

Chapter 9

1. A psychologist was interested in whether there was a gender difference in the use of email. She hypothesized that because women are generally better communicators than men, they would spend longer using email than their male counterparts. To test this hypothesis, the researcher sat by the email computers in her research methods laboratory and when someone started using email, she noted whether they were male or female and then timed how long they spent using email (in minutes). What should she report?

Welch Two Sample t-test

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data: Time Using Email
t = -1.895, df = 7.177, p-value (two-tailed) = 0.099
alternative hypothesis: true difference in means is not equal to 0
95 percent confidence interval:
-60.52295 6.52295
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- a. Females spent significantly longer using email than males, $t(7.18) =$
 - b. $-1.90, p < .05$.*
 - c. Females spent significantly longer using email than males, $t(14) =$
 - d. $-1.90, p < .05$.
 - e. Females and males did not significantly differ in the time spent using email, $t(7.18) = -1.89, ns$.
 - f. Females and males did not significantly differ in the time spent using email, $t(7.18) = -1.90, ns$.
2. What does the error bar on an error bar chart represent?
 - a. The confidence interval round the mean.
 - b. The standard error of the mean.
 - c. The standard deviation of the mean.
 - d. It can represent any of a, b or c.*
 3. An independent t -test is used to test for:
 - a. Differences between means of groups containing different people when the data are normally distributed, have equal variances and data are at least interval.*
 - b. Differences between means of groups containing different people when the data are not normally distributed or have unequal variances.
 - c. Differences between means of groups containing the same people when the data are normally distributed, have equal variances and data are at least interval.

- d. Differences between means of groups containing different people when the data are not normally distributed or have unequal variances.
4. The t -test can be characterized as a regression (linear) model if:
- a. The outcome variable is categorical.
 - b. The groups have equal sample sizes.
 - c. The experimental groups are represented by a binary variable (i.e. coded 0 and 1).*
 - d. A t -test is always different from regression.
5. A researcher measured the same group of people's physiological reactions while watching horror films and compared them to when watching erotic films. The resulting data were normally distributed. What test should be used to analyse the data?
- a. Independent t -test.
 - b. Dependent (related) t -test.*
 - c. Mann–Whitney test.
 - d. Wilcoxon signed-rank test.