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Characterization of Aggressive Behavior in Substance Users: Preliminary Findings

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Violent substance users represent a particularly challenging group in treatment settings. These individuals tend to have more severe substance use problems, a poorer prognosis, and a higher rate of recidivism. Although numerous studies have documented the high comorbidity rate between substance use disorders and aggressive behavior, few have accounted for the role of aggressive subtypes. Preliminary data from two studies are presented. The first examined the psychometric properties of the Impulsive/Premeditated Aggression Scales (IPAS) in a sample of methadone patients ($n=121$). Results indicated acceptable internal consistency ($\alpha=.72$) and test-retest reliability ($ICC \geq .54$) for both the Impulsive (IA) and Premeditated (PM) scales. Using the Lifetime History of Aggression Questionnaire, 51 patients were deemed to have a history of chronic aggressive behavior (score of 9 or higher). The IPAS was used to classify the aggressive behavior of this subgroup into 63% impulsive and 37% premeditated, a distribution similar to previous studies using the IPAS in non-drug dependent samples. These results suggest that aggressive behavior can be reliably characterized using the IPAS within the context of substance abuse.

The second study examined neurocognitive function in impulsive aggressive and non-aggressive polysubstance dependent individuals (primarily alcohol and crack cocaine) as well as non-aggressive, non-dependent controls. Deficits in executive/frontal lobe functioning have been associated with both substance dependence and impulsive aggression, but few studies have attempted to disentangle the effects of these co-occurring behaviors. The P3 event-related electroencephalographic potential was recorded during an auditory task designed to assess cognitive set-shifting. P3 amplitude was measured in response to rare stimuli (white noise burst) that signaled a change in stimulus-response mapping in succeeding trials. Repeated measures analysis indicated smaller P3 amplitude in the impulsive aggressive substance users as compared to the non-aggressive substance users and controls. These results suggest that a history of impulsive aggression may account for a significant proportion of those neurocognitive deficits previously associated with substance dependence.

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