

IS THE STRESS LEVEL GENDER BIAS?

Dr. Meena Mehta

Department of Food Science & Nutrition,

Dr. B.M. Nanavati College of Home Science,

Matunga, Mumbai 400 019 INDIA

Abstract

Stress is inherent in our lives from the day we are born to the day we die. Stress is more important in the life of college students. As stress is an integral part of our lives, there is no way of escaping it. In essence, complete freedom from stress is death. The important paradox is that stress plays a key role in our daily lives, influencing, happiness, productivity and health. It will likely come as no surprise that women say they feel more stressed out than men do. Psychiatrists and sociologists verify it; so do the studies that probe the depths of gender and stress. Stress is common in both the men and female. Causes of anxiety and depression in both the men and women are dissimilar from each other. It is unknown that why stress affects men and women differently. Generally, as the two sexual categories often work in different social circumstances, both are likely to build up different emotional temperament and personality. Men and women express different response to stress. It may give details in their longer life span and health. Compared to males, females had higher levels of markers for Protein Kinase A (PKA) in the striatum indicating increased dopamine and therefore greater reinforcement of reward signals in the female brains. The most common response to this stress is to ignore it and carry on regardless.

All forms of stress consume energy. This is why it is important to eat particularly healthily while under stress. Unfortunately, it tends to convenience or comfort food with few nutrients, plus a large intake of coffee. After classifying different types of stress level and their relation with the dietary habits were studied by selecting 100 subjects. A pre-planned questionnaire was prepared

and survey was conducted with the subjects. A definite correlation was established between stress level and the nutritional status of the different male and female. A study provides useful information and dietary remedy to relieve the stress.

INTRODUCTION

Stress is an imbalance between perceived demands and personal resources. Stress is the wear and tear of our body experience as we try to adjust to our environment¹. Stress is hidden enemy. This is a major problem in the today's world, rapidly becoming an epidemic. It is natural, unavoidable and touching all levels of society, since stress is pervasive. Everyone is experiencing stress. This is not only for men and women, but even children who should be leading stress free life are the most affected by stress. Men and women's different reactions to stress might be more than just an interesting observation. It could account for differences in their longevity and health. It results from a transaction between environment and human being. Secondly, there has been a global shift in the life style over last 10 to 15 years. Thus stress is a result of interaction between an individual wants and demand of environment. Hence, stress can be positive when it motivates exchanges and results in a new awareness and exciting new perspective. Stress is negative when it creates hurdle with an individual physical and/or emotional well being. It can result in feeling of rejection, depression and anger.

Stress is defined as a non specific response of the body to any demand made upon it. Non-specific response refers to the adoption required to resume normal bodily functioning. Such response is triggered by stressor, which are internal or external stimuli which can set off, a physiological fight-flight response. Thus it is a state of mind and not body. Factors which are responsible for stress are termed as stressor. There are mainly three categories of stressor namely physical, professional and personal. More knowledge about the cause and effect of stress would help to minimize its harmful effects and improve the quality of life of people².

The present work is aimed at investigating the role of gender in a complex behaviour, habit formation. These habits do not appear to be hormone-dependent. This has allowed us to make significant progress in understanding some of the distinct contributions of genetic and

hormonal factors to behaviours that are argued to be associated with an increased vulnerability to addiction. The changes in gene expression are probably vital to coping with stress and the absence of such changes in the stress-sensitive female may suggest potential sex differences linking stress responsible to disease. Previous work has shown that anxiety and depression are more often diagnosed in females. Stress is a predisposing factor in the development of these mood disorders. This paper deals with the findings of whether stress is gender bias? Classify the causes of stress and correlate stress with diet.

REVIEW OF LITERATURE

When stressor puts demand on the body and evokes adoption, activities, since each of us have a limit to the body's ability to adopt. But when body's resources are overtaxed it results in a state of exhaustion or sickness³⁻⁴. Women enjoy a greater life expectancy than men. One reason may be that the tend-and-befriend system protects them from some of the damaging effects of stress. It has been reported that men and women differ in responses to stress may have evolved to suit the needs of our earliest ancestors.

Life style and environment have changed markedly over the past decade, placing new demands for work and diet⁵. Modern society has produced many economic benefits but it has also shown an increase in diabetes, obesity and cardiovascular problems along with metabolic disorder in urban civilization⁶. Yesterday's foods were primarily designed to correct nutrient deficiencies, whereas tomorrow's foods will be targeted to present health problems arising before symptoms are noticed.

