Pearson Edexcel
International
Advanced Level

Thursday 24 October 2019

Afternoon (Time: 1 hour 30 minutes) | Paper Reference **WPS03/01**

Psychology
International Advanced Level
Unit 3: Applications of Psychology

You do not need any other materials. | Total Marks

Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **ALL** questions in Section A, and **ALL** questions from **EITHER** Option 1 criminological psychology **OR** Option 2 health psychology.
- Answer the questions in the spaces provided
  – *there may be more space than you need*.

Information

- The total mark for this paper is 64.
- The marks for **each** question are shown in brackets
  – *use this as a guide as to how much time to spend on each question.*
- The list of formulae and statistical tables are printed at the start of this paper.
- Candidates may use a calculator.

Advice

- Read each question carefully before you start to answer it.
- Check your answers if you have time at the end.

Turn over ▶

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FORMULAE AND STATISTICAL TABLES

Standard deviation (sample estimate)

$$\sqrt{\left(\frac{\sum(x-\bar{x})^2}{n-1}\right)}$$

Spearman's rank correlation coefficient

$$1 - \frac{6\sum d^2}{n(n^2-1)}$$

Critical values for Spearman's rank

	Level of significance for a one-tailed test				
	0.05	0.025	0.01	0.005	0.0025
	Level of significance for a two-tailed test				
N	0.10	0.05	0.025	0.01	0.005
5	0.900	1.000	1.000	1.000	1.000
6	0.829	0.886	0.943	1.000	1.000
7	0.714	0.786	0.893	0.929	0.964
8	0.643	0.738	0.833	0.881	0.905
9	0.600	0.700	0.783	0.833	0.867
10	0.564	0.648	0.745	0.794	0.830
11	0.536	0.618	0.709	0.755	0.800
12	0.503	0.587	0.678	0.727	0.769
13	0.484	0.560	0.648	0.703	0.747
14	0.464	0.538	0.626	0.679	0.723
15	0.446	0.521	0.604	0.654	0.700
16	0.429	0.503	0.582	0.635	0.679
17	0.414	0.485	0.566	0.615	0.662
18	0.401	0.472	0.550	0.600	0.643
19	0.391	0.460	0.535	0.584	0.628
20	0.380	0.447	0.520	0.570	0.612
21	0.370	0.435	0.508	0.556	0.599
22	0.361	0.425	0.496	0.544	0.586
23	0.353	0.415	0.486	0.532	0.573
24	0.344	0.406	0.476	0.521	0.562
25	0.337	0.398	0.466	0.511	0.551
26	0.331	0.390	0.457	0.501	0.541
27	0.324	0.382	0.448	0.491	0.531
28	0.317	0.375	0.440	0.483	0.522
29	0.312	0.368	0.433	0.475	0.513
30	0.306	0.362	0.425	0.467	0.504

The calculated value must be equal to or exceed the critical value in this table for significance to be shown.

Chi-squared distribution formula

$$X^2 = \sum \frac{(O-E)^2}{E} \qquad df = (r-1)(c-1)$$

Critical values for chi-squared distribution

	Level of significance for a one-tailed test					
	0.10	**0.05**	**0.025**	**0.01**	**0.005**	**0.0005**
	Level of significance for a two-tailed test					
df	**0.20**	**0.10**	**0.05**	**0.025**	**0.01**	**0.001**
1	1.64	2.71	3.84	5.02	6.64	10.83
2	3.22	4.61	5.99	7.38	9.21	13.82
3	4.64	6.25	7.82	9.35	11.35	16.27
4	5.99	7.78	9.49	11.14	13.28	18.47
5	7.29	9.24	11.07	12.83	15.09	20.52
6	8.56	10.65	12.59	14.45	16.81	22.46
7	9.80	12.02	14.07	16.01	18.48	24.32
8	11.03	13.36	15.51	17.54	20.09	26.12
9	12.24	14.68	16.92	19.02	21.67	27.88
10	13.44	15.99	18.31	20.48	23.21	29.59
11	14.63	17.28	19.68	21.92	24.73	31.26
12	15.81	18.55	21.03	23.34	26.22	32.91
13	16.99	19.81	22.36	24.74	27.69	34.53
14	18.15	21.06	23.69	26.12	29.14	36.12
15	19.31	22.31	25.00	27.49	30.58	37.70
16	20.47	23.54	26.30	28.85	32.00	39.25
17	21.62	24.77	27.59	30.19	33.41	40.79
18	22.76	25.99	28.87	31.53	34.81	42.31
19	23.90	27.20	30.14	32.85	36.19	43.82
20	25.04	28.41	31.41	34.17	37.57	45.32
21	26.17	29.62	32.67	35.48	38.93	46.80
22	27.30	30.81	33.92	36.78	40.29	48.27
23	28.43	32.01	35.17	38.08	41.64	49.73
24	29.55	33.20	36.42	39.36	42.98	51.18
25	30.68	34.38	37.65	40.65	44.31	52.62
26	31.80	35.56	38.89	41.92	45.64	54.05
27	32.91	36.74	40.11	43.20	46.96	55.48
28	34.03	37.92	41.34	44.46	48.28	56.89
29	35.14	39.09	42.56	45.72	49.59	58.30
30	36.25	40.26	43.77	46.98	50.89	59.70
40	47.27	51.81	55.76	59.34	63.69	73.40
50	58.16	63.17	67.51	71.42	76.15	86.66
60	68.97	74.40	79.08	83.30	88.38	99.61
70	79.72	85.53	90.53	95.02	100.43	112.32

