

Study Psychology

HELPING YOU ACHIEVE



A-Level Psychology Practice Paper

This is a practice paper intended for revision following the **EDEXCEL** specification.

Paper 2: Applications of Psychology

2.15 hours



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

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

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.

Mann-Whitney U test formulae

$$U_a = n_a n_b + \frac{n_a(n_a+1)}{2} - \sum R_a$$

$$U_b = n_a n_b + \frac{n_b(n_b+1)}{2} - \sum R_b$$

(U is the smaller of U_a and U_b)

Critical values for the Mann-Whitney U test

	N_b															
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
N_a																

$p \leq 0.05$ (one-tailed), $p \leq 0.10$ (two-tailed)

5	4	5	6	8	9	11	12	13	15	16	18	19	20	22	23	25
6	5	7	8	10	12	14	16	17	19	21	23	25	26	28	30	32
7	6	8	11	13	15	17	19	21	24	26	28	30	33	35	37	39
8	8	10	13	15	18	20	23	26	28	31	33	36	39	41	44	47
9	9	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54
10	11	14	17	20	24	27	31	34	37	41	44	48	51	55	58	62
11	12	16	19	23	27	31	34	38	42	46	50	54	57	61	65	69
12	13	17	21	26	30	34	38	42	47	51	55	60	64	68	72	77
13	15	19	24	28	33	37	42	47	51	56	61	65	70	75	80	84
14	16	21	26	31	36	41	46	51	56	61	66	71	77	82	87	92
15	18	23	28	33	39	44	50	55	61	66	72	77	83	88	94	100
16	19	25	30	36	42	48	54	60	65	71	77	83	89	95	101	107
17	20	26	33	39	45	51	57	64	70	77	83	89	96	102	109	115
18	22	28	35	41	48	55	61	68	75	82	88	95	102	109	116	123
19	23	30	37	44	51	58	65	72	80	87	94	101	109	116	123	130
20	25	32	39	47	54	62	69	77	84	92	100	107	115	123	130	138

	N_b															
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
N_a																

$p \leq 0.025$ (one-tailed), $p \leq 0.05$ (two-tailed)

5	2	3	5	6	7	8	9	11	12	13	14	15	17	18	19	20
6	3	5	6	8	10	11	13	14	16	17	19	21	22	24	25	27
7	5	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34
8	6	8	10	13	15	17	19	22	24	26	29	31	34	36	38	41
9	7	10	12	15	17	20	23	26	28	31	34	37	39	42	45	48
10	8	11	14	17	20	23	26	29	33	36	39	42	45	48	52	55
11	9	13	16	19	23	26	30	33	37	40	44	47	51	55	58	62
12	11	14	18	22	26	29	33	37	41	45	49	53	57	61	65	69
13	12	16	20	24	28	33	37	41	45	50	54	59	63	67	72	76
14	13	17	22	26	31	36	40	45	50	55	59	64	67	74	78	83
15	14	19	24	29	34	39	44	49	54	59	64	70	75	80	85	90
16	15	21	26	31	37	42	47	53	59	64	70	75	81	86	92	98
17	17	22	28	34	39	45	51	57	63	67	75	81	87	93	99	105
18	18	24	30	36	42	48	55	61	67	74	80	86	93	99	106	112
19	19	25	32	38	45	52	58	65	72	78	85	92	99	106	113	119
20	20	27	34	41	48	55	62	69	76	83	90	98	105	112	119	127

N_a	N_b															
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
$p \leq 0.01$ (one-tailed), $p \leq 0.02$ (two-tailed)																
5	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
6	2	3	4	6	7	8	9	11	12	13	15	16	18	19	20	22
7	3	4	6	7	9	11	12	14	16	17	19	21	23	24	26	28
8	4	6	7	9	11	13	15	17	20	22	24	26	28	30	32	34
9	5	7	9	11	14	16	18	21	23	26	28	31	33	36	38	40
10	6	8	11	13	16	19	22	24	27	30	33	36	38	41	44	47
11	7	9	12	15	18	22	25	28	31	34	37	41	44	47	50	53
12	8	11	14	17	21	24	28	31	35	38	42	46	49	53	56	60
13	9	12	16	20	23	27	31	35	39	43	47	51	55	59	63	67
14	10	13	17	22	26	30	34	38	43	47	51	56	60	65	69	73
15	11	15	19	24	28	33	37	42	47	51	56	61	66	70	75	80
16	12	16	21	26	31	36	41	46	51	56	61	66	71	76	82	87
17	13	18	23	28	33	38	44	49	55	60	66	71	77	82	88	93
18	14	19	24	30	36	41	47	53	59	65	70	76	82	88	94	100
19	15	20	26	32	38	44	50	56	63	69	75	82	88	94	101	107
20	16	22	28	34	40	47	53	60	67	73	80	87	93	100	107	114

