation between Factor 1 scores and this measure was small in magnitude, whereas the correlation between Factor 2 scores and this measure was large.

Table 3 displays correlations between the personality and self-esteem measures and both informant reports and DRs of aggression. For the informant data, psychopathy total and Factor 1 scores were most highly correlated with verbal aggression in response to ego threats, although these correlations were small in magnitude. The association between Factor 2 scores and verbal aggression in response to ego threats was also small in magnitude, but this association was nonsignificant. The correlations between psychopathy total, Factor 1, and Factor 2 scores and physical aggression in response to ego threats were nonsignificant.

Table 2. Pearson Product–Moment Correlations Among Self-Report Measures

	N	NPI	RSE	PET	T-Ang/R
Psych	98	.55**	.23**	.43**	.34**
Psych F1	98	.38**	.48**	.11	−.11
Psych F2	98	.36**	−.10	.47**	.51**
NPI	98	—	.43**	.41**	.32**
RSE	95	—	—	.01	−.07
PET	93	—	—	—	.30**
T-Ang/R	97	—	—	—	—

Note. Psych: psychopathy *z*-scores (i.e., summed *z*-scores from the Self-Report Psychopathy Scale—II and Psychopathic Personality Inventory—Short Form). F1: Factor 1; F2: Factor 2; NPI: Narcissistic Personality Inventory; RSE: Rosenberg Self-Esteem Scale. PET: Perceived Ego Threat Questionnaire; T-Ang/R: Angry Reaction scale from the State–Trait Anger Inventory—2.
**$p < .01$.

For the DR measures, psychopathy total and Factor 2 scores were moderately and significantly correlated with verbally aggressive DRs in response to ego threats (i.e., DRs coded as Possibly, Probably, or Definitely, with regards to level of ego threat). Factor 1 scores were positively correlated with verbally aggressive DRs in response to ego threats, but this association was nonsignificant. The correlations between psychopathy measures and physically aggressive DRs in response to ego threats were all nonsignificant. However, Factor 1 scores correlated positively with this variable, whereas psychopathy total and Factor 2 scores' correlations with this variable were negative or negligible in magnitude.

For the informant and DR data, we compared correlations between aggression types, that is, aggression when an ego threat was present versus aggression when no ego threat was present. For the informant data, psychopathy total, Factor 1, and Factor 2 scores' correlations with verbal aggression in response to ego threats were larger than the same variables' correlations with aggression when no ego threat was present. The difference between the correlations, based on aggression type, was

Table 3. Pearson Product–Moment Correlations for Informant and Disciplinary Report Measures

	Informant reports					Disciplinary reports				
		Ego threat		No ego threat			Ego threat		No ego threat	
	N	Verbal	Physical	Verbal	Physical	*N*	Verbal	Physical	Verbal	Physical
Psych	98	.26*	.14	.14	.20*	50	.37**	−.06	.17	.14
Psych F1	98	.24*	.14	.10	.17	50	.22	.11	.03	−.17
Psych F2	98	.19	.09	.16	.18	50	.30*	−.12	.21	.23
NPI	98	.17	.06	.10	.10	50	.23	<.01	.10	.18
RSE	95	.01	.01	.03	−.02	50	.05	−.07	−.04	−.17
PET	93	.14	.17	.16	.21*	48	.05	−.03	.03	.22

Note. Verbal: verbal aggression; Physical: physical aggression.
*$p < .05$; **$p < .01$.

significant for Factor 1 scores ($t = 1.86$, $df = 95$, $p = .03$) and almost reached significance for psychopathy total scores ($t = 1.59$, $df = 95$, $p = .06$). This pattern was not found for informant reports of physical aggression, where correlations were smaller for physical aggression in response to ego threats than physical aggression when no ego threat was present. However, the differences in correlations between aggression types for physical aggression were nonsignificant for all the psychopathy measures.