The calculated value must be equal to or exceed the critical value in this table for significance to be shown.

P 5 8 1 6 3 A 0 3 2 8

Wilcoxon Signed Ranks test process

• Calculate the difference between two scores by taking one from the other

• Rank the differences giving the smallest difference Rank 1

  Note: do not rank any differences of 0 and when adding the number of scores, do not count those with a difference of 0, and ignore the signs when calculating the difference

• Add up the ranks for positive differences

• Add up the ranks for negative differences

• T is the figure that is the smallest when the ranks are totalled (may be positive or negative)

• N is the number of scores left, ignore those with 0 difference

Critical values for the Wilcoxon Signed Ranks test

	Level of significance for a one-tailed test		
	0.05	0.025	0.01
	Level of significance for a two-tailed test		
N	0.1	0.05	0.02
N=5	0	-	-
6	2	0	-
7	3	2	0
8	5	3	1
9	8	5	3
10	11	8	5
11	13	10	7
12	17	13	9

The calculated value must be equal to or less than the critical value in this table for significance to be shown.

SECTION A

DEVELOPMENTAL PSYCHOLOGY

Answer ALL questions. Write your answers in the spaces provided.

1 In theories of attachment you will have learned about the following study:

   •   O'Connor et al. (2013).

   (a) State **one** conclusion made by O'Connor et al. (2013).

(1)

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   (b) Explain **one** strength of the study by O'Connor et al. (2013).

(2)

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   (c) Explain **one** improvement that could be made to the study by O'Connor et al.
        (2013).

(2)

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(Total for Question 1 = 5 marks)

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2 Sophia investigated the relationship between the number of hours two-year-old children spent in day care and the number of words each child could say. Day care is where children are looked after by carers other than their parents or relatives.

She recorded the average number of hours a week spent in day care and the number of different words the two-year-old children said in an hour.

The data gathered by Sophia is shown in **Table 1**.

Average number of hours a week spent in day care	Rank 1	Number of different words said in an hour	Rank 2	d	d^2
35	5	26	6	-1	1
40	6	20	3	3	9
15	2	18	1	1	1
20	3	21	4	-1	1
24	4	19	2	2	4
8	1	23	5	-4	16
				Total for d^2	32

Table 1

(a) Calculate Spearman's rank for the data gathered by Sophia.

You **must** give your answer to two decimal places.

The formulae and statistical tables can be found at the front of the paper.

(3)

Space for calculations

Spearman's rank ....

(b) Describe **two** ethical issues Sophia should have taken into account when she carried out her research.

(2)

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(c) Explain **one** weakness of Sophia using a correlational design in her research.

(2)

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(Total for Question 2 = 7 marks)

3 Tsai has decided to carry out an ethnographic study into the objects that children play with and how they play with other children.

(a) Describe how Tsai could carry out an ethnographic study into children's play.

(2)

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(b) Explain **one** strength of Tsai carrying out an ethnographic study into children's play.

(2)

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(Total for Question 3 = 4 marks)

P 5 8 1 6 3 A 0 8 2 8

4 Helen has three children. Paris is 12 months old, Hector is three years old and Cassandra is five years old. Helen's sister, Cleo, recently came for a visit and was interested in the language development of the three children.

Paris saw Cleo and said 'Mamamama'. Hector laughed and said 'Not mama'. When Cleo read the children a bedtime story she asked them 'Where is the dog and the cat?' and Hector pointed to two different animals in the picture. Cassandra asked Cleo what some words in the story meant.

Discuss stages of language development in relation to Paris, Hector and Cassandra.

You **must** refer to the context in your answer.

(8)

(Total for Question 4 = 8 marks)

P 5 8 1 6 3 A 0 1 0 2 8

5 Assess whether Erikson's stages of psychosocial development are scientific.

(8)

(Total for Question 5 = 8 marks)

TOTAL FOR SECTION A = 32 MARKS

P 5 8 1 6 3 A 0 1 2 2 8

SECTION B

Answer ALL questions from EITHER OPTION 1: CRIMINOLOGICAL PSYCHOLOGY

OR OPTION 2: HEALTH PSYCHOLOGY.