In India, however stress is not seen as a major problem in itself. Generally, it is addressed to medical doctors and a psychiatrist. But stress is a wide spread and ever increasing problem taking a heavy toll⁷. It is estimated that nearly 80% visits to doctors are stress related. Stress produces several symptoms of illness, both short term and long term. Short term symptoms include headache and other aches blood pressure and ulcers, while long term symptoms are related to social, occupational and health aspects⁸⁻⁹.

MATERIAL AND METHOD

A pre designed questionnaire was prepared to undertake the survey of selected subjects from different age groups and correlate their life style with the level stress they develop. The questionnaire take 15 minutes to complete and although some of the questions touch on sensitive matters, but no harm in responding to them. Questions about past and present symptoms of depression, medication use, and suicidal ideation helped us to understand the nature of stress in males and females¹⁰. Although answering all questions gave us complete information, but any questions which made the subjects uncomfortable then they were allowed to skip them. All questionnaire information provided was completely confidential. The results of the survey were grouped and selected information has been interpreted and reported.

RESULTS AND DISCUSSION

It is observed that nearly 20% of the people had income of around Rs.10000/- per month. It was found that nearly 40% of subjects from 20-29 years age group were under stress. It comprises of mainly students, service people and business persons. The main reasons for stress was new jobs, family problems, economic problems, competition, overwork and for meeting deadlines¹¹. It has been indicated that men and women appear to respond differently to stress. Our study revealed that mental and physical harassment at workplace was experienced¹². Since female workers have opted for dual careers, stress level was high in female as compared to men. Different studies have endorsed the mechanism for gender difference in stress¹². The researchers found that all signs point largely to oxytocin, a hormone that promotes both maternal and social behavior which enhances relaxation as the key factor behind the gender difference. People with high levels of oxytocin are calmer, more relaxed, more social and less anxious. In males the effects of oxytocin seem to be countered by male hormones but in female oxytocin may play a key role in reducing the response to stress. Men are more likely to respond to stressful experiences by developing hypertension, aggressiveness and consumption of alcohol¹³⁻¹⁴.

Stress can set off an alarm reaction in the body. In severe cases it can cause hormonal imbalance in the body. Repeated and chronic stress can trigger off complex physiological reactions that may involve different chemical changes in the brain and body¹⁵. Stress suppresses the immune system and is a contributing factor in most diseases. Adrenalin increases the stickiness of blood platelets (blood clotting) whereas cortisol can increase its number, which in turn allow platelet to adhere to artery wall by narrowing them. Prolonged time in this mode results in exhaustion of brain cells and areas that control emotions. It may block the entry of glucose in to brain cells by killing them. When faced with stress, the body releases a number of different hormones. Some of these hormones, notably cortisol and adrenaline, raise blood pressure and cholesterol levels and suppress the immune system, putting off-stressed people at greater risk for everything from colds to cancer to heart diseases. Long-term exposure to stress can lead to weight gain. Initially, women have the same response to stress as men, leaving them somewhat vulnerable to cortisol and adrenaline. But then women also begin secreting oxytocin from the pituitary gland, which helps scale back the production of cortisol and adrenaline, minimizing their harmful effects. Interestingly, men also secrete oxytocin when under stress, but they produce it in lesser amounts than women do, and its effects are inhibited by male hormones such as [testosterone](#). The more relaxed behavior that oxytocin promotes also seems to offer some protection of its own.

The comparisons between male and female responses to pain, depression, injury, and addiction are manifold. Neuro-scientific proof of these differences can have profound impacts on everything from over-the-counter pharmaceuticals to government reimbursements for health care¹⁶⁻¹⁷. Compared to males, females had higher levels of markers for PKA in the striatum, indicating increased dopamine and therefore greater reinforcement of reward signals in the female brains. Increased levels of markers for PKA were seen also in the pleasure-indicative nucleus of females more than males.

The factors that cause some people to try drugs despite all of society's warnings about their dangers are complex, but among the factors are gender, personality type and prior stress experiences women tend to try cocaine earlier in life. Females acquire self-administration at

lower doses of cocaine and escalate drug taking more rapidly than males, so they take more cocaine in relation to their body weight¹⁸. Stress in early life or even during the prenatal period can increase vulnerability to drug use and abuse. Preliminary findings indicate that the tendency to begin using cocaine is enhanced following prenatal stress, and that males and females are uniquely affected by stress in the womb. The interaction of gender, stress response, hormonal fluctuations, and novelty-seeking may help to understand women's susceptibility to cocaine use, abuse and addiction. Such behaviour can uplift the symptoms of stress in either gender.