Consistent with the informant report data, psychopathy total, and Factor 1 scores' correlations with verbally aggressive DRs in response to ego threats were higher than verbally aggressive DRs when no ego threat was present (i.e., DRs coded as Not at all with regards to level of ego threat). The differences between correlations were significant for psychopathy total scores ($t = 1.83$, $df = 47$, $p = .04$) and almost reached significance for Factor 1 scores ($t = 1.67$, $df = 47$, $p = .05$). For physically aggressive DRs, only Factor 1 scores' correlation with physically aggressive DRs in response to ego threats was higher than the correlation with physically aggressive DRs with no ego threat present. The difference between these correlations was nonsignificant ($t = 1.34$, $df = 47$, $p = .09$). Psychopathy total and Factor 2 scores' correlations with physically aggressive DRs in response to ego threats were lower than the correlation with physically aggressive DRs with no ego threat present. The differences between these correlations almost reached significance ($t = -1.695$, $df = 47$, $p = .05$) for Factor 2 scores.

Perceived Ego Threat's Associations with Psychopathy and Aggression (Hypothesis 2)

Psychopathy total and Factor 2 scores correlated positively and significantly with perceived ego threat scores, and these associations were moderate in magnitude (see Table 2). In contrast, the association between Factor 1 scores and perceived ego threat was nonsignificant. Perceived ego threat scores were positively and significantly associated with self-reported tendencies to become angry in response to ego threats, and this association was moderate in magnitude. For the informant data, the correlations between perceived ego threat and aggression in response to ego threats were all nonsignificant and small in magnitude. For the DR data, the correlations between perceived ego threat and aggression in response to ego threats were negligible.

Perceived Ego Threat as a Mediator (Hypothesis 3)

We constructed regression equations to test whether perceived ego threat mediated the relationship between psychopathy and aggression in response to ego threats (see Baron & Kenny, 1986). For each model, (1) psychopathy correlated significantly with anger in response to ego threats; (2) psychopathy correlated significantly with perceived ego threat; and (3) perceived ego threat correlated significantly with anger in response to ego threats. Because perceived ego threat scores did not correlate significantly with either the informant reports or DRs of aggression in response to ego threats, we did not test for mediator effects with the

Table 4. Hierarchical Multiple Regression Analyses Testing Perceived Ego Threat as a Mediator

Variable	Model *R*	R^2	R^2 change	*df*	*p*	Zero-order	Partial
Model 1							
PET	.30	.09	.09	1, 91	<.01	.30	—
Psych	.39	.15	.06	1, 90	.01	.35	.26
Model 2							
PET	.30	.09	.09	1, 91	<.01	.30	—
F2	.51	.26	.17	1, 90	<.01	.51	.43
Model 3							
PET	.30	.09	.09	1, 91	<.01	.30	—
NPI	.37	.14	.05	1, 90	.03	.32	.23

Note. Zero-order: Pearson product–moment correlations; partial: partial correlations controlling for perceived ego threat. Dependent variable for Models 1–3: T-Ang/R.

informant report or DR data. Using hierarchical linear regression techniques, we calculated two regression equations for predicting T-Ang/R scores (see Table 4). For each equation, perceived ego threat was entered in the first step, and the measure of psychopathy was entered in the second step. For both models, the associations decreased when controlling for perceived ego threat. However, the association remained significant and contributed unique variance to the models in predicting this form of aggression, indicating that perceived ego threat was not a significant mediator. Psychopathy total scores remained significantly associated with self-reported anger in response to ego threats (Model 1), although the unique variance in predicting this form of aggression was relatively small. For the model with Factor 2 as the independent variable (Model 2), the unique variance was larger.

Narcissism's Associations with Aggression and Perceived Ego Threat (Hypothesis 4a)

Correlations between NPI scores and measures of aggression in response to ego threats were compared with those for the psychopathy measures (see Table 2). Like psychopathy total and Factor 2 scores, NPI scores correlated positively and significantly with inmates' self-reported tendencies to become angry in response to ego threats. Also like psychopathy total and Factor 2 scores, NPI scores correlated positively and significantly with PET scores. For the informant and DR data, NPI scores' correlations with verbal aggression in response to ego threats were higher than the same variables' correlations with aggression when no ego threat was present. However, the differences between the correlations across aggression type were nonsignificant. NPI scores' correlations with physical aggression were lower than the same variables' correlations with aggression when no ego threat was present, but again the differences across aggression type were nonsignificant. Compared with the findings for the psychopathy measures, particularly psychopathy total and Factor 2 scores, a similar pattern of findings held for NPI scores, but the associations were generally weaker in magnitude.

