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Syllabus points

- Applications of Psychology to Health: stress as defined by Selye (1936), models of stress, health related consequences of stress – maladaptive and adaptive coping strategies
- Science Inquiry: Ethical guidelines and practices for psychological research, Formulating research, Methodology, Processing and analysing data.

Conditions

- Reading time: 5 minutes
- Working time: 50 minutes

Task Weighting

- 8% total weighting

Structure of this paper

Section	Number of questions available	Number of questions to be attempted	Suggested working time (minutes)	Marks	Score
Section One: Short Answer	2	2	35	33	
Section Two: Extended Response	1	1	15	16	
Total				49	

Section One: Short Answer Response

(33 Marks)

This section has two questions. Write your answers in the spaces provided.
Suggested working time: 35 minutes.

Question One

(13 marks)

Mrs Lee and her Psychology class wanted to test their theory that different types of meditation techniques would improve stress levels before exams. The class collected participants from their own school; Year 7's, Year 9's, Year 11's, and Year 12's. The participants were aged between 11 and 18 years old and were randomly allocated into three groups. Group 1 practices mindfulness once a day and group 2 practice Mantra meditation once a day (a practice that involves repeating a word, phrase, or sound to bring about mental focus and clarity). Group 3 practiced no meditation beyond their normal daily routine. At the end of a two-month trial, a week before the exam period, all the participants completed a stress test.

The following results were collected:

	Mean Score on Stress Test (out of 100)
Group 1: Mindfulness	57
Group 2: Mantra Meditation	65
Group 3: No Meditation	79

A statistical test on the difference between the effect of practicing meditation verses no meditation on stress found that $p = 0.47$

- a) Suggest a directional hypothesis that the class would have developed for this study.

(4 marks)

It is hypothesised that the students aged between 11-18 that partake in meditation once a day will have a lower score on the stress test prior their exams, as opposed to the students who practiced no meditation.

- b) Identify two possible sources of error in the conduction of this experiment.

(2 marks)

A source of error is the large variety of year groups and their different responsibilities in regards to school. A year 12 compared to a year 7 are more likely to experience more stress because they know the importance of their exam.

- c) Define stress as defined by Selye (1936)

(2 marks)

Stress is defined as the nonspecific response of the body to any demand (psychological and physiological).

- d) Outline what type/nature of stressor that being stressed about the upcoming exam is categorised by.

(2 marks)

The type of stressor being stressed about an exam is a psychological stressor. This is internal and involves a persons thoughts, perceptions and emotions. An individual being stressed about the difficulty of the exam or lack of preparation involves their cognitive perceptions.

- e) Name the type of stress these students are experiencing due to exam preparation and outline what this means.

(3 marks)

The students are experiencing eustress which is a positive stress response that enhances functioning and motivation. The students being aware that they have an upcoming exam can motivate them to start studying in order to do well.

Question Two

(20 marks)

Hugh recently graduated University and was travelling to his first big job interview. Along the way he noticed his car tire had started to go flat and needed replacing. Hugh was **panicked** and **felt instantly stressed** about making it on time for the job interview. Luckily a repair shop was close by, and he managed to get it replaced almost instantly.

- a) Describe the duration of the stressor.

(1 mark)

Duration refers to how long the stress lasts, can be short-term (acute) or long-term (chronic).

- b) Identify the **stage of stress** Hugh was in when realising he had a flat tire and outline the characteristics of this stage.

(4 mark)

Hugh was in the alarm stage of stress. This is the body's initial response to stress. Hugh's brain processed the flat tire as a threat to his job interview which resulted in him instantly being stressed. During the stage, the body's sympathetic nervous system is activated preparing it for fight-or-flight in order to deal with the stress. Some characteristics may include a heightened heart rate and breathing rate.

Hugh unfortunately did not get offered the job position, and it is now 3 months later, and he has failed to secure another interview opportunity. His financial situation has been a serious stressor of his for these past few months.

- c) Explain what may happen if Hugh is unable to resolve the stress, including both short-term and long-term impacts.

(5 marks)

If Hugh is unable to solve the stress it can have a serious impact on his health and wellbeing. In short term this may include fatigue or reduced motivation. While in long-term it could lead to the development of depression or anxiety. It can also weaken his immune system that can increase his risk of developing heart diseases or diabetes.

Due to the prolonged stress, Hugh decides to visit a psychologist, seeking help and support in managing his stress. The psychologist decides to assess Hugh's vulnerability to stress through The Social Readjustment Scale, developed by Holmes and Rahe (1967).

- d) Name the type of self-report measure used in the Social Readjustment Scale. (1 mark)

Subjective measure

- e) Outline one strength and one limitation of this measurement tool. (2 marks)

A strength is that it collects quantitative data.

A limitation is that participants can overexaggerate their experiences since it's based on their perception of the situation.

- f) Using Lazarus and Folkman's (1984) theory, outline the role of the following cognitive appraisals and apply them to Hugh. (4 mark)

Primary: Is the initial assessment of a threat to decide if it's a stressor. Hugh has realised that his unemployment is a threat to his wellbeing and deems it a stressor.

Secondary: Is the evaluation of available resources to deal with the stress. Hugh decides to contact a psychologist so he can get assistance to ~~then~~ manage his stress.

- g) Explain the method of coping Hugh is using in the scenario. (3 mark)

Hugh is using problem solving which prioritises resolving the root cause of the stress. He's done this by seeking advice and help from a psychologist to help deal with his stress. It also involves him seeking another job to help ease his financial stress.

