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Anxiety Vulnerability Factors and Disorders and Tobacco and Marijuana Use and Disorders: Emerging Theory and Research Explicating their Relations

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There has been a long-standing recognition that psychological disorders are related to drug use, abuse, and dependence. The vast majority of the work addressing relations among psychopathological processes and drug use, abuse, and dependence has been focused primarily on a select few psychological disorders, namely, schizophrenia, depression, antisocial personality disorder, and attention deficit hyperactivity disorder (e.g., Hellerstein, Rosenthal, & Miner, 1995). This body of empirical work has indicated that there often are clinically meaningful relations among individual differences in certain psychopathological characteristics and the onset and maintenance of substance use, abuse, and dependence. Yet, despite that anxiety disorders are one of the most common and impairing classes of psychological problems and frequently co-occur with substance use and misuse (Barlow, 2002), there has been relatively limited programmatic study of the relations between anxiety factors (anxiety disorders and vulnerability processes) and substance use disorders, with the possible exception of alcohol use problems (e.g., Kushner, Abrams, & Borchardt, 2000).

Of the substance use disorders, work has focused on explicating the linkages between tobacco use and anxiety vulnerability factors and disorders (Morissette, Tull, Gulliver, Kamholz, & Zimering, 2007; Zvolensky, Bernstein, Marshall, & Feldner, 2006). Much of this work initially centered on panic psychopathology due to the early recognition that it, relative to other anxiety disorders, was robustly related to smoking (Breslau & Klein, 1999), and helped lead to theoretical and clinical insights regarding the reciprocal and dynamic relations between cigarette smoking and panic attacks, panic disorder, and agoraphobia (Zvolensky & Bernstein, 2005). More recently, other work has begun to more systematically focus on smoking in regard to the onset and maintenance of other anxiety disorders (e.g., posttraumatic stress disorder; Feldner, Babson, & Zvolensky, 2007) as well as whether, and to what extent, pre-morbid

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vulnerability factors for anxiety and related negative mood conditions (e.g., pre-morbid anxiety and depressive symptoms, anxiety sensitivity, distress tolerance) also may be related to various facets of smoking behavior (e.g., smoking use motives, lapse and relapse to use). A second, albeit even more nascent, stream of research has begun to evaluate linkages between anxiety factors and marijuana (Zvolensky et al., 2006), the most commonly used illicit drug in the United States and the world (Amos, Wiltshire, Bostock, Haw, & McNeill, 2004). This marijuana-anxiety research has been important both because of the public health problems associated with marijuana use problems and possibly unique relations between marijuana and certain anxiety experiences (e.g., panic attacks induced by marijuana use). Moreover, each of these burgeoning areas of study reflects how studying one set of co-occurring substance use-anxiety problems (e.g., smoking and panic psychopathology) can lead to extensions of that basic model to other anxiety problems (e.g., posttraumatic stress disorder), substance use problems (e.g., marijuana use disorders), and their co-occurrence with one another.

Scientific work, primarily in terms of tobacco use and increasingly in regard to marijuana use, has begun to explore common or shared risk as well as moderating and mediating processes, including cognitive, affective, neurobiological, and psychophysiological factors that may help account for the concurrence of various anxiety disorders and vulnerability factors and these substance use problems. This work is theoretically and clinically important to the extent it leads to understanding broad-based (e.g., cross-substance and transdiagnostic) and unique (e.g., drug-specific and diagnosis-specific) relations, refining theoretical understanding of substance use-anxiety comorbidity and marshalling such knowledge to develop evidenced-based ‘next generation’ prevention and treatment protocols.

The primary purpose of the present special series is therefore to provide a forum for the systematic presentation of emerging theory, empirical evidence, and directions for future work pertaining to anxiety psychopathology and vulnerability processes and tobacco and marijuana use and disorders by some of the leading research groups carrying out such work. To accomplish this aim, articles were invited to highlight a range of research and theory. Whereas the vast majority of past work dealing with these topics has to date largely focused on issues related to psychiatric (diagnostic) comorbidity (Zvolensky & Bernstein, 2005), the articles in this special issue collectively suggest that focusing on anxiety vulnerability processes and the contexts in which they operate is also a valuable and promising pursuit. Additionally, the present series includes papers that cover basic and clinical research, and in so doing, attempts to highlight the importance of translating research findings and ideas from basic to applied and from applied to basic work in this area of study. Overall, by covering a range of issues interconnected by their focus on understanding anxiety psychopathology and vulnerability processes in relation to tobacco and marijuana use and their disorders, it is hoped that such “broad coverage” will: (1) alert readers to the significance of this work at a variety of different levels of analysis; (2) illustrate current research questions being explored via innovative approaches; and (3) identify promising areas for future research and clinical advances.

References

- Anda RF, Williamson DF, Escobedo LG, Mast EE, Giovano GA, Remington PL. Depression and the dynamics of smoking: A national perspective. *Journal of the American Medical Association* 1990;264:1541–1545. [PubMed: 2395193]
- Amos A, Wiltshire S, Bostock Y, Haw S, McNeill A. You can’t go without a fag...you need it for your hash- a qualitative exploration of smoking, cannabis, and young people. *Addiction* 2004;99:77–81. [PubMed: 14678065]
- Barlow, DH. *Anxiety and its disorders: The Nature and Treatment of Anxiety and Panic*. 2nd ed.. New York: The Guilford Press; 2002.

- Breslau N, Klein DF. Smoking and panic attacks: an epidemiologic investigation. *Archives of General Psychiatry* 1999;56:1141–1147. [PubMed: 10591292]
- Feldner MT, Babson KA, Zvolensky MJ. Smoking, traumatic event exposure, and posttraumatic stress: A critical review of the empirical literature. *Clinical Psychology Review* 2007;27:14–45. [PubMed: 17034916]
- Hellerstein DJ, Rosenthal RN, Miner C. A prospective study of integrated outpatient treatment for substance-abusing schizophrenic patients. *American Journal on Addictions* 1995;4:33–42.
- Kushner MG, Abrams K, Borchardt C. The relationship between anxiety disorders and alcohol use disorders: A review of major perspectives and findings. *Clinical Psychology Review* 2000;20:149–171. [PubMed: 10721495]
- Morissette SB, Tull MT, Gulliver SB, Kamholz BW, Zimering RT. Anxiety, anxiety disorders, tobacco use, and nicotine: A critical review of interrelationships. *Psychological Bulletin* 2007;133:245–272. [PubMed: 17338599]
- Zvolensky MJ, Bernstein A, Marshall EC, Feldner MT. Panic attacks, panic disorder, and agoraphobia: Associations with substance use, abuse, and dependence. *Current Psychiatry Reports* 2006;8:279–285. [PubMed: 16879791]
- Zvolensky MJ, Bernstein A. Cigarette smoking and panic psychopathology. *Current Directions in Psychological Science* 2005;14:301–305.