

9.3: Comparing Two Independent Conditions- The Mann– Whitney U Test

Learning Objectives

At the end of this section you should be able to answer the following questions:

- When examining differences between two independent groups, which nonparametric test can be used?
- When examining differences between two dependent groups, which nonparametric test can be used?

The Mann-Whitney U Test for two Independent Samples

When examining differences between two groups, Mann-Whitney U Test is best. This test examines the differences in median scores, as well as the size of the differences. Example: Is there a difference in the median number of Facebook Friends for male and female internet users? If a researcher wanted to compare Two Related Conditions, the test to use would be the Wilcoxon Signed-Rank Test.

Ranks			
	Gender	N	Mean Rank
FacebookFriends	Male	82	159.46
	Female	285	191.06
	Total	367	

Test Statistics	
	FacebookFriends
Chi-Square	5.65
df	1
Asymp. Sig.	.017

Interpretation for the Mann-Whitney U Test

As can be seen in the blue, there is a statistically significant difference, note the p value. The chi-squared value, and degrees of freedom are also needed for reporting. The median ranks indicate that female internet users have more Facebook Friends than male users.

Write-up

The results of the Mann-Whitney U Test indicate that female internet users reported having a statistically significantly higher number of Facebook Friends (Median = 191.06) than male users (Median = 159.46; $U = 5.65$, $p = .017$).

PowerPoint: Mann-Whitney

Please click on the slides below to see an example of interpretation for the Mann-Whitney U Test.

- [Chapter Nine – Mann-Whitney](#)

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