■ EXERCISE 36

1. The researchers found a significant difference between the two groups (control and treatment) for change

in mobility of the women with osteoarthritis (OA) over 12 weeks with the results of F(1, 22) = 9.619,

p = 0.005. Discuss each aspect of these results.

2. State the null hypothesis for the Baird and Sands (2004) study that focuses on the effect of the GI with

PMR treatment on patients’ mobility level. Should the null hypothesis be rejected for the difference between the two groups in change in mobility scores over 12 weeks? Provide a rationale for your answer.

3. The researchers stated that the participants in the intervention group reported a reduction in mobility

difficulty at week 12. Was this result statistically significant, and if so at what probability?

4. If the researchers had set the level of significance or α = 0.01, would the results of p = 0.001 still be

statistically significant? Provide a rationale for your answer.

5. If F(3, 60) = 4.13, p = 0.04, and α = 0.01, is the result statistically significant? Provide a rationale for your

answer. Would the null hypothesis be accepted or rejected?

6. Can ANOVA be used to test proposed relationships or predicted correlations between variables in a single group? Provide a rationale for your answer.

7. If a study had a result of F(2, 147) = 4.56, p = 0.003, how many groups were in the study, and what was the

sample size?

8. The researchers state that the sample for their study was 28 women with a diagnosis of OA, and that

18 were randomly assigned to the intervention group and 10 were randomly assigned to the control group.

Discuss the study strengths and/or weaknesses in this statement.

9. In your opinion, have the researchers established that guided imagery (GI) with progressive muscle

relaxation (PMR) reduces pain and decreases mobility difficulties in women with OA?

10. The researchers stated that this was a 12-week longitudinal, randomized clinical trial pilot study with

28 women over 65 years of age with the diagnosis of OA. What are some of the possible problems or

limitations that might occur with this type of study?