We computed one regression equation to test whether perceived ego threat mediated the relationship between narcissism and anger in response to ego threats

(see Table 4). When controlling for perceived ego threat, the association decreased but remained significant and contributed unique variance to the model (Model 3). Therefore, perceived ego threat was not a significant mediator, although the unique variance in narcissism in predicting this form of aggression was relatively small. These results were comparable with those for the psychopathy total scores.

Narcissism's Associations with Factor 1 and Factor 2 (Hypothesis 4b)

Psychopathy total scores correlated positively and significantly with NPI scores (see Table 2). In addition, both Factor 1 and Factor 2 scores correlated positively and significantly with NPI scores. A test of the difference between these correlations revealed that NPI's correlations with psychopathy did not significantly differ across psychopathy factors ($t = 0.173$, $df = 95$, $p = .57$).

Self-Esteem Findings (Hypothesis 4c)

There was virtually no relation between self-esteem scores and measures of aggression in response to ego threats. RSE scores correlated negligibly with self-reported anger in response to negative feedback, informant reports of verbal and physical aggression in response to ego threats, and verbally and physically aggressive DRs in response to ego threats. Moreover, the correlation between RSE scores and perceived ego threat was negligible.

DISCUSSION

The results provided partial support for the hypothesis that psychopaths are more likely to respond to ego threats with aggression than nonpsychopaths. Levels of perceived ego threat and aggression in response to ego threats differed across psychopathy factors, suggesting that further investigation of psychopathic features may elucidate the predictors of aggressive behavior. Our findings further suggested that psychopathy fits within Baumeister and colleagues' model better than does narcissism. Although the pattern of results for narcissism was similar to that for psychopathy total and Factor 2 scores, narcissism's associations with the aggression measures were weaker in magnitude overall. When we compared the correlations for aggression in response to ego threats versus aggression in the absence of ego threats using the informant report and DR data, psychopathy total scores and Factor 1 scores fit better than did narcissism in the threatened egotism model. Nevertheless, this interpretation is tentative given that the findings for psychopathy were not entirely consistent. Moreover, because we did not Bonferroni-correct the correlations in Tables 2 and 3, our findings will require replication in independent samples. We elected not to perform Bonferroni corrections given that this practice markedly increases Type II error rates (see Schmidt, 1992, and Sedlmeier & Gigerenzer, 1989, for arguments against the use of Bonferroni correction and other alpha-adjusted procedures).

Unique to this study was the attempt to investigate the relation between psychopathy and aggression in response to ego threats. Psychopathy total scores exhibited significant, although small to moderate, associations with self-reported anger in

response to ego threats, informant reports of verbal aggression in response to ego threats, and verbally aggressive DRs in response to ego threats. Factor 2 was significantly associated with self-reported anger in response to ego threats, and Factors 1 and 2 were significantly associated with informant reports of verbal aggression in response to ego threats. When comparing the associations for aggression in response to ego threats versus aggression in the absence of ego threats, the differences were significant only for psychopathy total and Factor 1 scores.

The small to negligible associations between Factor 1 and both perceived ego threat and self-reported anger in response to ego threats can be interpreted in at least two ways. First, high Factor 1 individuals may lack insight about their sensitivity to ego threats. Second, such individuals may not readily admit to responding with anger. Both interpretations are plausible given that Factor 1's association with aggression in response to ego threats was supported by the informant report and DR data.

