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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 year 7, 9, 11 and 12 students aged
(mindfulness, mantra)
between 11 and 18 who participate in meditation practices
daily ~~will~~ for 2 months prior to an exam period will
lower
score ~~will~~ on a stress test than those who did
not participate in the ~~no mindfulness~~ meditation, measured
by the mean score on stress test out of 100.

- b) Identify two possible sources of error in the conduction of this experiment. (2 marks)

- small sample size could limit reliability

- participants in the no meditation group could already partake in meditation as apart of their normal ~~res~~ routine.

- c) Define stress as defined by Selye (1936) (2 marks)

the non-specific response to any ~~dema~~ demand on the body.
can be physiological or psychological.

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

(2 marks)

the nature of the stressor is ~~psyc~~ psychological stress. This stress arises from the internal factors such as an individuals thoughts, emotions or perceptions.

- e) Name the type of stress these students are experiencing due to exam preparation and outline what this means. (3 marks)

The type of stress is distress. As described by Selye
distress is the negative stress response typically accompanied by physiological reactivity and negative emotions.

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)

acute (short term) stress

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 when he realised he had a flat tire. Characteristics of this stage include the stimulation of the adrenal glands to release cortisol, adrenaline, nor-adrenaline and the initiation of the fight or flight response by the sympathetic nervous system. Increased rate & depth of breathing, increased heart 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 resolve the stress he may experience the exhaustion stage, where he has had prolonged exposure to the stress symptoms of the body. This can result in decreased health and increase risk of many illnesses. Some initial responses/impacts include lack of motivation, fatigue and these can result in longer term impacts including depression, anxiety, heart disease, 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)

~~Life~~ ~~the~~ ~~Scale~~ ~~the~~ ~~Scale~~ Questionnaire

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

Strength: collects quantitative data to provide statistical analysis

Limitation: due to the reporting being subjective the results can be exaggerated

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

Primary: Used to determine whether the situation is a challenge, threat or dangerous situation. Hugh evaluated his situation and decided that it was challenging or a threat to himself.

Secondary: Used to evaluate whether the person has the resources and abilities to manage & cope effectively. Hugh evaluated the ~~way~~ ability he has to cope and decided he can cope effectively by seeing someone

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

Hugh is using the coping method of problem focused coping as he has decided in his cognitive appraisal that his situation can be managed effectively and is treating the issue at its cause rather than the symptoms.

Section Two: Extended Response

(16 Marks)

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

Suggested working time: 15 minutes.

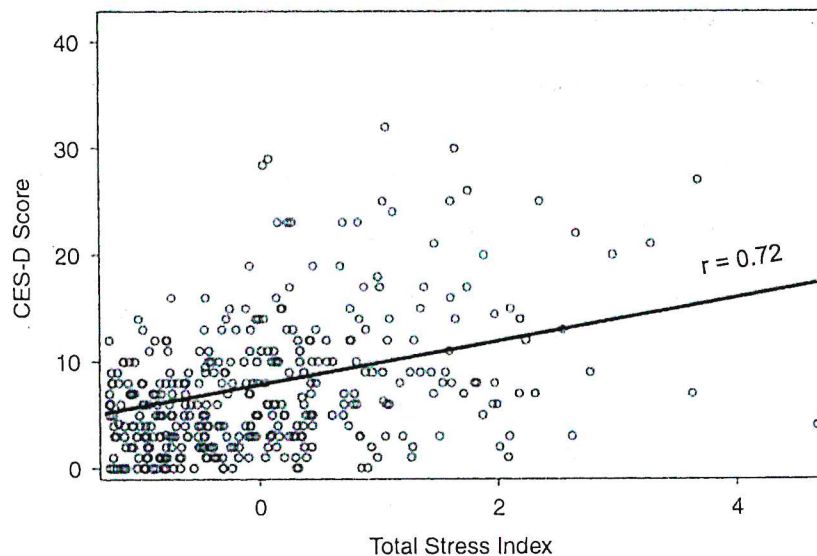
Question three

(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)

Question number: _____

According ~~my~~ to psychologists Lazarus and Folkman stress is the ~~mean~~ interaction between an individual and the environment. Two types of stressors that the miners in the situation could be experiencing include environmental stressors and social stressors.

When partaking in research, an experiment must be approved by the ethics committee. The ethics committee's role is to set the standards of ethics and ethical guidelines all researchers must follow and enforce them in all research situations. The ethics committee also review experiment or research proposals to ensure that the ethical guidelines are being followed. During this study of coal miners and depression, two ethical guidelines that the ethic's committee would monitor is the withdrawal rights of participants and the right to privacy that the participants have. This could be enforced by the committee continuously reviewing the experiment while it is occurring to ensure that any participants who have decided to withdraw from the study are allowed to do so freely without threat or punishment, and that any participant involved's private sensitive information has been collected, disposed of and stored securely.

Question number: _____

Based on the illustration of figure 1, there is shown to be a moderate positive correlation between the total stress index and the CES-D score for depressive symptoms. This can be seen as the correlation coefficient for the relationship is measured at 0.72 and the graphing of the data shows that as the total stress index score increases, the CES-D score increases as well.

~~When stress increases then~~

Lazarus and Folkman stated that psychological stress arises when a person's ~~to~~ ~~when~~ cognitive appraisal evaluates that they are in a challenging, threatening or dangerous situation but are unable to cope or manage effectively.

Question number: _____

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Question number: _____

This image shows a single page of white paper with horizontal black lines, resembling notebook paper. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

END OF TEST