**Research Scenario 1**

A psychologist was interested in evaluating the effectiveness of a domestic violence prevention program in changing attitudes towards domestic violence in a sample of high school students. The psychologist recruited male and female high school students between the ages of 16 and 17 years from nine high schools in the Greater Brisbane Region. The students received a six-week domestic violence prevention program and the psychologist recorded their attitudes to domestic violence on Day 1 (baseline), Day 30, and Day 90. Based on the following data, determine whether the domestic violence prevention program had an influence on the attitudes towards domestic violence in high school students (higher scores indicate greater acceptance of domestic violence). If the ANOVA result is significant, conduct and report Bonferroni post hoc analyses to determine exactly which time points differed from one another. 

|  |  |  |
| --- | --- | --- |
| **Day 1** | **Day 30** | **Day 90** |
| 32 | 28 | 36 |
| 44 | 24 | 42 |
| 44 | 13 | 20 |
| 43 | 20 | 32 |
| 33 | 20 | 33 |
| 32 | 40 | 21 |
| 41 | 24 | 11 |
| 44 | 16 | 36 |
| 25 | 37 | 24 |
| 36 | 37 | 19 |
| 12 | 31 | 16 |
| 17 | 35 | 23 |
| 45 | 37 | 21 |
| 44 | 30 | 41 |
| 31 | 9 | 29 |
| 36 | 33 | 28 |
| 35 | 24 | 24 |
| 39 | 16 | 20 |
| 48 | 25 | 17 |
| 33 | 19 | 20 |
| 39 | 37 | 15 |
| 38 | 32 | 24 |
| 36 | 33 | 14 |
| 30 | 22 | 24 |
| 27 | 36 | 16 |
| 38 | 31 | 16 |

Which of the following statistical analyses should be performed for this scenario? Note that you may need to select more than one analysis depending upon the specifications of the scenario.

To indicate a selection choose 'Yes' otherwise choose 'No':

|  |  |  |  |
| --- | --- | --- | --- |
| One way independent measures ANOVA: | |  |  | | --- | --- | | Yes | No | |
| One way repeated measures ANOVA: | |  |  | | --- | --- | | Yes | No | |
| Kruskal Wallis test: | |  |  | | --- | --- | | Yes | No | |
| Friedman test: | |  |  | | --- | --- | | Yes | No | |
| Bonferroni-adjusted pairwise comparisons: | |  |  | | --- | --- | | Yes | No | |
| Wilcoxon pairwise comparisons: | |  |  | | --- | --- | | Yes | No | |
| Tukey's HSD: | |  |  | | --- | --- | | Yes | No | |
| Mann Whitney *U*: | |  |  | | --- | --- | | Yes | No | |

Now run the appropriate analysis or analyses using SPSS and enter all relevant values into the fields provided.

*Important Notes:*

1. *Be careful to select the correct statistical test as your choice will impact all future marks for the scenario.*
2. *It is strongly recommended that you copy and paste the data into SPSS to avoid transcription errors.*
   * + *Paste from Moodle into Microsoft Excel first and then from Excel into SPSS or you could experience layout issues.*
3. *There may be more value answer fields than are required.*
   * + *You may be prompted to answer all parts of this question. This does****not****apply to the value answer fields. Leave value answer fields****blank****if they are not required for the statistical test you have selected.*
     + *Report only those values that correspond to the statistical test you have chosen (i.e., the values you will need for your results write up).*
     + *e.g., if the scenario requires a t-test and there is an answer field for an F ratio then you would leave that field blank.*
4. *You must present values exactly according to correct APA format.*
   * + *Refer to the module materials for instructions on how to do this.*
     + *Ensure you do not include any extraneous characters (e.g., spaces) in your answers.*
5. *In most cases you will enter just a numerical value, however when reporting very small p values you may need to include the < sign in your answer, where appropriate, to demonstrate correct APA formatting.*