N_a	N_b															
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
$p \leq 0.005$ (one-tailed), $p \leq 0.01$ (two-tailed)																
5	0	1	1	2	3	4	5	6	7	7	8	9	10	11	12	13
6	1	2	3	4	5	6	7	9	10	11	12	13	15	16	17	18
7	1	3	4	6	7	9	10	12	13	15	16	18	19	21	22	24
8	2	4	6	7	9	11	13	15	17	18	20	22	24	26	28	30
9	3	5	7	9	11	13	16	18	20	22	24	27	29	31	33	36
10	4	6	9	11	13	16	18	21	24	26	29	31	34	37	39	42
11	5	7	10	13	16	18	21	24	27	30	33	36	39	42	45	48
12	6	9	12	15	18	21	24	27	31	34	37	41	44	47	51	54
13	7	10	13	17	20	24	27	31	34	38	42	45	49	53	56	60
14	7	11	15	18	22	26	30	34	38	42	46	50	54	58	63	67
15	8	12	16	20	24	29	33	37	42	46	51	55	60	64	69	73
16	9	13	18	22	27	31	36	41	45	50	55	60	65	70	74	79
17	10	15	19	24	29	34	39	44	49	54	60	65	70	75	81	86
18	11	16	21	26	31	37	42	47	53	58	64	70	75	81	87	92
19	12	17	22	28	33	39	45	51	56	63	69	74	81	87	93	99
20	13	18	24	30	36	42	48	54	60	67	73	79	86	92	99	105

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

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

<i>n</i>	Level of significance for a one-tailed test		
	0.05	0.025	0.01
	Level of significance for a two-tailed test		
	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
Clinical Psychology

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

- 1.** In your studies of Clinical Psychology you will have learned about schizophrenia. Describe **three** features of schizophrenia. **(3)**

- 2.** Outline the use of the longitudinal research method as used in Clinical Psychology. **(4)**

3. Briefly describe **one** non-biological explanation for schizophrenia.
(3)

4. Simon has carried out an experiment to determine the effectiveness of a new drug in treating a mental health disorder. He recruited his participants through volunteer sampling from a local health care centre where he placed an advertisement in the waiting room.

Once recruited he gave half the participants the new drug and half the participants a placebo (sugar pill). The participants did not know whether they received the new drug or the placebo, however Simon did know.

(a) State the independent variable (IV) of Simon’s experiment. (1)

(b) State the dependent variable (DV) of Simon’s experiment. (1)

(c) State a fully operationalised one-tailed hypothesis for Simon’s experiment. (2)

(d) **Table 1** shows the percentage of reduction in symptoms from Simon's experiment.

	% of reduction in symptoms
New drug	25%
Placebo	10%

Table 1

Calculate Simon's results as a ratio.

You must express the ratio to the lowest whole numbers.

(1)

SPACE FOR CALCULATIONS

Ratio

(e) Simon concluded that the new drug was more effective in reducing symptoms than the placebo. Explain how Simon's interpretation of the results of his experiment may have been influenced by subjectivity.

(3)

[illegible]

5. You will have learned about the classic study by Rosenhan (1973). Outline the procedure of Rosenhan (1973). **(4)**

[illegible]

6. Julie is a clinical psychologist working with a patient who has told her that he is going to harm himself and has previously been hospitalised due to self-harm.

Outline **two** of the Health and Care Professions Council (HCPC) guidelines that would be important for Julie. You must make reference to the context in your answer. **(4)**

[illegible]

7. Assess how far culture can lead to individual differences in mental health disorders.

(8)

This image shows a full page of white paper with horizontal dashed lines, typical of primary-ruled 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.

[illegible]

8. Evaluate a contemporary study on a disorder **other than schizophrenia.**

(20)

[illegible]

Handwriting practice lines consisting of multiple sets of three horizontal dashed lines for tracing and writing practice.

Handwriting practice lines consisting of multiple sets of three horizontal dashed lines for tracing and writing practice.

SECTION B

Answer questions from ONE option in this section.

Indicate which question 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 question with a cross ☒.

OPTION 1: CRIMINOLOGICAL PSYCHOLOGY

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

If you answer Option 1, put a cross in the box ☐ .

9. A PHD student studying violence in young people observed aggressive behaviour in a group of adolescents during the school lunch break.

Table 1 shows the number of aggressive behaviours she recorded for males and females.

Table 1

	Males	Females
Physical Aggression	35	12
Verbal Aggression	8	19

(a) Calculate the total number of acts of 'physical aggression' she observed in both males and females. (1)

SPACE FOR CALCULATIONS

Total

(b) Give **one** strength of using quantitative data in this study.

(2)

(c) State **three** reasons why the PHD student chose to use a Chi-Squared test to analyse her results.

