

The relationship between stress and illness



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The term stress is used to describe the physical and emotional strain one can display as a direct response to pressure from the outside world. The pressure and consequence response can be acute (short) or chronic (long). Almost any thing can create stress situation, and stress is not always in negative format. Some people thrive off stress and are motivated by new challenges. The problem lies when the level of stress exceeds the person's ability to cope.

Psychologist have different views on the concept of stress, Selye (1956) defined stress as the nonspecific response of the body to any demand and in (1936) he went on and used the term (stress) to describe what happen when an organism was exposed to a noxious stimulus. The stimulus based or external model looks at stress as external stimuli that perpetrate destructive force upon the organism.

However stress has also been viewed as the individual's response to the stressor: i. e. the blame theory that one is suffering from stress because of their inadequacy to generate an effective coping mechanism. Perhaps difference in personality or cultural factors, but this model known as the internal factor is seen as coming from an internal change.

The most accepted view of stress is the interaction approach, for example every one might be faced with the same stressor or scenario but our individual response or coping mechanism varies based on individual differences, gender or culture. Some people get so worked up over a presentation at work or a job interview while others will be so laid back.

Stress and illness

Illness is the state of poor health and stress is the term use to describe the physical and psychological response to demand from the environment.

Psychologist and other health professionals have argued the relationship between stress and illness and there is conclusive evidence to support these arguments. Hans Selye (1930) study the body's response to stress using his experiment on rats; he finds repetitive exposure to stressor reduces the body's ability to fight illness. Selye argue that humans and other animals respond to different psychological and physical scenario with the same physiological activation. (The general Adaptation syndrome).

The body response to stress in two ways: an eustress scenario will lead to the release of hormones ' the fight or flight'. However when a scenario becomes stressful leading to a state of distress, the body will reach exhaustion that will leads to hormones reserve been fragile, which will undermined the body immune system leading to stress related conditions such as high blood pressure, ulcers and depression.

There are number of ways stress can affect the human immune system; it can cause the release of ACTH from the pituitary gland leading to the release of inflammatory hormones that will inhibit the functions of white blood cells.

Glaser and Kiecolt-Glaser 2005 argued that even brief period of stress such as school exams can lead to a significant suppression to the our immune system.

Another model psychologist used to link stress and illness is through behaviour; such as morals and social behaviour of a group of people. Culture

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for instance look at not the people them self but their mode of interactions. It has been suggested that these learned mode of interactions may influence individual's responses to stress. People who work shift patterns for instance having to adjust one body clock to another will result in considerable stress related accident at work. Czeisler, Moore-Ede, and Coleman 1992 found that manual shift work in industrial settings in Utah, USA correlated with raised accident rate, absenteeism and chronic feelings of ill health. They went on to argue that sleep depravation reduce work capacity and are responsible for majority of heavy goods vehicles accident that happens between 4am and 7am.

Psychologist have also argued on the relationship between stress and stomach ulcer; a supporting evidence was first introduced by Brady 1958, Brady's studied the relationship between high level of stress and high level of hormone production that eventually leads to stomach ulcer. In his experiment he placed monkeys in a restraining chairs order and conditioned them to pres a lever, giving them shocks every 20 seconds unless the lever was press at the same time. The monkeys did die; however, post-mortem showed they died from stomach ulcer caused by an increase in the level of gastrointestinal hormones presumably caused by the high level of stress. Sceptics however, have argued on the reasonability of generalising an experiment on monkeys and relating it to humans.

Psychologist also agued on other indirect effect of stress on the immune system; people who are stress tend to expose them selves to (pathogen) diseases causing organisms that may cause physical illness. It is widely reported that people who are stress smoke more, consume more alcohol and <https://assignbuster.com/the-relationship-between-stress-and-illness/>

undertake less exercise. Wills 1985 argued that adolescent who experience high level of stress are more likely to start smoking than their counterpart whose lives are not so stressful. Carey and co1993 also argued those adults who re-experience stress after given up smoking are more likely to resume the habit of smoking. Does this mean that every smoker is stress? There is a strong argument that some smokers choose to smoke as a social trend other than stress related.

Williams and co 2003 reported on a study linking personality and stress related diseases. Their report echoed that of rosenman and co who, after a 9 years study involving over 300 men found people with a Type A personality are more restless, impatience and hostile behaviours which increase the risk of high blood pressure, a major cause of hearth attack, stoke and other cardiovascular related diseases. Type B personalities on the other hand, are generally more relaxed.

Kabasa 1979 argued people with hardy personalities are less susceptible to the effect of stress, because they have more positive attitude and sense of control over stressful events. According toKabasa, hardy people view potential stressful situations as an opportunity and challenging. They have a strong sense of internal locus of control while people with external locus of control have little control over their lives leading to less effective coping strategies and greater stress related illnesses.

Kabasa supported her theory with a large scale evidence produce by her self, Maddi and Puccetti in 1982. Their experiment involved highly stress men who worked as managers for a large company; they found individuals with

high hardiness and exercised a lot had the least illness compared to their counterpart.

However the model has been criticized for been too based on white middle class male as the participant; Funk 1992 also argued that hardiness is difficult to asses.

Another form of stress related illness is bourn out suffered by care givers; it is widely believed that people who care for their love one, partners for example who suffer from chronic illness are expose to frequent isolation and dose experience overwhelming demands on their resources both physical and psychological which might lead to depression or anxiety.

Cobb and Rose 1973 produce evidence to link stress and hypertension using the study of men who worked as air traffic controllers and airmen. The researchers analysed annual medical records and found not only the hypertension rate were several times higher in the air traffic controllers, but also those controllers that works in air ports with high traffic density had higher levels of hypertension.

Psychoneuroimmunology a branch that specialises in studies linking stress and other psychological state has also provided evidence to support stress as immunosuppressive. Riley 1981 conducted experiments using mice; “ one case study saw mice placed on a rotating turntable and then measured the mice’s lymphocytes over a five hour period and found downwards gradient”. In another study Riley went further and studied the link between stress and tumour growth by implanting cancer cells in mice and repeating the rotating turntable stress. One group had 10 minutes on the wheel per hour for three

days and the other group had no stress. The conclusion was that the tumour in the stress subjected group had grown but not so for the other group.

The above research was supported by Schlier and co 1983 who looks at the immune system of husbands of women who died of breast cancer and found that the husband's immune system function not as well after their wives died compared to before. The aim was to show the effect of bereavement as a stressor will have on their immune system.

Despite all the above supporting evidence linking stress and debilitating the immune system, causing serious psychological scenarios like depression and even serious cardiovascular (heart) problems, sceptics continues to argue some of the conclusiveness of certain supporting evidence. Bachen, Cohen, and Marsland 1997 argued " it is not clear either the nature or magnitude of immunological change found in psychoneuroimmunology (PNI) bears any relevance in increase in disease susceptibility" (PSYCHOLOGY FOR AS LEVEL M. W. EYSENCK AND C. FLANAGAN PAGE 126-130).

Their arguments were that the rate at which stress affect the immune system does not correlate with increase in (CHD) coronary heart disease for example. They went on to further argue that human immune system is too complex and that there is supporting evidence provided by Evans, Clow, and hucklebridge 1997 that found PNI assumption that stress suppresses the immune system is oversimplified.

Also alcohol are said to help relax the muscles sometimes which is contrary to the concept of psychologist who argued that drinking alcohol as a form of coping mechanism can damage your health.

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