|  |  |  |
| --- | --- | --- |
|  | **Statistic** | **Value** |
| Day 1 | Mean (SD) | Answer (Answer) |
| Mean Rank | Answer |
| Day 30 | Mean (SD) | Answer (Answer) |
| Mean Rank | Answer |
| Day 90 | Mean (SD) | Answer (Answer) |
| Mean Rank | Answer |
| Homogeneity of variance assumption | F | Answer |
| Fmax | Answer |
| df **OR**  (df1, df2) | Answer  (Answer, Answer) |
| p | Answer |
| Primary analysis | F | Answer |
| Χ2 | Answer |
| df **OR**  (df1, df2) | Answer  (Answer, Answer) |
| N | Answer |
| p | Answer |
| η2 or η2p | Answer |
| Day 1 vs Day 30 comparison | T | Answer |
| U | Answer |
| p | Answer |
| d | Answer |
| r | Answer |
| Negative Ranks: n | Answer |
| Negative Ranks:  Sum of ranks | Answer |
| Positive Ranks: n | Answer |
| Positive Ranks:  Sum of ranks | Answer |
| Ties: n | Answer |
| Day 1 vs Day 90 comparison | T | Answer |
| U | Answer |
| p | Answer |
| d | Answer |
| r | Answer |
| Negative Ranks: n | Answer |
| Negative Ranks: Sum of ranks | Answer |
| Positive Ranks: n | Answer |
| Positive Ranks: Sum of ranks | Answer |
| Ties: n | Answer |
| Day 30 vs Day 90 comparison | T | Answer |
| U | Answer |
| p | Answer |
| d | Answer |
| r | Answer |
| Negative Ranks: n | Answer |
| Negative Ranks: Sum of ranks | Answer |
| Positive Ranks: n | Answer |
| Positive Ranks: Sum of ranks | Answer |
| Ties: n | Answer |

**Research Scenario 1**

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| Which statistical analyses should be performed for this scenario? Include the primary analysis plus any follow up analyses, where appropriate.  *[Note: This answer should exactly match with what you have selected for the values section in Moodle.]* |
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| Should a one-tailed or two-tailed test be used for the primary statistical test? Provide a justification for your choice. |
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| What are the null and alternative hypotheses for the primary statistical test? Provide these in words not symbols. |
| H0:  HA: |

|  |
| --- |
| Report the results of the analyses in APA format, as they should be presented in a journal article.  Include all appropriate statistical notation. |
|  |

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| --- |
| Enter your effect size calculations (i.e., workings) here if effect size is not provided in the SPSS output. |
|  |

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| --- |
| Enter all relevant SPSS output that supports your results write-up.   *[Note: Here you get to show how well you understand the SPSS output by selecting only those output tables/figures required for making sense of the results. So include only the essential output here (i.e., output that displays the test results and assumption checks referred to in your results write-up). Marks will be deducted for any non-essential output.]* |
|  |

Research scenario 2

**Research Scenario 2**

A social psychologist wanted to determine whether stereotype threat (the fear that one’s performance on a task will confirm a negative stereotype about one’s group) was associated with job satisfaction in a sample of mature age workers. Furthermore, the researcher wanted to determine if levels of job satisfaction could be predicted based on the level of stereotype threat. The social psychologist recruited a sample of mature age employees from the Melbourne metro region and asked them to complete self-report questionnaires of stereotype threat (higher scores indicate higher levels of stereotype threat) and job satisfaction (higher scores indicate greater job satisfaction). These questionnaire scores involve summation across multiple Likert items, so you can assume at least an interval scale of measurement for this data. Determine: (1) whether there is a negative relationship between stereotype threat and job satisfaction; and (2) if stereotype threat significantly predicts job satisfaction. 

|  |  |
| --- | --- |
| **Stereotype  Threat** | **Job  Satisfaction** |
| 75 | 7 |
| 81 | 11 |
| 68 | 13 |
| 71 | 19 |
| 64 | 30 |
| 76 | 11 |
| 63 | 35 |
| 62 | 9 |
| 64 | 23 |
| 67 | 10 |
| 62 | 27 |
| 67 | 24 |
| 52 | 30 |
| 65 | 23 |
| 73 | 15 |
| 66 | 24 |
| 75 | 8 |
| 60 | 14 |
| 69 | 34 |
| 64 | 27 |
| 67 | 10 |
| 69 | 16 |
| 73 | 5 |
| 65 | 23 |
| 82 | 18 |
| 61 | 31 |
| 67 | 26 |
| 66 | 26 |
| 82 | 12 |
| 60 | 23 |
| 66 | 27 |

Which of the following statistical analyses should be performed for this scenario? Note that you may need to select more than one analysis depending upon the specifications of the scenario.