(3)

10. Gabriel was recently involved in a car accident which resulted in damage to his amygdala. Since the accident he loses his temper more often and argues with his parents frequently. His friends have also started to notice a change in his personality.

Explain how damage to Gabriel's amygdala may account for his aggression. You must make reference to the context in your answer.

(4)

[illegible]

11. In your studies of Criminological Psychology you will have learned about a contemporary study. State the conclusion of your contemporary study.

(2)

[illegible]

12. Jane witnessed a robbery at a bank. Whilst she was waiting to give her statement to the police she was in a room with other witnesses to the robbery. Jane gave an interview to the police whilst still at the bank. When she went home a report of the robbery was on the local news where they mentioned that a weapon had been used.

One week later the police asked Jane to go to the police station to give a second interview as they needed to clarify a few points about the robbery.

(a) Explain how post-event information may have affected Jane's testimony of the robbery when she went into the police station. **(2)**

(b) Give **one** suggestion of how the police could have improved the reliability of Jane's testimony.

(2)

13. The social learning theory is a theory of human development that can account for criminal or anti-social behaviour.

Describe how the social learning theory might explain why some people commit crime while others do not.

(4)

14. You will have learnt about a key question from Criminological Psychology that is relevant to today's society.

[illegible]

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[illegible]

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

If you answer Option 2, put a cross in the box ☐.

15. A psychologist studying aggressive behaviour in pre-school children conducted an observation one Monday morning at the local daycare centre.

Table 1 shows the number of aggressive behaviours recorded for boys and girls.

Table 1

	Boys	Girls
Hitting	6	3
Pushing	2	0
Arguing	7	9

(a) Calculate the total number of acts of aggression by 'hitting' **and** 'pushing' observed in both boys and girls. **(1)**

SPACE FOR CALCULATIONS

Total

(b) Give **one** strength of using quantitative data in this study. **(2)**

(c) State **three** reasons why the psychologist chose to use a Chi-Squared test to analyse the results. **(3)**

16. Pauline works as a child psychologist in a local health centre. She observes that most of the children she works with form an emotional bond with their parents easily. However, there is one child who displays extreme anxiety when separated from their mother and who can take up to 20 minutes to calm back down. Pauline discovered that the child’s mother went back to full-time work when the child was three months old.

Describe how Bowlby’s work on attachment may help explain the behaviour of the child Pauline is concerned about. You must make reference to the context in your answer. **(4)**

17. Olivia is six months old. Her mother had to return to work so placed her in day care. The local nursery was felt to be a good match as the other children were of a similar age and the staff always engage in a variety of fun, learning activities. The manager of the nursery has a professional qualification in childcare.

(a) Using research, describe the advantages for Olivia of attending day care. **(2)**

(b) Describe what Olivia’s mother would have considered when selecting a nursery that provides good quality day care. **(4)**

18. You will have studied the effects on development of developmental disorders, such as autism.

Explain one way developmental psychology can be used to explain the symptoms seen in such disorders.

(4)

19. You will have learnt about a key question from Child Psychology that is relevant to today's society.

Assess the key question from Child Psychology.

(16)

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Handwriting practice lines consisting of 20 sets of three horizontal dashed lines.

OPTION 3: HEALTH PSYCHOLOGY

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

If you answer Option 3, put a cross in the box ☐.

20. A psychologist studying health promotion behaviour in high school children conducted an observation to explore student engagement in sports or physical activities.

Table 1 shows the number of health promotion behaviours recorded for boys and girls.

Table 1

	Boys	Girls
Engaged in school sports	35	21
Engaged in other physical activity	28	13
Engaged in other non sport-related activity (e.g. art/ crafts)	7	26

(a) Calculate the total number of health promotion behaviours involving students 'engaged in school sports' observed in both boys and girls. **(1)**

SPACE FOR CALCULATIONS

Total

(b) Give **one** strength of using quantitative data in this study. (2)

(c) State **three** reasons why the psychologist chose to use a Chi-Squared test to analyse the results. (3)

21. Describe **two** issues around drug taking. (4)

[illegible]

22. Outline one difference between the biological explanation for nicotine and the learning theory as an explanation for nicotine.

(2)

[illegible]

23. Mary works with people addicted to heroin. This includes offering treatments for their addiction to heroin.

Describe how **one** treatment could be used by Mary with people addicted to heroin.

(4)

[illegible]

24. Biological and social factors in drug misuse can include effects dependent on differences in the individual, such as personality.

Explain how **one** individual difference might explain drug use.

(4)

[illegible]

25. You will have learnt about a key question from Health Psychology that is relevant to today's society.

Assess the key question from Health Psychology.

(16)

[illegible]

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END OF PAPER

Study Psychology (c)

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