

9. Definitions of stress (30 minutes)

(a) Outline ways in which stress has been defined.

(6 marks)

Response definition:

Selye views stress as the physiological response of the body to external stressors.

Stimulus definition:

Emphasizes the role of external stressors on the body.

Transactional definition:

Cox (1975) considers that stress involves external stimuli, the physiological response to these stimuli, and psychological processes that mediate between stimulus and response. The psychological processes involve differences between individuals in their perception of the environmental demands and their own capacity to cope with them.

(b) Describe the general adaptation syndrome.

(6 marks)

This was developed by Selye (1956) who subjected rats to noxious agents. The same symptoms appeared in response to a variety of these stimuli and so were considered to be due to a general state described as 'stress'.

The stress response was thought to comprise three phases:

Alarm reaction:

Stressful event is registered followed by activation of the hypothalamic-pituitary-adrenal system as the body is prepared for energy expenditure (fight or flight).

Resistance:

The body copes with a persistent stressor by maintaining high levels of arousal.

Exhaustion:

Body's defence systems become exhausted and responses to minor additional stresses become exaggerated. Psychosomatic disorders (e.g. gastric ulcers or chronically raised blood pressure) may develop.

(c) Describe the relationship between stress and physical illness.
(6 marks)

Selye's research suggested a link between the exhaustion stage of the general adaptation syndrome and physical illness. Recent research suggests that it is hormones that are responsible for the negative effects of stress, their secretion being increased by activation of the hypothalamic-pituitary axis and the sympathetic branch of the autonomic nervous system.

Evidence suggests that stress can reduce the body's resistance to illness by suppressing the immune system (Riley 1981; Schliefer et al 1983). Stress can also lead to unhealthy lifestyles involving more smoking and greater alcohol consumption.

Relationships exist between stress and ulcers (Brady 1958), hypertension (Cobb and Rose, 1973), and coronary heart disease (Friedman and Rosenman 1959).

(d) 'There is clear evidence for individual responses to stress related to personality traits.'
Evaluate research into the role played by personality in modifying the effects of stressors.
(12 marks)

Kobasa et al (1982) reported that company managers who were psychologically hardy (having strength of commitment and perceiving stressful situations as a challenge) suffered less illness.

Support for the influence of personality factors was provided by Friedman and Rosenman (1959, 1974, 1996) in a longitudinal study that compared the incidence of heart disease in two groups classified by personality types. Type A were competitive, impatient and hostile, whilst Type B personalities were more relaxed. After 8.5 years, the researchers found that the percentage of Type A personalities developing heart disease was twice that of Type B.

These findings were supported by the Framingham Heart Study (Haynes et al 1980). However, some studies have failed to find a relationship between type A personality and increased heart disease, but many of these have been based on self-report measures rather than interviews. Studies employing a structured interview methodology and using initially healthy populations generated a correlation coefficient of +0.33, thus supporting the original finding of a moderate relationship.

It should also be noted that lower long-term correlations may be created if individuals become aware that they are at risk, for they may give up unhealthy activities such as smoking and take up healthy ones such as increased exercise.

Some psychologists consider that hostility rather than stress may account for the results of Friedman and Rosenman. Ganster et al (1991) found that it was this component of Type A personality that was associated with high levels of physiological reactivity.

There have been successful applications derived from the results of research. For example, Friedman et al (1986) reported that a group of Type A personalities who had suffered a heart attack had subsequently undertaken a behaviour modification programme designed to reduce Type A behaviour. A five-year follow up showed that this group had fewer second heart attacks than those who received counselling or no treatment.

(Total marks 30)