Exercise 29 statistices

Sport & Tourism, Fitness

EXERCISE 29

\nQuestions to be Graded\n

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1. Were the groups in this study independent or dependent? Provide a rationale for your answer. Groups are independent in this study. According to the above data-independent groups define as if the two sets of data were not taken from the same subjects and if the scores are not related. In this study, subjects are two different genders which are men and women, and scores are not even related to each other. Therefore this is an independent study. \n \t
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 mentalhealthvariability. This is significant value because it provides the degree of freedom. According to the data above the significance of a ratio can be determined by comparison with the critical values in a statistical table for the t distribution using the degree of freedom for the study. The value is significant because p-value of it is 0. 002 which is smaller than the alpha value set for this test that is 0. 05 \n \t
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 represents health functioning variables between men and women which compares men and women for perceived coping, quality of life, and social support. A smaller P-value indicates more significant

findings. The P-value for healthy functioning is 0. 049 which is smaller than the alpha level 0. 05 in this study. \n \t

4. Examine the t ratios. 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 largest difference between males and females post MI indicates mental health. It has t ratio of -3. 15. This is a significant ratio because it has a p-value of 0. 02 which is smaller than the alpha value that is sent for 0. 05 \n \t
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 = -2. 50 has a p-value of 0. 01 whereas t = -2. 54 has the p-value of 0. 007 which is smaller than the p-value of 0. 01. This result means that t = -2. 54 has more significant findings, which indicate that better role- physical after post-MI between men and women than the physical component score. \n \t
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. According to the data above, a type 1 error occurs when the researcher rejects the null hypothesis when it is in actuality true. The type 1 error is often represented by the Greek letter alpha (a). In this study, the level of significance or alpha was set at 0. 05 and multiple p-values have gone above 0. 05 such as socioeconomic p value0. 58, familyp-value 0. 51. Therefore, there is a type 1 error in this study. \n \t
7. Should a Bonferroni procedure be conducted in this study? Provide a rationale for your answer. Because this study has a risk of a type 1

error, a Bonferroni procedure should be conducted. This procedure is used to correct the risk of a type 1 error. The Bonferroni procedure is a simple calculation in which the alpha is divided by the number of t-tests run on different aspects of the study data. \n \t

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. Alpha/ number of t-tests performed on study data = more stringent study to determine the significance of study results 0. 05/9 = 0. 0055. 0. 005 is the alpha level that should be used to determine significant differences between the two groups in the study. \n \t
9. The authors reported multiple df values. Why were different df values reported for this study? The author used multiple df values in table VI because according to the data above, the significance of a ratio can be determined by comparison with the critical values in a statistical table for the t distribution using the degrees of freedom for the study. DF is a mathematical equation that describes the freedom of a particular scores' value to vary based on the other existing scores values and the sum of the score. The formula for the df = number in group 1+ number in group 2-2. This way the author is becoming more specific by providing different df values which shows the comparison and differences between 2 independent groups. \n \t
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 tells us about the differences between men and women post-MI physical component score. In my practice using this t value, I would be able to work differently between men and women after post-MI. Teaching might provide women more about physical functioning, role physical, bodily pain, and general health since these are all included in the physical component score. The physical component score for women is 48. 5 compared to men 51. 1 (standard deviation). Therefore, women might need to educate more about physical components than men. \n