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RESEARCH ARTICLE

STRESS REDUCTION AND MANAGEMENT TECHNIQUES

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INTRODUCTION

Stress is a part of day-to-day living. In our daily lives, we are often exposed to situations that produce stress. The interpretation and reaction to events that make stress are different for different people. For example, speaking in public can be stressful for some people and relaxing for others. However if our stress level is too high, it can result in serious medical and social problems. Any event or circumstance that strains or exceeds an individual ability to cope is called stress. The term "stress" can be defined in many ways. Generally, a layperson may define stress in terms of pressure, tension, unpleasant external forces or an emotional response.

Stress is a complex concept. Accumulate stress causes frustration; depression and anxiety, and can lead to attention deficit hyperactivity disorder, substance abuse, antisocial behaviors and even violence. Personality variables also affect people's reactions to potential stressors. Some people are simply not bothered by situations that other perceives to be stressful. Stress management is the ability to maintain and control when situation, people and events make excessive demands.

Stress is not just part of university, it is part of life; learning how to anticipate, recognize, and successfully manage stress is an important life skill, while unmanaged stress can lead to emotional, physical, and interpersonal problems.

Progressive Muscle Relaxation (PMR)

Progressive muscle relaxation (PMR) is a technique for reducing stress and anxiety by alternately tensing and relaxing the muscles. It was developed by American physician Edmund Jacobson in the early 1920s. Jacobson argued that since muscle tension accompanies anxiety, one can reduce anxiety by learning how to relax the muscular tension. PMR entails a physical and mental component.

Method/Pathophysiology: The physical component involves the tensing and relaxing of muscle groups over the legs, abdomen, chest, arms and face. In a sequential pattern, with eyes closed, the individual places a tension in a given muscle group purposefully for approximately 10 seconds and then releases it for 20 seconds before continuing with the next muscle group. The mental component requires that the individual focuses on the distinction between the feelings of the tension and relaxation. With practice, the patient learns how to effectively relax in a short period of time.¹

Relaxation must be attempted in order to reduce pain or pain perception and tension, create a pleasant mental state, reduce anticipatory anxiety, reduce anxiety as a response to stress, increase parasympathetic activities, increase knowledge concerning muscle tension and autonomous stimuli, improve concentration, increase the feeling of control, improve the ability to block inner talk, energize and improve sleep, decrease the cardiac index, lower blood pressure, warm or cool body parts, enhance performance of physical activities and

help in the relationship with others. Therefore, the individual is taught by a trained professional, manual or audio how to progressively relax major muscle groups and performs the sequence 2-3 times daily for 15-20 minutes per session.

Diaphragmatic Breathing

The natural act of breathing has been used as a means of relaxation intuitively, has been traditionally part of different yoga traditions and is now incorporated in many relaxation programs.

Method/Pathophysiology: Diaphragmatic breathing, or abdominal or belly or deep breathing is marked by expansion of the abdomen rather than the chest when breathing.

Deep breathing has been successfully used to decrease the fatigue associated with haemopoietin stem cell transplantation patients, to reduce the anxiety and asthma signs/symptoms of children with asthma, in the management of acute stressful tasks showing that the slow-breathing technique can have a significant effect on improvement of the hemodynamic changes following the acute stressful tasks. Furthermore, it has been used to influence autonomic functions in patients with essential hypertension and thus reduce it, in the management of male adolescent aggressive behaviour, in long term prophylaxis of migraine, in stress related to dental visits.²

Transcendental Meditation™

The TM technique, a simple, psychophysiological stress reduction procedure, was introduced to the West by Maharishi Mahesh Yogi, a scholar of the ancient Vedic tradition of India. **Method/Pathophysiology:** The TM technique is simple and easily learned, requiring to be practiced for 20 minutes daily while sitting with eyes closed and repeating a 'mantra', a meaningless sequence of sounds specific to each individual, to promote a natural shift of awareness to a wakeful but deeply restful state. TM is not a religion or philosophy and is taught through a seven-step course of instruction by a certified TM teacher. During the TM practice, a reduction in mental and physical activity occurs and that is the result of the individual's experience of a mental state called transcendental consciousness, which is different from usual waking, dreaming, or sleep states. This experience is deemed responsible for the restoration of normal function of various bodily systems, especially those involved in adapting to environmental stressors or challenges. TM increases frontal and alpha central activity and neuroimaging studies indicate increased regional cerebral blood flow measures during meditation.

Studies show that regular practice of TM has an impact on the brain's electrophysiological characteristics, improving brain functioning and attention. During TM practice there is improved cortical coherence between and within hemispheres.³ Additionally, research data shows that TM helps patients become more resilient under stressful situation, reducing the more concrete pathophysiologic signs or symptoms of cardiovascular disease.