When testing the hypothesis that narcissism is related to aggression in response to ego threats, the results were nonsignificant for the informant report and DR data. Therefore, the results from Bushman and Baumeister's (1998) study of the threatened egotism model did not replicate in this sample. One interpretation of this negative finding is that narcissism, although associated with aggression in nonclinical samples (e.g., Raskin et al., 1991; Wink, 1991), accounts for a lower proportion of the variance in predicting aggression in inmates. Additional or more severe forms of personality disturbance, including psychopathic traits, may better account for aggression in response to ego threats in correctional settings.

Results supported the prediction that both Factor 1 and Factor 2 would be significantly associated with narcissism. The strengths of these associations did not differ significantly across factors. Assertions that Factor 1 is best characterized by insidious, narcissistic personality traits (Meloy, 1988) appear to be incomplete because the available data suggest that Factor 2 also includes features related to narcissism.

There is some suggestive evidence for two distinct types of narcissism. "Overt" narcissism is described as including extraversion and rebellious features, whereas "Covert" narcissism is described as reflecting a sense of inner depletion, introversion, and hypersensitivity (see Wink & Donahue, 1997). Examination of the item content of the NPI suggests that it is more a measure of "Overt" than "Covert" narcissism. However, the research evidence for these subtypes of narcissism is very preliminary. We chose to use the NPI, a well-validated measure of narcissism, to ensure that our findings would be generalizable and easily compared with those of Bushman and Baumeister (1998). The two types of narcissism could have differential associations with the threatened egotism model. For example, in response to ego threat, overt narcissism may be more associated with the expression of observable aggression than covert narcissism, whereas covert narcissism may be more associated with unexpressed anger than overt narcissism. Nevertheless, additional research is needed to substantiate these conjectures and to better validate the distinction between these two constructs.

Perhaps the primary limitation of this study was its quasi-experimental design, which limits the strength of causal inferences. Although our study was less internally valid than Bushman and Baumeister's (1998) experimental study, it is more

ecologically valid given its greater relevance to aggression in prison and possibly community samples. However, the present study did not measure other potentially important variables, such as differences in the ego threats confronted by different inmates. In Bushman and Baumeister's study, all participants faced the same ego threat. In this study, inmates were assessed for how they *tend* to respond to ego threats in a naturalistic setting. They were not presented with an objectively defined ego threatening event, as in experimental designed study, because this design was not feasible with our prison sample. These limitations constrain our ability to ascertain whether psychopathy is a significant predictor of aggression in response to ego threats and whether the severity of one's perception of an ego threat significantly explains this association. Before discounting the relevance of Bushman and Baumeister's (1998) findings to inmate samples, operationalizations of aggression, ego threat, and perceived ego threat should be further investigated. Other emotional responses that have been linked with anger and aggression should also be incorporated within this model. For example, the evidence supporting an association between shame (but not guilt) and anger (see Tangney, Wagner, Fletcher, & Gramzow, 1992) is consistent with and may hold important implications for the threatened egotism model.

The associations between psychopathy and aggression were stronger for verbal than for physical aggression, and the low variance of physical aggression may have precluded the detection of significant associations. Although there is a positive association between behavior inside and outside of prison (e.g., Hare & McPherson, 1984), physical aggression is tightly controlled in the prison setting, and inmates may use verbal aggression more readily than physical aggression. It is probable that the high situational constraints (Monson & Snyder, 1977) of the prison setting constrain the variety and severity of aggressive responses.

Another limitation involved our reliance on psychopathy self-report measures. Because of time and resource limitations, we did not administer the PCL-R, which is the best validated measure of psychopathy (Hare, 1991). Nevertheless, the SRP-II and PPI have been increasingly used in research studies, and are moderately to highly correlated with the PCL-R and its factor scores (e.g., Edens et al., 1999; see also Faraone & Tsuang, 1994, for a discussion of the problems related to a lack of "gold standards" in psychopathology research). However, although we included validity scales to detect response biases (e.g., impression management, malingering), such scales cannot detect the lack of insight characteristic of psychopathy (see Cleckley, 1941/1988).

