

AS2 (Assignment 2, Unit 5): Dependent Measures t-test

Please write your answers in red 😊

An investigator is interested in whether the number of dresses tried on in a department store for a wedding will be affected by viewing a fashion magazine. A sample of 5 women was measured on how many dresses each tried on before and after viewing a fashion magazine. The before-and-after scores are as follows:

Subject	Before	After
1	6	2
2	5	7
3	9	6
4	1	3
5	8	5

1. What is the research's hypothesis? **Viewing Magazines will have an effect on the number of dresses tried on in a wedding department store.**
2. What is the null hypothesis? **Viewing Magazines will not have an effect on the number of dresses tried on in a wedding department store.**
3. What is the independent variable? **Viewing the Magazines**
4. What is the dependent variable? **Number of dresses being tried on**
5. What is the name of the *research design*? **Within-subjects research design**
6. What is the appropriate *hypothesis test* to analyze these data? **Dependent measures t-test**
7. Please run the appropriate SPSS analysis and cut and paste your results here:

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	After	4.6000	5	2.07364	.92736
	Before	5.8000	5	3.11448	1.39284

Paired Samples Test

Paired Differences	t	df	Significance
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Pair	After - Before	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				One-Sided p	Two-Sided p
					Lower	Upper				
1		1.2000	2.94958	1.31909	-4.86238	2.46238	-.910	4	.207	.414

8. Based on your SPSS results, please answer the following questions:

(a) What decision did you make? Reject or fail to reject the null? **Fail to reject H0**

(b) Please write your “statistical statement”: **t(4)=-.910, p>.05**

(c) Please interpret the results of your analysis “in words” and relating DIRECTLY back to the research question.

The mean number of dresses tried on before viewing the magazines was M=5.8 with a SD=3.11. The mean number of dresses tried on after viewing the magazines was M=4.6 with a SD=2.07. The data failed to reach significance, t(4)=-.910, p>.05

(d) Is there a probability of Type I error? **No**

(e) Is there a probability of Type II error? **Yes**