OUTLINE, DISCUSS AND EVALUATE DEFINITIONS AND THEORIES OF STRESS, INCLUDING INDIVIDUAL DIFFERENCES.

1.1

Stress is a physiological and physical response of the body which presents itself whenever we must adapt to changing conditions. These conditions can be real or perceived, and positive or negative. Everybody has stress in their lives, but people respond to the stress differently. For some people stress severely affects them, whilst for others, stress doesn't phase them at all, remaining calm. There are two types of stress; Eustress (which is good stress), and Distress (which is bad stress).

Stress in humans results from interactions between a person and their environment that is perceived as something which that individual has no control over. Stress is mainly about perception. If you perceive something as a danger, then you will feel at harm. The perceived stress is a stressor, which then makes the individual feel 'stressed' activating the changes in physiological responses, secreting more, or less, hormones depending on the stressor.

Stress is defined as "an organism's total response to environmental demands or pressures".
In the 1950's when stress was first researched, the term 'stress' was used to denote both the causes and the experienced effects of pressures. In recent years the word 'stressor' has been used for the stimulus that provides a stress response. One constant disagreement among researchers is the definition of stress in humans. Some say it is an "external response which can be measured by changes in glandular secretions, skin reactions, and other physical functions."

Risk factors in stress-related illnesses are a combination of personal, impersonal and social factors. These can include a loss of control over an individual's personal environment, and a severe lack, or loss of social support network. Those who depend on another human being, be it because they are a child, elderly or disabled, are at a higher risk of developing stress-related illnesses.

There are numerous approaches to stress. The first approach is the Biological Approach.
With the biological approach people see stress as something biologically wrong. Stress is experienced as anxiety. People with anxiety disorders are often prescribed tranquilisers. People with anxiety disorders were previously prescribed barbiturates. However, in recent years, these have been largely discontinued. The most common drugs in use these days are benzodiazepines, such as 'Diazepam'. This is intended for short-term use, and can be addictive. Another medication used in this biological approach is Buspirone. These act on the serotonin receptors. These do not lead to dependency. Beta blockers can also be used.

There are criticisms with the biological approach, and prescribing medications. The drugs do not deal with the environmental factors contributing to the problem, only the physical symptoms. Drugs are short term ways of dealing with stress, and are only beneficial when used with a combination of other therapies.

Another approach to stress is the Behavioural Approach. This approach deals with people behaviour, and changing these certain behaviours. Bio-feedback is a behavioural approach to dealing with stress symptoms, using the principles of operant conditioning. The principle of bio-feedback is to monitor the physiological functions such as heart rate, and blood pressure. The monitored information is then relayed back to them. Those with stress can be trained in methods involving relaxation to bring biological processes under voluntary control. The feedback given to the person can be visual or auditory. Although this requires specialist equipment it is quite cheap. Erbeck *et al* (1983) found that people can lower blood-pressure by using bio-feedback.

One problem with the behavioural approach is that some people do not have the necessary control. Very often it can take many months for someone to acquire the techniques used, and to see the benefits.

Behavioural methods have been used to modify Type A behaviours. Such behaviours include impatient-ness, excessively time-conscious, insecure about their status, highly competitive, hostile and aggressive, and incapable of relaxation.

Another stress approach is the Cognitive Approach. It has been suggested that people best adapt to stressful events in their lives by changing the way they think, and consciously taking control of the situation. The locus of control theory researched by Rotter (1996) is very relevant with the cognitive approach to stress. Everybody falls into one of the two types of locus of control. These two types are an internal locus of control, and an external locus of control.
People who have an internal locus of control are likely to blame themselves when things go wrong. Where as people with an external locus of control tend to put the blame on external influences such as God, or fate. Johnson and Sarason (1978) found that people with an external locus of control were more likely to experience stress.

The cognitive approach to stress tries to get an individual to change the way that they think, or feel about a particular situation, in order to reduce stress levels, and find a way for the individual to cope effectively. Meichenbaum (1985) and Kobasa have both suggested methods of reducing stress which aim to help people make realistic assessments of stressful situations, and develop coping strategies.

2.1
Seyles (1956) study on rats led him to believe that there is a similar pattern of physiological response to stressors. He found out from his studies that stress reaction always goes in three stages. He called this 'The General Adaptation Syndrome'

This 'syndrome' comes in three phases. The first phase is the 'Alarm' phase. This is also known as the fight or flight stage.

When going through the alarm stage an individual experiences a rise in heart rate, blood pressure and respiration, it does this to supply muscles and brain with more oxygen. More blood is sent to the skeletal muscles and the brain, while less is sent to the kidneys, liver and skin. In some cases people react the opposite way with a lower blood pressure and a slower respiratory rate. Their muscles relax, which can cause fits.

