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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's hypothesised that school students aged 11 to 18 will experience more stress when they don't meditate ~~compare~~ daily compared to mindfulness and mantra meditation. Testing using a stress-test a week before the exam period and using the mean score from three groups

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

(2 marks)

Younger children may not be as stressed because they may have smaller understanding of the seriousness of exams. Since random allocation was used the amount of younger children ^{in a group} could be bigger than the rest ^{skewing the results}

c) Define stress as defined by Selye (1936)

(2 marks)

the unconditional response to any demand of the body

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

(2 marks)

Psychological stressor. This being an internal stressor caused by thoughts, values and perspective

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

(3 marks)

Distress.

This means a negative stress response that can cause these students to not want to act or not prepare for the exam hindering their results

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 duration (small)

- 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)

The alarm stage. At this stage cortisol, adrenaline and noradrenaline are secreted causing physiological changes to the body like increased blood pressure, increased ~~use~~ support of the breakdown of glycogen to sugars in the liver and increased ~~breath~~ ^{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 not only will he continue to have increased breath rate, blood pressure and transformation of glycogen to sugars in the liver. Hugh will also experience a ~~lack of decreased~~ ^{fully functional} of his immune system increasing his chance to be sick also the extended duration of the increased blood pressure may cause a increased chance of a heart attack.

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)

A Questionnaire

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

A strength: It provides quantitative data allowing for analysis.
Limitation: There is no place to insert a reason for each answer
therefore instead of a divorce causing stress it may relieve stress
(subjective answers)

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

Primary: Initial assessment of a situation to figure out
if it is harmful or dangerous (what will be the
result of continuing with ^{Hugh} financial difficulty)
(Financial stress)

Secondary: evaluating the resources you have and
determining whether they can resolve the problem
(Hugh trying to find another job to make more money)

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

Hugh is using adaptive emotional-focused coping.
Hugh is benefiting from his coping strategy and is not
focusing on controlling his emotional reaction to the
stressor (being financial difficulty)

Section Two: Extended Response

(16 Marks)

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

Suggested working time: 15 minutes.

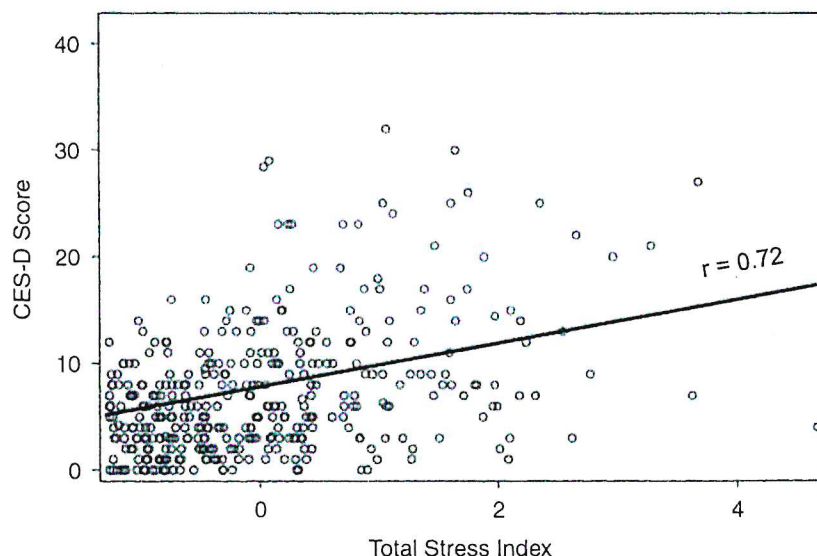
Question three

(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 item 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)

Stress according to Lazarus and Folkman is any event that is different or causes change.

The miners experience social ~~and~~ and environmental stressors. Lack of support from their supervisors and the threat of harm unintentional and intentional are social and environmental are the types of stressors respectively.

An ethics committee's role is to analyse an experiment and decide whether any risks of the study are outweighed by the benefits of completing the study while also ensuring the study is as ethical as possible. The committee would monitor protection ~~and~~ from any harm and confidentiality. protection from harm may be most common during this experiment as psychological harm from being asked about such a stressful place and confidentiality being ~~ensuring~~ none of the coal miners names are published neither their results from the studies.

Based on figure 1 showing $r = 0.72$ the relationship between stress and depressive symptoms are correlated

Question number: 3

as they have a positive slope explaining that
as ~~one~~^{stress} goes up so does depressive symptoms.

Psychological stress arises through an individual's thoughts
values and perspectives being challenged or being
negative.

Question number: _____

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Question number: _____

END OF TEST