

Individual HW 12 - Time to Relax! Summer 24

Started: Jul 11 at 6:48pm

Quiz Instructions

This assignment is associated with Chapters 11 and 12 (Salkind).

Always save a copy of your responses to the individual assignments before you submit them (either by taking a picture of your answers or by copying and pasting your answers into a word document). You will need them for your discussion assignment and you will not always have access to your responses after you submit them.

Instructions: There are lots of techniques that we can use to try to calm down or relax when we are feeling anxious or tense. One strategy is deep breathing (see this link for some tips on deep breathing, [UoM Health Stress Management: Breathing Exercises for Relaxation](https://www.uofmhealth.org/health-library/uz2255) [↗\(https://www.uofmhealth.org/health-library/uz2255\)](https://www.uofmhealth.org/health-library/uz2255)). A professor is interested in examining how deep breathing can influence feelings of anxiety. She recruits participants in her class right before the final exam, when their feelings of anxiety would be high. She measures their current levels of anxiety, instructs them to engage in 2 minutes of deep breathing, and then measures their anxiety again after they've completed the breathing. Below are the anxiety levels of each student before and after deep breathing. Your job is to determine if their anxiety levels significantly DECREASE after deep breathing.

Before Deep Breathing	After Deep Breathing
8	6
10	8
7	6
6	5
5	5
7	6
5	5
8	6
4	4
9	8
6	6
5	5
5	4
4	3
6	4
6	6



Question 1 0.5 pts

What's the null hypothesis for this research question?



Ha: Anxiety levels are significantly lower after deep breathing



Ho: Anxiety levels before deep breathing $\leq$ anxiety levels after deep breathing



Question 2 0.5 pts

What's the alternative hypothesis for this research question?

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Ho: Anxiety levels are the same before and after deep breathing

☐

Ha: Anxiety levels are significantly lower after deep breathing

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Question 3 1 pts

What's the best statistical test to use to analyze this research question?

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F statistic

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Independent sample t-test

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One way ANOVA

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Dependent samples t-test

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Correlation coefficient

☐

One sample z-test

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Question 4 1 pts

The next step is to compute the test statistic. What is the t-statistic value (make sure you're using the t-test formula for the dependent samples t-test). Round your answer to two decimal places.

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Question 5 2 pts

What are the degrees of freedom?

⋮

Question 6 1 pts

Should you do a one-tailed or two-tailed test here? Think about whether the hypothesis is directional or non-directional!

☐

one tailed

☐

two tailed

⋮

Question 7 2 pts

What is the critical value?

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Question 8 1 pts

Based on the t-value provided and the critical value, what is your decision about this research study?

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There is a significant decrease in anxiety after deep breathing



There is not a significant decrease in anxiety before and after deep breathing.



Question 9 1 pts

Write up your results as you would see them in an APA style write up. Don't forget to include your means and sds for the before and after data!

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Quiz saved at 7:23pm

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