

Name: Soleil Oost

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 students at the school from
ages 11-18 who practice mindfulness once a day
will score lower on the stress test before the exam
than the students who practice mantra meditation
or no meditation.

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

The difference in year/age is an ^{extraneous} ~~uncontrolled~~ variable as year 7's ^{exams} ~~tests~~ are considerably less stressful/easy than year 12's. Secondly the stress test used only collects quantitative data and is subjective. Stress could arise from other factors not measured.

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

the non-specific response of the body to any demand (physiological or psychological)

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

(2 marks)

psychological - the student own thoughts and perceptions influence how stressed they feel about the test.

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

Distress = stress that is negative often accompanied by negative emotions. distress arises from when the stressor isn't beneficial.

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

- 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 the GAS model. In this stage the initial response to the stressor occurs. The amygdala starts the bodies fight or flight response triggering glands to release stress hormones such as cortisol, adrenaline and noradrenaline. heart rate, breathing and blood pressure increase.

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)

Hugh is now in the exhaustion stage. In this stage the prolonged release of stress hormones weakens the immune system and the bodies homeostasis. Short term effects of this include low motivation and sleep deprivation. Long term effects are increased likelihood to develop health issues such as anxiety, depression, heart attacks, diabetes and strokes.

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)

Survey

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

Strength - The data can be measured and statistically analysed.

Weakness - The data is subjective and could be exaggerated. Also doesn't allow for explanation

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

Primary: The initial evaluation of the stressor, for Hugh this would be deciding whether his unemployment was dangerous/threatening or not.

Secondary: evaluation of coping strategies and deciding how to deal with the stress. Hugh decided his unemployment was troubling and in secondary appraisal he chose to see a psychologist.

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

Emotional Coping Method. ^{Hugh} who chose to seek emotional support from others (the psychologist) to help him manage the stress. Emotional coping is often chosen by individuals who feel they don't have the resources to deal with the stressor itself.

Section Two: Extended Response

(16 Marks)

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

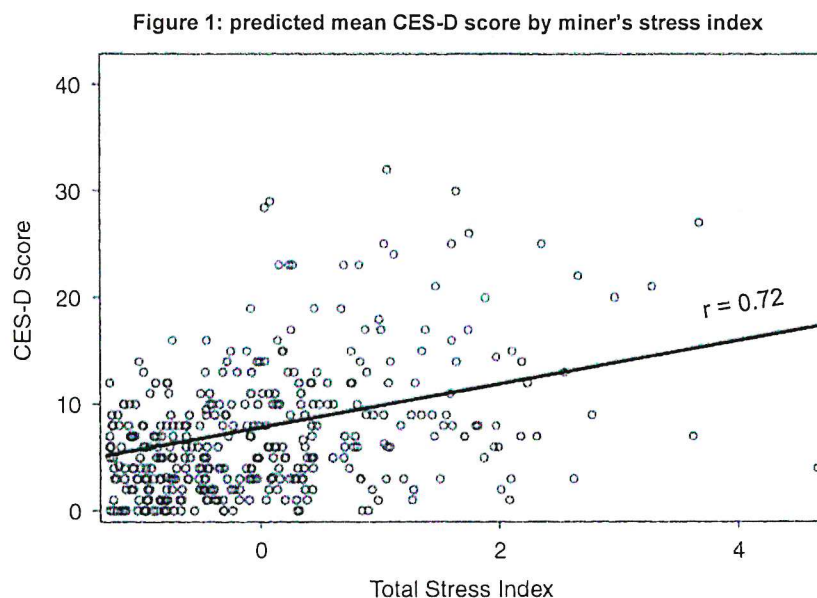
Suggested working time: 15 minutes.

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.



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 to Lazarus and Folkman stress is . . . the miners experience environmental and psychological stressors in their occupation. The ethics committee involved in the study are responsible for ensuring the study is ethical and that participants are not harmed in any way. During this study the committee would monitor and ensure that all the participants had informed consent including written consent and were aware of what the study involved. They would also monitor to ensure none of the miners came to any physiological or psychological harm. Based on figure 1 there is a strong correlation linking stress and depressive symptoms. Many of the miners had scores exceeding 16 indicating depression. According to Lazarus and Folkman psychological stress arises from . . .

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 appears to be a standard notebook page or a sheet of stationery. There is no handwriting or other markings on the page.

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Question number: _____

This image shows a single page 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 left edge of the paper shows some slight waviness, suggesting it might be part of a bound notebook. There is no handwriting or other markings on the page.

END OF TEST