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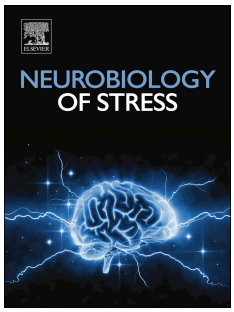

Stress reactivity and the developmental psychopathology of adolescent substance use

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Abstract

Adolescence represents a period of risk for initiation of substance use and the development of substance use disorders (SUDs). In addition, during adolescence, there is rapid development of stress reactivity systems. This paper describes a conceptual model of the role of stress reactivity in the development of substance use in adolescence. It is proposed that some children develop maladaptive patterns of emotional, physiological, and neural reactivity to stressful situations that are either too high or too low and that their patterns of reactivity interact with increased stressful life events during adolescence to lead to potential for substance use and SUDs. In one pathway, youth develop a heightened reactivity to stress, which leads to high negative emotion and using substances to cope. In a second pathway, youth develop a blunted reactivity to stress, which leads to chronic under-arousal and using substances to increase sensation/arousal. We propose that girls may be more likely to take the high-reactivity pathway to substance use and boys may be more likely to take the low-reactivity pathway. We review existing studies of stress reactivity in adolescents, which support our theory that altered stress reactivity is correlated with and, in some cases, predictive of adolescent substance use, with some studies finding high stress reactivity and some finding low stress reactivity to be correlated with increased substance use and SUD risk. Some studies find that the blunted reactivity pathway to substance use occurs particularly for youth from high-risk contexts. Further, some evidence supports the proposed sex differences in stress reactivity pathways. We discuss future directions and implications of these findings for developing and refining developmentally-sensitive stress reactivity-focused SUD prevention programs.

Keywords: stress reactivity; substance use; adolescence; sex differences