

## Characterizing Aggressive Behavior in a Forensic Population

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The concept of a dichotomous versus a continuous aggression model continues to be debated within the research literature. The Impulsive/Premeditated Aggression Scale (IPAS; M. S. Stanford, R. J. Houston, C. W. Mathias, et al., 2003) is a newly developed self-report instrument designed to classify an individual's aggressive behavior as predominantly premeditated or predominantly impulsive. The IPAS consists of 30-items that are scored on a 5-point Likert scale. This study used a nonrandom sample of convenience ( $N = 85$ ) from a forensic state hospital. Principal-components analysis of the 30 items revealed 2 distinct factors (Impulsive and Premeditated Aggression), which accounted for 33% of the variance. The results of this study further validate the bimodal classification of aggression through its application to a forensic sample. The implications for general assessment, diagnosis, and treatment are discussed.

*Keywords:* aggression, forensic, IPAS, impulsive, premeditated

The ability to dichotomize aggressive behavior into distinct categories appears to be increasingly accepted in the empirical literature. Aggression has been defined in the broad-based literature as premeditated (predatory, instrumental, callous-unemotional, proactive) and impulsive (affective, reactive, impulsive; Cornell et al., 1996; Raine et al., 1998; Stanford, Houston, Mathias, et al., 2003; Weinshenker & Siegel, 2002; Woodworth & Porter, 2002). There is some empirical evidence supporting the validity and similarity of all of these typologies (Dodge & Coie, 1987), despite differences in chosen words to illustrate each type.

According to clinical lore, premeditated-predatory aggression is carried out in a methodical and deliberate fashion for the benefit of achieving a desired goal. The heightened sense of awareness permits the perpetrator to home in on the victim, gathering all of the necessary information before carrying out the violent act. According to Cornell et al. (1996), an example of premeditated-predatory aggression is rape, especially serial rape, and offenders generally perform this violent act to gratify both psychopathic and narcissistic personality traits (Meloy, 2000). Studies show that during a premeditated-predatory mode of aggression, the aggressor typically shows very little, if any, physiological arousal (Stanford, Houston, Villemarette-Pittman & Greve, 2003), a hypothesis first proposed by Meloy (1988). These behavioral characteristics

commonly associated with the premeditated-predatory aggressor make it very difficult for the victim to predict the impending attack (Meloy, 2000). Empirical studies on incarcerated populations have also demonstrated that premeditated-predatory aggressors are more psychopathic, as measured by the Psychopathy Checklist-Revised (PCL-R), than those classified as impulsive-affective aggressors (Cornell et al., 1996; Porter, Woodworth, Earle, Drugge, & Boer, 2003; Woodworth & Porter, 2002).

Individuals who display impulsive-affective aggressive behaviors are commonly labeled unpredictable and "short fused." The impulsive-affective aggressor responds to provocation with immediate and destructive violence. The activation of the sympathetic branch of the autonomic nervous system provides the necessary means for accomplishing the ultimate goal of threat reduction (Meloy, 1988, 2000). It is quite plausible that the behavioral instability observed in the impulsive aggressor is related to cognitive dysfunction. For example, a few of the more recent scientific experiments found the impulsive aggressor to demonstrate significant executive functioning and verbal impairments on neuropsychological testing (Stanford, Greve, & Gerstle, 1997; Villemarette-Pittman, Stanford, & Greve, 2002) and diminished P3 event-related potential amplitudes (Barratt, Stanford, Kent, & Felthous, 1997; Mathias & Stanford, 1999). Because of the lack of cognitive resources, the impulsive aggressor becomes overwhelmed by competing stimuli, which, if only for a brief moment, renders the aggressor helpless. Seeing no other alternative, the affective aggressor acts before he or she thinks, drawing on primal aggressive knowledge; consequently, affective aggressors are frequently caught and sent to jail for their violent outbursts (Meloy, 2000).

Within the past 30 years, there have been attempts to validate psychological measures that would adequately tap the aggression construct (Barratt, Stanford, Dowdy, Liebman, & Kent, 1999;

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Barratt, Stanford, Kent, & Felthous, 1997; Campbell, Muncer, McManus, & Woodhouse, 1999; Cornell et al., 1996; Heilbrun, Heilbrun, & Heilbrun, 1978; Linnoila et al., 1983; Raine et al., 1998; Vitiello, Behar, Hunt, Stoff, & Ricciuti, 1990). Unfortunately, several of the measures used to classify subtypes of aggressive and violent behavior are fraught with methodological problems, making the reliability and validity of these measures suspect (Heilbrun et al., 1978; Linnoila et al., 1983). First and foremost, differences in opinion on how the construct of aggression should be operationally defined prevent the scientific community from empirically testing an already illusive construct. In a recent review of the clinical and research measures on aggressive behavior, Suris et al. (2004) discussed the psychometric properties of the available aggression instruments. On the basis of their comprehensive review of the literature, Suris et al. made the following assertion:

Construct definition and clarification in the study of aggression is complicated by a number of factors related to choice of instrumentation and participant population. Interviewer bias, social desirability, and operational definitions may all provide confounds to resulting integrity and generalizability. . . . Improving psychometric assessments of aggressive behavior will not only help clarify the constructs in question, but will also help define applicability appropriateness for various populations under study (pp. 221)

The lack of instruments specifically designed to assess aggressive subtypes affords a unique opportunity for the scientific community to move forward with the development of an impulsive and premeditated aggressive measure.