Our operationalization of perceived ego threat and our reliance on the PET self-report measure posed problems as well. To our knowledge, there are no well-validated measures of perceived ego threat, and our measure was based on the ad hoc measure constructed by Bushman and Baumeister (1998). In addition, the relationship between the PET measure and the STAXI-2's T-Ang/R subscale, which assesses anger in response to negative evaluation (i.e., an ego threat), warrants further consideration. Like the PET measure in Bushman and Baumeister's (1998) study, our PET measure assessed the extent to which people perceive ego threats

as challenging to their self-concepts. In contrast, we used the T-Ang/R subscale, informant reports, and DRs as measures of aggression in response to ego threats, and in essence, we decided a priori what kinds of events would be considered ego threats. On the basis of Baumeister and colleagues' model, we separated *the extent to which people perceive ego threats as challenging to their self-concepts* from the self-report and external measures of *anger and aggression in response to ego threats*. Also based on their model, the *perception of threat* largely explains the angry or aggressive *response to this threat*. Although we attempted to clarify these distinctions in our operationalizations of these variables, it is possible that subtle criterion contamination explained some of the associations among them.

Furthermore, although we considered anger and aggression to be lower-order indicators of the same broad construct (see Novaco & Renwick, 1998; Spielberger et al., 1995), our findings were not entirely consistent across the self-report anger measure and external measures of aggression. There are important distinctions between anger and aggression, the most notable being that anger is an emotion whereas aggression is a behavior. Although we were unable to carefully examine these distinctions with respect to the threatened egotism model, further research on Baumeister and colleagues' model should clarify the potential differences between self-reported anger and observed aggression as outcome variables. The extent to which psychopathic or narcissistic individuals become angry versus respond aggressively has important implications for criminal and violence risk prediction.

Our informant measure might have been limited in its capacity to detect aggression. For example, inmates can be aggressive toward others in ways that go undetected by correctional officers and mental health staff. It is possible that informants falsely attributed observed aggression in general (i.e., across situations and events) to aggression when the inmates' egos were threatened, which would have jeopardized the validity of the informant reports. Fortunately, we were able to exclude this potential problem as an explanation for our findings by comparing the informant report data with the DR data (see Table 3). As shown there, we found a similar pattern of results across these two measures. The DRs were expected to be relatively more immune to this potential problem than the informant reports because we developed a method for coding observed events and behaviors, as documented in the DRs, rather than relying on individuals' inferences about the precursors to aggressive behaviors.

Informants' perceptions of inmates' aggressive behaviors might have been influenced by informants' race, as there is some evidence that African American observers may perceive more aggression than European American observers (e.g., see Sager & Schofeld, 1980). Nevertheless, because we did not collect information regarding informants' races, we could not examine this possibility. Similarly, the DR data were limited by the fact that a minority of inmates tend to commit a majority of DRs and that many largely extraneous factors may influence which incidents are recorded. For example, some aggressive individuals who are especially charming and manipulative may evade DRs in the prison setting.

Given that prior violence is a good predictor of future violence (Monahan et al., 2001; Monahan & Steadman, 1994), our findings bear implications for violence risk

assessment in community and in forensic settings. Although some might assume that psychopaths, who tend to be cold, callous, and interpersonally distant, are immune to ego threats, our findings suggest otherwise. Consistent with Baumeister and colleagues' assertions, neither high nor low levels of self-esteem are strong predictors of aggression and violence. A clearer understanding of the variability in individuals' perceptions of and responses to potential ego threats across settings is required before these variables can be incorporated into violence risk assessment procedures. Likewise, additional research on aggression and threatened egotism could eventually assist in developing training programs for correctional staff.

Our findings do not support the use of treatment programs designed to increase offenders' self-esteem, because such programs could inadvertently augment their psychopathic or narcissistic tendencies. Nevertheless, interventions that focus on cognitive appraisals of certain triggering events, such as insults and other ego threats, as well as on affective reactions to such events (e.g., Monahan, 1981), may prove fruitful (Baumeister, 2001; Walsh, 1999). Researchers should investigate the efficacy of these interventions in altering offender's interpretations of potential ego threats and in decreasing their risk of violence.

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