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## Psychopathology and Stress

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Feeling anxious, sad, and discouraged are universal experiences that afflict nearly everyone from time to time. Such emotional reactions fall within the normal range of human functioning and are common responses to adverse life circumstances, such as preparing for a difficult job interview, failing an important exam, getting fired, or losing a loved one. Indeed, emotional reactions such as these are adaptive insofar as they help us prioritize goals, communicate feelings, and remember important life events. In some instances, however, emotional reactions to stressful situations can become exaggerated or prolonged, leading to levels of distress that impact social and occupational functioning. It is under these circumstances that stress can contribute to the development of different forms of psychopathology. Specific disorders known to be precipitated by stress include Social Anxiety Disorder, Generalized Anxiety Disorder, Post-Traumatic Stress Disorder, Substance Abuse Disorder, Schizophrenia, Bipolar Disorder, and Major Depressive Disorder. Stress can also contribute to the development of trait-like personality disorders, such as Antisocial Personality Disorder and Borderline Personality Disorder, especially if the stress exposure is prolonged or severe. This article describes the types of stress that cause psychopathology, the vulnerability factors that contribute to individual differences in stress reactivity, the mechanisms that link stress with psychopathology, and the processes that underlie associations between stress, psychopathology, and physical disease.

Three types of stress have been found to increase risk for psychopathology. They are: *acute life events*, *chronic difficulties*, and *contextual stressors*. Acute life events are relatively discrete in nature and include situations such as acute health problems or illnesses, accidents, marriages, divorces, job losses, births, and deaths. They can occur once or multiple times, and can vary in impact from being relatively minor to very severe. Breaking up with a romantic partner after two weeks of dating is typically a relatively minor acute life event, whereas being physically or sexually attacked constitutes a severe life event. Chronic difficulties, in contrast, are more prolonged in nature and include circumstances that persist for several months or years, such as ongoing health, relationship, financial, housing, occupational, and educational difficulties. Living in an apartment with limited personal space for two months is usually a relatively minor chronic difficulty, whereas taking care of a dying spouse for five years constitutes a severe difficulty. Finally, contextual stressors are societal- or macro-level circumstances that form the general physical, social, and psychological environment in which people live. These stressors include experiences such as poverty, war, under-education,

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unemployment, discrimination, crime, poor healthcare access, and social isolation. Because of their ubiquitous nature, contextual stressors often give rise to specific acute life events and chronic difficulties. For example, people living in poverty are more likely to experience stressors involving crime and physical danger, while those without access to healthcare are more likely to experience health- and illness-related stressors.

Although stress is ubiquitous, most people who experience stress do not develop psychiatric disorders. This is due in part to the severity and length of the stress exposure, with longer, more severe exposures being more likely to cause psychopathology. Another critical factor that determines whether people develop psychopathology following stress involves level of vulnerability. Theories that account for both severity of stress exposure and amount of personal vulnerability are called *diathesis-stress theories*, and they posit that the amount of stress that is required for psychopathology to develop differs depending on the vulnerability of the person. Theories such as *cognitive theory of depression* focus mainly on cognitive vulnerability to stress that comes in the form of negative views of the self, others, or future. Vulnerability can be represented at other levels as well. According to *stress sensitization* and the *kindling hypothesis*, for example, people become more neurobiologically and behaviorally sensitive to stress over time because of prior psychopathology or experiences with stress; as a result, less stress is required for psychopathology to develop in the future. In addition, *neuroticism*, or the tendency to remain in a negative emotional state, has also been shown to increase vulnerability to stress. Finally, genetic factors that influence serotonin and immune system activity also affect stress reactivity, leaving some individuals more likely to develop psychopathology following stress than others.

Some of the most recent research on psychopathology and stress has involved identifying mechanisms that give stress the ability to affect mental health. In *social signal*

*transduction theory*, for example, cognitive, emotional, neural, physiologic, and genetic factors all play a role in linking stress with psychopathology. From this perspective, stress generates specific negative thoughts (e.g., "I'm not good enough," "I won't get through this," "This will never end") and emotions (e.g., anxiety, sadness, shame, humiliation) that produce distress. Stress also upregulates biological systems including the sympathetic nervous system and hypothalamic-pituitary-adrenal axis, which regulate components of the immune system involving inflammation that have profound effects on mood, cognition, and behavior. Finally, as revealed most recently by work on *human social genomics*, some types of stress – such as social conflict, isolation, rejection, and exclusion – can reach deep inside the body to influence the activity of the human genome. These biobehavioral changes can be adaptive and enhance survival when they occur intermittently and in response to actual physical threat. If activation of these systems is frequent or prolonged, however, substantial distress can develop, possibly leading to psychiatric illness.

Finally, stress can also increase risk for several physical disease conditions that frequently co-occur with psychiatric illness, such as asthma, rheumatoid arthritis, chronic pain, metabolic syndrome, cardiovascular disease, obesity, certain cancers, and neurodegeneration. In fact, one of the most recent discoveries in this area is the finding that inflammatory components of the immune system that link stress with anxiety and depression may also give stress the ability to promote the physical diseases noted above. The implications of this discovery are profound, as they suggest that stress may be associated with both mental and physical health through common underlying pathways. If this is the case, targeting stress-related biobehavioral processes may reduce risk not just for psychopathology, but for physical disease as well.

### Further Readings

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