The brain produces neurotransmitters called 'Endorphins'. The endorphins block out any immediate feelings of pain. The body also produces additional blood platelets which help repair physical damage. The part of the brain that controls the automatic nervous system secretes neuro-hormones which stimulate the pituitary gland. This gland secretes adrenocorticotropic hormone which helps to secrete adrenaline. This alarm phase lasts merely seconds.

The second phase of 'GAS' is called the 'Adaptation' phase.
In the Adaptation Phase the pituitary stops the large secretion of hormones and the effects of the alarm phase lessen. The symptoms of the alarm phase continue after the stressor has gone. During adaptation the organism adapts to the stressor. One example is adapting to a threat. If someone was trying to rob you in the street, after the initial shock you will 'adapt' to the robber. You will begin to feel they are not as threatening, and you will soon lose the feeling of fear, and gain the feeling of reasoning of whether to fight or flight. We do not only adapt to bad stressors, we also adapt to good stressors. When we hear something good or exciting, at the first instant we are overwhelmed with happiness. After a while we calm down, and the feeling of happiness is not so strong.

Whenever you deal with a stressor, you get to know it and next time you are more prepared to tackle it. It is easier for the organism to adapt to a stressor if it appears rhythmically. Adaptation to pain has been

observed in people who suffer from coronary heart disease, with the feeling of pain in definite intervals. Studies have found that if you suffer from a disease, and suffer from the disease again, your organism are more prepared for the second disease as it is familiar, therefore your body can fight it easier.

The third and final stage of 'GAS' is Exhaustion.
In this last stage of stress reaction the organism has depleted most of its reserves, and the individual will feel exhausted. The individual will have no strength to deal with the stressor anymore. Sometimes if the stressor is to strong for an individual, exhaustion may even mean death. Otherwise the organism recovers fully in time. If it is prolonged, too frequent, or too strong, stress reaction can lead to permanent disorders of the body or the psyche.

Seyle (1956) listed several physiological sources of stress. These sources included infection, trauma, heat, cold and being x-rayed. One important physiological source of stress is when bodily rhythms have to be adapted.

One of the major criticisms regarding the GAS study was that is was carried out on rats. Seyle ignores the role of emotional and cognitive factors – possibly because of use of non-human animals.

Gold *et al* (1992) found that nurses on rotating shifts made twice as many errors during work than those who were on permanent shifts, which suggests that the disruption of routine causes stress.

2.2

One major environmental factor which causes stress is noise, or 'unwanted sound'. Very loud noise will cause physical discomfort; however, even fairly quiet noises will cause annoyance if they are not wanted in the situation. A classic example of this is a dripping tap, or tapping. Rosen (1970) showed that noise leads to physiological responses associated with stress. Unwanted noise can also affect task performance. Stress resulting from noise can also have physical effects. Cohen (1980) found that there was a relationship between prolonged exposure to noise, and physical illness.

Another environmental factor which can cause stress is temperature. Barn and Rosenberger (1978) found that the occurrence of riots and civil disturbance in America was related to hot weather. The relationship peaked when temperatures hit the mid 80's, and then dropped off. These findings are only assumptions; they assume that rioting is a symptom of stress.

Some other environmental factors include pollution; Rotten *et al* (1978) found that there was a correlation between the level of air pollution and people's moods. People reported feeling less happy when there were high levels of pollution. This study also rests on an assumption that negative mood can be seen as a straightforward symptom of stress.

3.1

It has been suggested that personality differences affect stress levels. Friedman and Rosenman (1974) believed that people can be divided into two different types of personalities; Type A and Type B.

People with Type A personalities are extremely competitive and are highly motivated to achieve. They are also restless and continuously feel they do not have enough time to fit everything into their day. People who have a Type A personality cannot wait their turn, have to do several things at once, and need to be admired by peers to sustain their self-esteem. They are hostile, cynical, angry, and speak vigorously.

People with Type B personalities on the other hand may be equally ambitious, but this does not dominate their whole lives. They make time in their lives for family and friends, and their leisure pursuits tend to be less competitive than those with a Type A personality.

It has been suggested that those with a Type A Personality are more likely to suffer from high blood pressure, and coronary heart disease than people with Type B personality.

Friedman and Rosenman tested the hypothesis that Type A individuals were more likely to develop coronary heart disease than Type. After their research, Friedman and Rosenman found that 70% of participants who were Type A personality had developed coronary heart disease. This was nearly double the amount of Type B people, when taking into account other known factors such as smoking, blood pressure and obesity. One criticism of this study is that it was carried out on middle aged males.

To conclude, individual differences play a huge part in the management of stress. Whether the difference is your personality type (A or B), what the stressor is, or how harmful you perceive the stressor to be, it all plays a part in how you will cope with the stress.

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Notes and handouts from Psychology classes with Wayne Lyall