

Exercise 29

Sport & Tourism, Fitness



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Questions to be Graded * 1. Were the groups in this study independent or dependent? Provide a rationale for your answer. The groups in this study were independent because the two sets of data were not taken from the same subjects. The subjects were in one group: female and the second group: male. * 2. $t = ?$ 3. 15 describes the difference between women and men for what variable in this study? Is this value significant? Provide a rationale for your answer. $t = -3.15$ describes the difference between men and women for the variable of mental health.

This value is significant because 0.002 is less than the alpha type 1 error rate of 0.05 that was used. * 3. Is $t = ?$ 1.99 significant? Provide a rationale for your answer. Discuss the meaning of this result in this study. $t = -1.99$ is significant because it shows that the physical functioning and health functioning of both the men and women in this study were almost the same across the board. The p value of 0.049 was also the same in each of these variables concluding that the type 1 error rate for this was less than the alpha 0.05 that was set for this study. * 4. Examine the t ratios in Table VI.

Which t ratio indicates the largest difference between the males and females post MI in this study? Is this t ratio significant? Provide a rationale for your answer. The t ratio that was the largest difference between males and females post MI in this study was mental health with -3.15. This t ratio is significant because it shows that the mental health of the women versus the men in this study was the largest difference. * 5. Consider $t = ?$ 2.50 and $t = ?$ 2.54. Which t ratio has the smaller p value? Provide a rationale for your answer. What does this result mean? T ratio -2.54 had the smaller p value of

0.007. -2.0 had a p value of 0.01. This result means that because the 0.007 p value is less than the predetermined alpha which was 0.05 that the observed result would be highly unlikely under the null hypothesis. Making this research credible. * 6. What is a Type I error? Is there a risk of a Type I error in this study? Provide a rationale for your answer. A Type I error occurs when the researcher rejects the null hypothesis when it is in actuality true. I do believe that there was a type 1 error risk in this study because according to the study 9 t tests were performed and the risk of type 1 errors increases when performed more than one time. 7. Should a Bonferroni procedure be conducted in this study? Provide a rationale for your answer. I do believe that a Bonferroni procedure would need to be conducted in this study because the t test was conducted 9 times. * 8. If researchers conducted 9 t-tests on their study data. What alpha level should be used to determine significant differences between the two groups in the study? Provide your calculations. The alpha level that should be used to determine the significant differences between the two groups in this study would be 0.006. The alpha was set to 0.05. That needs to be divided by the 9 t tests and you get 0.055 and when rounded becomes 0.006 for the corrected alpha. * 9. The authors reported multiple df values in Table VI. Why were different df values reported for this study? Different df values were reported in this study probably due to non participation in certain study areas. Because of that they would have to change the df if the number of participants was different in those areas or the research would not be accurate. * 10. What does the t value for the Physical Component Score tell you about men and women post MI? If this

result was consistent with previous research, how might you use this knowledge in your practice?

The t value -2.50 for the physical component score tells me that men and women have a significant difference in their perception of post MI coping. Women perceive themselves as having lower physical and psychological quality of life post MI. If this result was consistent with previous research, I could use this knowledge to set up a plan of care to assist the women with increasing their physical and psychological aspects of quality of life. I would also reach out to women and form support groups to help them improve their perceptions on their quality of life.