The Impulsive/Premeditated Aggression Scale (IPAS; Stanford, Houston, Mathias, et al., 2003), is a 30-item, self-report questionnaire that classifies an individual's aggressive behavior as predominantly premeditated or predominantly impulsive. Stanford, Houston, Mathias, et al. studied a sample of 93 men referred to a local clinic for aggression problems. The authors reported that scores on the IPAS were correlated with measures of neuroticism, physical aggression, impulsivity, and anger. Furthermore, they performed principal-components analysis (PCA) on 28 IPAS items (they removed 2 prior to PCA), which revealed three distinct aggression factors: Premeditated (Factor 1), Impulsive (Factor 2), and Familiarity With Target/Remorse/Agitation (Factor 3), accounting for 16.56%, 14.03%, and 9.72% of the variance, respectively. Additionally, following the initial rotation of the factors, the authors dropped 2 additional items, for a total of 26 items—they also removed Factor 3 from further analyses.

In conclusion, after comparing impulsive and premeditated aggressors, Stanford, Houston, Mathias, et al. (2003) were of the opinion that the former group displayed a broader range of impairments, including irritability and emotional lability, whereas the latter group showed an increased propensity for hostility, self-harm, and antisocial behavior as well as overall aggression. These findings suggest that the premeditated aggressor may be at a higher risk for developing antisocial personality disorder (Stanford, Houston, Mathias, et al., 2003) or constitutionally more psychopathic (Melow, 1988).

The aforementioned research supports the construct validity of the IPAS in an adult (Stanford, Houston, Mathias, et al., 2003) sample. The present study was prompted by a paucity of empirical research examining aggressive subtypes in a forensic population

and the absence of studies utilizing the IPAS in a forensic sample. Aggressive behavior is a significant concern for forensic hospitals, and a better understanding of the motivations behind patient aggression may assist the mental health community in determining solutions to this problem. To this end, we hypothesized that two independent types of aggression (impulsive and premeditated) would emerge from the IPAS in a forensic sample.

## Method

### Participants

The IPAS was administered to 86 participants recruited as a nonrandom sample of convenience from a forensic state hospital. Of the 86 participants, 1 participant was unable to complete the measure. The psychiatric hospital has three levels of security (minimum, medium, and maximum) and treats approximately 1,100 patients (men = 78%; women = 22%). Of the 1,100 patients, 51% are Caucasian, 47% are African American, 1% are Hispanic, and 1% are Asian or American Indian. A majority of patients are admitted to the state hospital as (a) incompetent to proceed (ITP; 539, 49%) and/or (b) not guilty by reason of insanity (NGI; 315, 29%); however, there are also civil commitment units. Moreover, all patients admitted to the state hospital were facing at least one felony charge. To reduce sample heterogeneity, we excluded participants who were mentally retarded, overtly psychotic, or unable to speak English.

### Procedure

Participants were tested individually over the 2002–2003 calendar year. Before the evaluation, participants were informed that the results of the evaluation would be sent to the referring court. Administration of the IPAS took place in a quiet interview room. Next, the test administrator instructed the participant to carefully read the directions and to select the best answer for each question. This study was officially approved for archival research for the 2002–2003 calendar year by both the Institutional Review Board at Florida State Hospital and the Florida Department of Children and Families.

### IPAS

The IPAS (Stanford, Houston, Mathias, et al., 2003) is a 30-item self-report instrument used to assess the individual's motivation and behavioral control during the aggressive acts. Of the 30 items, 15 items focus on impulsive aggression characteristics, and 15 items focus on premeditated aggression characteristics. Some examples of questions include, "When angry I reacted without thinking," and, "I planned when and where my anger was expressed." The items are scored on a 5-point Likert scale (5 = *strongly agree*, 1 = *strongly disagree*). According to Stanford, Houston, Mathias, et al. (2003), the IPAS demonstrates adequate reliability coefficients (Cronbach's  $\alpha$ s = .77 for the Impulsive scale and .82 for the Premeditated scale).

### Data Analysis

In the current study, we conducted statistical analyses similar to those used in the previously mentioned study on the IPAS with aggressive adults (Stanford, Houston, Mathias, et al., 2003). To determine whether the questions were relevant to a forensic population, we conducted an item analysis on the IPAS scales (Nunnally & Bernstein, 1994). We tabulated Pearson's product-moment item-total correlations between individual items and the respective scale minus the item of interest included in the composite score. Next, we computed a series of *t* tests to examine differences in item response between those participants designated as extreme groups (i.e., upper and lower quartiles of each scale). We excluded items







