

Chapter 19

Psychophysiological Effects of Yoga for Adults With Occupational Stress: Yoga in the Workplace

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ABSTRACT

Stress is a psychological process initiated by events that threaten, harm or challenge an organism or that exceed available coping resources and it is characterized by psychological responses that are directed towards adaptation. PNI research suggests that chronic stress can lead to or exacerbate mood disorders such as depression and anxiety, bipolar disorder, cognitive (thinking) problems, personality changes, and problem behaviors. In survival mode, the optimal amounts of cortisol can be lifesaving. But, chronic elevated levels can lead to serious issues. Yoga is a group of physical, mental, and spiritual practices or disciplines which originated in ancient India. Among the well-known types of yoga are Asthang yoga and Hath yoga. Moving yourself into a healthy parasympathetic state, and staying there as much of the time as possible, helps heal all health conditions, both physical and emotional ones as well. The parasympathetic system returns the body's physiological conditions to normal (homeostasis). Vagus Nerve Stimulation normalizes an elevated HPA axis (Selfhacked, 2015).

AN OVERVIEW ABOUT STRESS

Stress is a conscious or unconscious psychological feeling which occurs as a result of physical or mental (sometimes both) “positive or negative pressure” to overwhelm adaptive capacities. Stress is wear or tear on the body in response to stressful occurrences. Stress is a psychological process initiated by events that threaten, harm or challenge an organism or that exceed available coping resources and it is characterized by psychological responses that are directed towards adaptation. Stress is a natural and necessary part of staying alive. We should recognize that stress is positive and is both desirable and

DOI: 10.4018/978-1-5225-2788-6.ch019

necessary. Stress is an innate response to help us adjust to the demands of life. Hans Selye (in the 1970s), a doctor and a pioneer in the area of research, has suggested that stress is the “spice of life,” that to be without stress means to be without life. Stress is a normal part of life that can help us learn and grow. Conversely, stress can cause us significant problems. This happens if stress is prolonged and we are not able to cope with it efficiently.

In 1975, Hans Selye published a model considering stress as Eustress and Distress. Where stress enhances function, and is associated with something pleasant (e.g., winning a major award or prize) it may be considered Eustress. Distress is caused by unpleasant events (e.g., loss of a family member, financial difficulties, and so on). Persistent stress that is not resolved through coping or adaptation, may lead to anxiety or withdrawal behavior. When the word stress is used alone, typically it is referring to distress. Eustress is good stress that motivates us to continue working. Distress, is when the good stress becomes too much to bear or cope with.

One of the problems is that the stress response in primitive human beings or animals was the innate response that helped them to fight or flee from danger and so to survive. As members of modern society, we face a multitude of changes in our personal and professional lives. We instinctively react to such situations by unconsciously activating the stress response. However, their body is being prepared for running or fighting and since this preparation is not always utilized because only rarely do they find themselves in life-threatening situations. The fight-or-flight response refers to the physiological changes made by the body upon sensing a threat. More recently the parasympathetic mediated freeze response has gained importance (Porges, 2011). The stress response begins in the brain. When someone confronts a coming car or other danger, the eyes or ears (or both) send the information to the amygdala, an area of the brain that contributes to emotional processing. The amygdala interprets the images and sounds. When it perceives danger, it instantly sends a distress signal to the hypothalamus (Harvard Health Publications, 2011). When an inappropriate stress response is elicited repeatedly over a longer period of time stress hormones accumulate and the body does not have a satisfactory way to rid itself of the byproducts (stress hormones) secreted during the elicitation. Stress level rise and in time lead to dysfunction and disease.

Some amount of stress is normal and even useful. However, if stress occurs too often or lasts too long, it can have harmful effects. It can be linked to headaches, an upset stomach, back pain, and trouble in sleeping. It can weaken the immune system, making it harder to fight off disease. It can make a person moody, tense, or depressed. Personal relationships may suffer, and one may not do well at work or school.

STRESSORS AND COMPONENTS OF STRESS

Stress is normally experienced by three sources. 1. The environment, 2. Physical strain and 3. Self appraisal. Any factor that causes stress is called a stressor. There are two kinds of stressors: processive stressors and systemic stressors. Stress can be caused by either processive stressors or systemic stressors. Processive stressors are elements in the environment perceived by the organism as potential dangers. These do not cause damage directly, but are processed in the cerebral cortex. The processed information is then sent via the limbic system in the hypothalamus, where they activate the supreme centers of the autonomic nervous system. This results in the fight-or-flight response.

Besides stress which might be termed “of a personal character” there are other harmful factors (systemic stressors) influencing our health. These include the pollution of the environment. The origin of

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