Section Two: Extended Response

(16 Marks)

This section has **one** question. Write your answers in the spaces provided.

Suggested working time: 15 minutes.

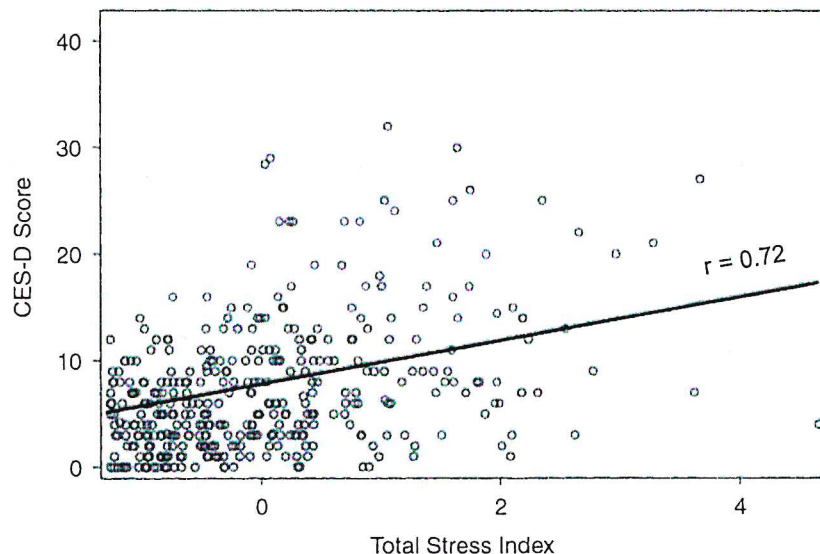
Question three

(16 marks)

Psychology students at Harvard University investigated the relationship between occupational stress and depressive symptoms among coal miners. The participants were 364 coal miners from Ohio, America. The study was approved by the internal review board of Harvard University.

A total stress index score was calculated for each miner to measure the level of stress they experience as part of their occupation. The Centre for Epidemiologic Studies Depression (CES-D) scale was used. It contains 20 items that are self-rated on a four-point Likert scale according to how often each symptom occurred in the past week. The sum of the scores represents the overall (CES-D) score between 0 to 60. A score of greater than 16 is considered indicative of depression. The scatterplot below shows the results for the study.

Figure 1: predicted mean CES-D score by miner's stress index



Notes: Adjusted for age, sex, race/ethnicity, alcohol intake and smoking status.

In a series of questionnaires used to gather qualitative data, the miner's reported threat of harm (intentional and unintentional), excessive work in hard conditions and a lack of support from supervisors as their three main stressors.

In your answer, refer to the above scenario by creating a well-constructed response, addressing the following:

- Outline what stress is according to Lazarus and Folkman (1984) and identify two types of stressors that the miner's experience in their work. (4 marks)
- The university's Internal Review Board is an example of an ethics committee. Describe the role of an ethics committee and outline two ethical guidelines that this committee would monitor during the study, stating how this would occur. (6 marks)
- Based on the data illustrated in Figure 1 on page 24, comment on the relationship between stress and depressive symptoms. (4 marks)
- Describe how psychological stress arises according to Lazarus and Folkman (1984) (2 marks)

hazarous and Sötker defined stress as a situation or characteristic ~~ma~~ impacting an individual. Two types of stressors miners experience in their work is environmental and ^{social} psychological. Environmental stressors involve a persons surroundings. Typically, miners are placed in dark, dangerous environments where they have a heightened risk of injury which can be stress causing. ^{social} Psychological stressors are external and involve a persons social roles, societal expectations and relationships. Mines are usually positioned away from home, making it difficult for them to interact with their family.

An ethics committee is a group of people responsible for creating ~~own~~ strict guidelines that protects participants from any harm or ~~decept~~ mistreatment. Its role is to ensure a participants health, wellbeing and ethics/rights are not breached or in risk of harm. A guideline this committee would monitor is ~~voluntary~~ informed consent. This is when the participants are completely aware of the aim and purpose of the study. Another guideline would be privacy. This is when participants remain

anonymous, and their personal information and results from the study are not shared with external people and are not listed together - their results can't be linked to the person. These guidelines can be followed by creating a consent form which must be signed and understood by the participants prior the test. It can also be followed by ensuring the participants remain anonymous throughout the entire study.

The graph shows that the lower the score the miners have on the WES-D stress index the lower the amount of depressive symptoms they experience. This shows that there is a ~~strong~~ causal relationship between the stress and depressive symptoms \rightarrow influence one another. However, the relationship is weak and inconsistent, showing a ^{moderate} ~~weak~~ linear relationship.

Psychological stressors are based on individual's interactions with their environment. These stressors

Question number: _____

are internal and involve a person's thoughts, emotions and perceptions. Therefore if an individual has a negative perception on their environment or interaction within a specific environment, they are more likely to experience a ~~stronger~~ psychological stress. Lazarus and Folkman stated that psychological stress can arise based on an individual's judgement of their environment and interactions.

Question number: _____

This image shows a single sheet of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There are approximately 20 lines visible. The paper has a slightly textured appearance and some minor discoloration or shadows, suggesting it might be a scan of a physical document. There is no handwriting or other markings on the page.

END OF TEST