Physical Exercise

Physical activity is one of the best methods for fighting stress. Exercise helps you feel better by harnessing the body's natural fight or flight response, rather than suppressing it. Exercising for twenty minutes or more can enhance mood by releasing chemicals called endorphins which relieve pain and increase a

sense of well-being and relaxation. Exercise also helps relieve tension caused by muscle contraction. Exercise burns the energy that has been stored in the muscles, allowing them to return to their normal resting state after exercise is complete.⁴

Yoga

Yoga a mind-body practice is considered one of many types of complementary and integrative health approaches. Yoga brings together physical and mental disciplines that may help you achieve peacefulness of body and mind. This can help you relax and manage stress and anxiety. Yoga has many styles, forms and intensities. Hatha yoga, in particular, may be a good choice for stress management. Hatha is one of the most common styles of yoga, and beginners may like its slower pace and easier movements.⁵ But most people can benefit from any style of yoga it's all about your personal preferences.

The core components of hatha yoga and most general yoga classes are:

- **Poses.** Yoga poses, also called postures, are a series of movements designed to increase strength and flexibility. Poses range from lying on the floor while completely relaxed to difficult postures that may have you stretching your physical limits.
- **Breathing.** Controlling your breathing is an important part of yoga. Yoga teaches that controlling your breathing can help you control your body and quiet your mind.
- **Meditation or relaxation.** In yoga, you may incorporate meditation or relaxation. Meditation may help you learn to be more mindful and aware of the present moment without judgment.

Kinetic Movement

Kinetic movement related stress relief practices need not involve a lot of exertion to be effective. Progressive muscle relaxation, or PMR, is a stress relief technique that relies upon subtle rather than gross (large) muscular movements to promote relaxation and tension relief.⁶ Progressive muscle relaxation is based on the observation that it is easier for muscles to relax from a position of high tension than it is from a position of lower tension.

The premise of PMR is that by tightening and releasing all the major muscle groups of the body in an exaggerated fashion, you will end up feeling more relaxed and at peace with yourself, and much less stressed than you otherwise would. Consciously exaggerating and releasing muscle tension also helps you learn to recognize when you are holding onto unnecessary muscular tension so that you can use relaxation techniques to relieve this stress before it gets out of hand.

Acupuncture

Acupuncture is an ancient traditional Chinese medical practice consisting of the insertion of fine needles into the skin so as to stimulate specific anatomic points for therapeutic purposes. The treatment is designed to balance the movement of energy (called qi) within the body to restore health. The needles used in this therapy are extremely small, and most people report that they feel nothing but a slight twinge when they are inserted. In addition to needles, acupuncturists may also use heat, pressure, friction, suction, or electromagnetic energy impulses to stimulate acupuncture points. The specific course and duration of acupuncture treatment depends on the nature and severity of

stress-related symptoms. A typical course of treatment might involve ten to twelve weekly sessions.⁷

Massage

A great deal of research supports the positive physical and emotional benefits of therapeutic touch. Therapeutic massage triggers the relaxation response, relaxes tense muscles, reduces anxiety, improves the functioning of the immune system, and helps restore a calm mind and overall sense of well-being.⁸ There are several different schools of therapeutic massage, each originating in early medicine and healing arts. Some of the more popular and well-known varieties practiced today include:

- Acupressure, involving the application of pressure to specific pressure points on the body
- Swedish massage, the classical European manipulation technique utilizing a combination of stroking and kneading of muscle tissue
- Reflexology, involving manipulation of pressure points in the hands and feet so as to increase relaxation and promote healing
- Shiatsu, a Japanese form consisting of pressure and assisted-stretching techniques
- Chiropractic, involving manual manipulation of the bones and associated muscles and joints to promote health and relaxation.

Biofeedback Techniques

All biofeedback techniques involve attaching sensors to your body. These sensors are then connected to a monitoring device (generally a computer of some sort), which is able to measure various body functions which are normally invisible or imperceptible to people. Monitors provide visual or auditory feedback so that people can become aware of how those body functions change from moment to moment.

A biofeedback therapist guides patients (the people receiving biofeedback training) through a series of physical and mental exercises designed to help them learn how to gain control over whatever body processes are being monitored. Moment to moment changes of monitored body processes are displayed visually or aurally (through the use of sounds), so that patients can see or hear relationships between what they do and how their body processes change as a result. With the aid of this feedback and training process, people are able to learn how to quickly and consciously alter their body processes in desirable ways. Often, biofeedback monitoring systems are designed to make a special noise or visual signal when monitored body processes reach desirable levels.⁹

Biofeedback can be useful in helping people learn how to recognize and control the physiological aspects of stress. It is used most often to relieve stress-induced problems related to blood flow such as headaches, high blood pressure, sleep disorders or chronic pain.