To indicate a selection choose ‘Yes’ otherwise choose ‘No’:

|  |  |  |  |
| --- | --- | --- | --- |
| Paired samples *t*-test: | |  |  | | --- | --- | | Yes | No | |
| Friedman test: | |  |  | | --- | --- | | Yes | No | |
| Pearson correlation: | |  |  | | --- | --- | | Yes | No | |
| Spearman correlation: | |  |  | | --- | --- | | Yes | No | |
| Linear regression: | |  |  | | --- | --- | | Yes | No | |
| Wilcoxon pairwise comparisons: | |  |  | | --- | --- | | Yes | No | |

Now run the appropriate analysis or analyses using SPSS and enter all relevant values into the fields provided.

*Important Notes:*

1. *Be careful to select the correct statistical test as your choice will impact all future marks for the scenario.*
2. *It is strongly recommended that you copy and paste the data into SPSS to avoid transcription errors.*
   * + *Paste from Moodle into Microsoft Excel first and then from Excel into SPSS or you could experience layout issues.*
3. *There may be more value answer fields than are required.*
   * + *You may be prompted to answer all parts of this question. This does****not****apply to the value answer fields. Leave value answer fields****blank****if they are not required for the statistical test you have selected.*
     + *Report only those values that correspond to the statistical test you have chosen (i.e., the values you will need for your results write up).*
     + *e.g., if the scenario requires a t-test and there is an answer field for an F ratio then you would leave that field blank.*
4. *You must present values exactly according to correct APA format.*
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5. *In most cases you will enter just a numerical value, however when reporting very small p values you may need to include the < sign in your answer, where appropriate, to demonstrate correct APA formatting.*

|  |  |  |
| --- | --- | --- |
|  | **Statistic** | **Value** |
| Stereotype threat | Mean (SD) | Answer  (Answer) |
| Mean Rank | Answer |
| Job satisfaction | Mean (SD) | Answer  (Answer) |
| Mean Rank | Answer |
| Primary analysis | Mean difference | Answer |
| t | Answer |
| Χ2 | Answer |
| r | Answer |
| rs | Answer |
| df | Answer |
| N | Answer |
| p | Answer |
| d | Answer |
| η2 | Answer |
| Secondary (prediction) analysis | F | Answer |
| df **OR** (df1, df2) | Answer  (Answer, Answer) |
| p | Answer |
| R2 (in %) | Answer% |
| Adjusted R2 | Answer |
| B | Answer |
| SE B | Answer |
| β | Answer |
| p | Answer |
| 95% confidence intervals [low, high] | [Answer, Answer] |
| Stereotype threat vs Job satisfaction comparison | T | Answer |
| p | Answer |
| r | Answer |
| Negative Ranks: n | Answer |
| Negative Ranks: Sum of ranks | Answer |
| Positive Ranks: n | Answer |
| Positive Ranks: Sum of ranks | Answer |
| Ties: n | Answer |
|  |  |  |

**Research Scenario 2**

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| --- |
| Which statistical analyses should be performed for this scenario? Include the primary analysis plus any follow up analyses, where appropriate.  *[Note: This answer should exactly match with what you have selected for the values section in Moodle.]* |
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| --- |
| Should a one-tailed or two-tailed test be used? Provide a justification for your choice. |
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|  |
| --- |
| What are the null and alternative hypotheses for the primary statistical test? Provide these in words not symbols. |
| H0:  HA: |

|  |
| --- |
| Report the results of the analyses in APA format, as they should be presented in a journal article.  Include all appropriate statistical notation. |
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| Enter your effect size calculations (i.e., workings) here if effect size is not provided in the SPSS output. |
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| --- |
| Enter all relevant SPSS output that supports your results write-up.   *[Note: Here you get to show how well you understand the SPSS output by selecting only those output tables/figures required for making sense of the results. So include only the essential output here (i.e., output that displays the test results and assumption checks referred to in your results write-up). Marks will be deducted for any non-essential output.]* |
|  |