Symptoms of stress:

- Disruption in sleeping habits
- Change in appetite or diet
- Change in mood, such as a loss of optimism or feeling overwhelmed
- Inability to put stress in long-term perspective or see the bigger picture
- Increase in anger or irritability

If you suffer from these symptoms, experts say it's important to reach out to family and friends. If your symptoms continue, seek out advice from your doctor or a mental health professional trained to deal with these issues. Therapies to help people fight the health effects of stress usually target either altering factors in the environment that are causing stress or changing how people perceive and respond to stress through counselling on stress management, biofeedback, and/or drug treatment.

Methods of relieving Stress

To ease the negative effects of stress on your health, the following are the tips to reduce your stress and keep your life in balance:

- ✚ Attempt to maintain a normal routine life by sticking to a schedule can help you feel more in control even when the circumstances around you are chaotic.
- ✚ Make and keep connections with friends, family and other confidants.
- ✚ Maintaining a strong social support network can act as a buffer against stress.\

- ✦ Make time for things that you enjoy, whatever that may be, such as playing with your children or pets, exercise, reading etc.
- ✦ Give yourself a break and stay away from things that rule you in times of stress.
- ✦ Participate in a volunteer activity.
- ✦ Assisting others in a time of need can be empowering.
- ✦ Take care of yourself. Don't let stress affect your diet, sleep schedule, or exercise habits.
- ✦ Alter Your Perspective
- ✦ Have Some Quick Stress Relievers
- ✦ Maintain Regular Stress-Relieving Habit.

Eliminate What You Can

Stress and Diet:

A well balanced diet is crucial in preserving health and helping to reduce stress. Certain foods and drinks act as powerful stimulants to the body and hence are a direct cause of stress. This stimulation, although quite pleasurable in the short term, may be quite harmful in the long run.

Caffeine causes the release of adrenaline, thus increasing the level of stress. Alcohol is a major cause of stress. The irony of the situation is that most people take to drinking as way to combat stress. But, in actuality, they make it worse by consuming alcohol. Alcohol and stress, in combination, are quite deadly. During stress, the body produces several toxins. In the absence of its filtering by the liver, these toxins continue to circulate through the body resulting in serious damage. In the short term, smoking seems to relieve stress. But in the long term smoking is very harmful¹⁹. Sugar has no essential nutrients. It provides a short-term boost of energy through the body, resulting possibly in the exhaustion of the adrenal glands. This can result in irritability, poor concentration, and depression. Salt increases the blood pressure, deplete adrenal glands, and causes emotional instability. Avoid the consumption of foods rich in saturated fats. Fats cause obesity and put unnecessary stress on the cardiovascular system. Stress result in cramps and

constipation. Eat more fibre to keep digestive system moving. Meal should provide at least 25 grams of fibre per day. Fruits, vegetables and grains are excellent sources of fibre. For breakfast, eat whole fruits instead of just juice, and whole-grain cereals and fibre-fortified muffins.

Foods to Eat

1. Whole grains promote the production of the brain neurotransmitter serotonin, which increases your sense of well-being.
2. Green, yellow, and orange vegetables are all rich in minerals, vitamins, and phytochemicals, which boost immune response and protect against disease.
3. You should also take a good multi-vitamin and mineral preparation.
4. Eat a meal high in carbohydrates, High in Fibre and Eat More Vegetables

Foods to Avoid

1. Coffee and other caffeinated beverages: If you are currently addicted to coffee, drink black tea; it has less than a third of the caffeine of coffee, and none of the harmful oils.
2. Fried foods and foods rich in fat are very immune-depressing, especially when stress is doing that, as well. Reduce animal foods. High-protein foods elevate brain levels of dopamine and nor-epinephrine, both of which are associated with higher levels of anxiety and stress.

CONCLUSION

Stress is the wear and tear our bodies experience as we adjust to our continually changing environment; it has physical and emotional effects on us and can create positive or negative feelings. As a positive influence, stress can help compel us to action; it can result in a new awareness and an exciting new perspective. As a negative influence, it can result in feelings of distrust, rejection, anger, and depression, which in turn can lead to health problems such as headaches, upset stomach, rashes, insomnia, ulcers, high blood pressure and heart diseases. It has

become necessary part of modern life. Nutrition is not a canon to prevent stress and alleviate the effect of stress, but nutrition plays vital role in the person suffering from acute and chronic stress. Diets majoring in fruits, whole grains, nuts, legumes and appropriate dairy products along with physical exercise help to resist stress related diseases.

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