Indicate which option you are answering by marking a cross in the box ⊠. If you change your mind, put a line through the box ⊠ and then indicate your new option with a cross ⊠.

If you answer the questions in Option 1 put a cross in the box ⊠ .

OPTION 1: CRIMINOLOGICAL PSYCHOLOGY

6 (a) Describe how weapon focus can influence the identification of offenders.

(2)

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(b) Justify why weapon focus could make eye-witness testimony unreliable.

(3)

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(Total for Question 6 = 5 marks)

P 5 8 1 6 3 A 0 1 3 2 8

7 Dimitris carried out an experiment to determine the effectiveness of a new treatment for offenders who had committed either theft, assault or fraud. The offenders taking part in the experiment were from a local prison.

Dimitris used a stratified sample in his experiment.

(a) Describe how Dimitris may have obtained his stratified sample.

(3)

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(b) Explain **one** strength and **one** weakness of Dimitris using a stratified sample in his experiment.

(4)

Strength

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Weakness

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(Total for Question 7 = 7 marks)

8 Rebecca is a lawyer. She is defending a client who is on trial for stealing a large amount of money from a bank. The case has been reported in the national news and has been a popular topic on social media. Some of the reporting has been very negative towards her client.

Rebecca is concerned that her client will not get a fair trial due to the pre-trial publicity in the media.

Explain **one** strength and **one** weakness of pre-trial publicity as an explanation of why Rebecca's client may not have a fair trial.

Strength

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Weakness

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(Total for Question 8 = 4 marks)

9 In your studies of criminological psychology, you will have learned about one of the following contemporary studies in detail:

- Ruva, McEvoy and Bryant (2007) Effects of pre-trial publicity and jury deliberation on jury bias and source memory errors
- Valentine and Mesout (2009) Eyewitness identification under stress in the London Dungeon.

Evaluate your chosen contemporary study in terms of reliability and validity.

(8)

Chosen study

https://xtremepape.rs/

(Total for Question 9 = 8 marks)

10 Assess the use of psychological (case) formulation to understand the function of offending behaviour in the individual.

(8)

P 5 8 1 6 3 A 0 1 9 2 8

(Total for Question 10 = 8 marks)

TOTAL FOR SECTION B OPTION 1 = 32 MARKS

If you answer the questions in Option 2 put a cross in the box ☒ .

OPTION 2: HEALTH PSYCHOLOGY

11 (a) Describe the Hypothalamic-Pituitary-Adrenal (HPA) axis in relation to stress.

(2)

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(b) Justify whether the Hypothalamic-Pituitary-Adrenal (HPA) axis is a valid explanation of stress.

(3)

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(Total for Question 11 = 5 marks)

12 Dimitris carried out an experiment to determine the effectiveness of a new treatment for people diagnosed with either general anxiety, anxiety based on work or anxiety due to a personal experience. The participants taking part in the experiment were from a local health centre.

Dimitris used a stratified sample in his experiment.

(a) Describe how Dimitris may have obtained his stratified sample.

(3)

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(b) Explain **one** strength and **one** weakness of Dimitris using a stratified sample in his experiment.

(4)

Strength

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Weakness

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(Total for Question 12 = 7 marks)

P 5 8 1 6 3 A 0 2 3 2 8

13 Rebecca has experienced several stressful events recently, including divorcing her husband and the death of her pet. She is using emotion-focusing strategies to cope with her stress.

Rebecca's doctor is concerned that Rebecca will not be able to cope with her stress due to the use of emotion-focusing strategies.

Explain **one** strength and **one** weakness of Rebecca using emotion-focusing strategies to cope with her stress.

Strength

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Weakness

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(Total for Question 13 = 4 marks)

P 5 8 1 6 3 A 0 2 4 2 8

14 In your studies of health psychology, you will have learned about one of the following contemporary studies in detail:

- Avdagic et al. (2014) A randomised controlled trial of acceptance and commitment therapy (ACT) and cognitive-behavioural therapy (CBT) for generalised anxiety
- Russell et al. (2015) Adaptation of an adolescence coping assessment for therapeutic recreation and outdoor adventure settings.

Evaluate your chosen contemporary study in terms of reliability and validity.

(8)

Chosen study

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P 5 8 1 6 3 A 0 2 5 2 8

(Total for Question 14 = 8 marks)

P 5 8 1 6 3 A 0 2 6 2 8

15 Assess the use of personality traits as an explanation of factors that affect stress.

(8)

P 5 8 1 6 3 A 0 2 7 2 8

(Total for Question 15 = 8 marks)

TOTAL FOR SECTION B OPTION 2 = 32 MARKS
TOTAL FOR PAPER = 64 MARKS

P 5 8 1 6 3 A 0 2 8 2 8