Cognitive Restructuring

Cognitive restructuring, also known as cognitive reframing, is a technique drawn from cognitive therapy that can help people identify, challenge and alter stress-inducing thought patterns and beliefs. The end goal of cognitive restructuring is to enable people to replace stress-inducing thought habits with more accurate and less rigid (and therefore less stress-inducing) thinking habits.

Cognitive restructuring was first developed as a part of Cognitive Behavioral Therapy for depression (in Dr. Beck's version) and as a part of Rational Emotive Behavioral Therapy (in Dr. Ellis' version).¹⁰ It is a very powerful therapy technique which has been adapted to help people cope with all manner of stressful events and conditions. One drawback of this technique is that it is somewhat difficult for people to learn it in a self-help mode (without the assistance of a therapist). It is easy for people to think they are doing it right when they are not and falsely conclude that the technique is of little use. If you really want to learn how to do cognitive restructuring, we recommend that you work with an experienced cognitive behavioural therapist over the course of 10 to 15 weekly sessions.

Guided Imagery Technique

Visualization and imagery (sometimes referred to as guided imagery) techniques offer yet another avenue for stress reduction. These techniques involve the systematic practice of creating a detailed mental image of an attractive and peaceful setting or environment. Guided imagery can be practiced in isolation, but it is frequently paired with physical relaxation techniques such as progressive muscle relaxation and massage.

Guided imagery techniques work to help people relax for several reasons. As is the case with many techniques, they involve an element of distraction which serves to redirect people's attention away from what is stressing them and towards an alternative focus. The techniques are in essence a non-verbal instruction or direct suggestion to the body and unconscious mind to act "as though" the peaceful, safe and beautiful (and thus relaxing) environment were real. Finally, guided imagery can work through the associative process, where scenes become a learned cue or trigger that helps recall memories and sensations resulting from past relaxation practice.¹¹

Vitality of Natural Environment

The simplest methods of sensory immersion are also sometimes the best ones. One of the best strategies is to simply make it a point to spend some time in a natural environment. Research suggests that we benefit physically and mentally from contact with nature. For example, patients recover better from surgery when their hospital windows look out on peaceful nature scenes. Watching aquariums has been shown to lower blood pressure and produce a state of calm relaxation.¹²

In order to combat stress, look for ways can experience the natural world around us. For instance, visit a park or garden and take a walk there, letting all of our senses appreciate the beauty. Allow our eyes, ears, and nose absorb the pleasant sensations surrounding us.

Pets

The therapeutic use of pets to enhance the mental and physical health of a wide variety of individuals, including people with AIDS or cancer, older adults living in institutions, and individuals with mental illness, has received increasing amounts of attention.

Pets provide stress reducing effects for a number of reasons. First, pets are usually relatively consistent with regard to their behaviour. Compared to humans, our relationships with our

pets are predictable. If we feed and properly pay attention to our pets, they in turn will show us unconditional affection (this reciprocity only applies to certain pets, like dogs, cats, etc). Animals will not argue, "stab us in the back," or engage in indirect, confusing or contradictory behaviour that can cause us to feel stressed.¹³ In addition, this consistency, predictability, and unconditional love can be quite comforting and stress reducing

Socialization

Socialization, or enjoying other people's company and maintaining a sense of connectedness to others, is an important component of stress reduction. Joining a club or group, chatting online, calling a friend on the phone, or hanging out with family are all examples of socialization. These activities decrease a sense of loneliness while promoting feelings of safety, security, belonging and enjoyment.

Social support seems to affect our balance of hormones. Adequate amounts of social support are associated with increases in levels of a hormone called oxytocin, which functions to decrease anxiety levels and stimulate the parasympathetic nervous system calming down responses.¹⁴ Oxytocin also stimulates our desire to seek out social contact and increases our sense of attachment to people who are important to us. Stressed people who have adequate levels of social support receive an oxytocin boost which helps them feel less anxious, more confident in their ability to cope, and more drawn to other people.

Religious/Spiritual Practice

Spirituality is about an individual's relationship with a Spirit (which can be a Higher Power like a God, or is a simply a representation of human being's connection to a metaphysical reality greater than oneself). Spiritual and religious people find various ways to express these qualities by praying, attending religious services, interacting with people who share the same beliefs, meditating, viewing or making art or music, visiting nature, etc. Because many people view the term "spirituality" as the more all-encompassing term. Spirituality can decrease stress, by allowing a person to: Create a sense of quiet, stillness, peace and enhance a sense of connectedness.¹⁵

CONCLUSION

Stress can make an individual productive and constructive when it is identified and well managed. In times of great stress or adversity, it's always best to keep busy, to plow anger and energy into something positive. Positive attitude and stress management techniques will be helpful for coping the stress. Having broader perspective of life will definitely change the perception of stress. Let us hope that we will be successful in making distress into eustress for our healthy lifestyle as well as organizational well-being.

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