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Psychophysiological, Behavioral, and Emotional Distinctions between Childhood Reactive and Proactive Aggression

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Reactive and proactive aggression are two common forms of childhood aggression. Reactive aggression occurs impulsively in response to perceived provocation, whereas proactive aggression is planned and goal-driven. This study was designed to understand the cognitive, emotional, behavioral, and psychophysiological distinctions between these forms of aggression. Sixty-four 7-13 year-olds (mean = 9.67; 42 boys, 56 White) were recruited from the community. Parents were interviewed to determine child psychiatric diagnoses, and rated their child on reactive/proactive aggression and other behavior problems. Children completed computerized tasks designed to measure response to provocation, attention, and behavioral inhibition. Heart rate (HR), skin conductance (SC), and heart rate variability (HRV) were measured in 42 of the children during a four-minute rest period prior to the computer tasks.

The findings indicated that reactive and proactive aggression have unique correlates in terms of cognitive, emotional, behavioral, and psychophysiological functioning, providing support for their distinction. Specifically, reactive aggression was associated with mood/anxiety disorders, decreased vigilance associated with frontal deficits, and autonomic dysregulation in terms of decreased resting HRV and SC. Proactive aggression, on the other hand, was unrelated to mood/anxiety disorders and frontal dysfunction, but was associated with increased resting HRV and SC, and with behavioral problems such as ADHD, delinquent behaviors, and ODD. This pattern of findings is generally consistent with the notion of emotional dyscontrol, both in terms of negative emotion expression and poor regulation, possibly indicative of frontal lobe dysfunction, in relation to reactive aggression. Proactive aggression, however, seems relatively unaffected by anxiety/mood problems and shows autonomic patterns consistent with greater regulation and frontal control. If replicated, these findings would have implications for intervention, whereby emotional and attentional problems need to be addressed for treating reactive aggression and long-standing behavioral problems for treating proactive aggression.

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