



Biostatistics

Archive

Lecture 15

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1. When using alpha level of 0.05, the test is considered to be statistically significant if:

- a. $P = 0.052$
- b. $P = 0.04$
- c. $P = 0.01$
- d. $P = 0.2$
- e. A and D
- f. B and C

Answer: F. B and C

2. When we accept the null hypothesis at a level of significance equals 0.05, this means:

- a. $P > 0.003$
- b. $P < 0.05$
- c. $P > 0.10$
- d. $P < 0.010$
- e. $P < 0.03$

Answer: C. $P > 0.10$

3. When we accept the null hypothesis at a level of significance equals 0.05. The widest range of possibilities for p value will be when:

- a. $P > 0.003$
- b. $P < 0.05$
- c. $P > 0.10$
- d. $P > 0.05$
- e. $P < 0.03$

Answer: D. $P > 0.05$

4. For a specific statistical test, the p value was equal to 0.04. If the null hypothesis of that test was accepted, that is because:

- a. Alpha was 0.05
- b. Alpha was 0.01
- c. Both a and b
- d. Neither of a or b

Answer: B. Alpha was 0.01

5. To determine the critical region (area) in any statistical test, we have to have:

- a. Alpha value
- b. P value
- c. Degree of freedom
- d. Both A and C
- e. Both B and C

Answer: D. Both A and C

6. Consider having an alpha value of 0.01, the test that is considered statistically insignificant will be when:

- a. $P = 0.04$
- b. $P = 0.005$
- c. $P = 0.003$
- d. $P = 0.001$

Answer: A. $P = 0.04$

7. When using a confidence level of 0.95, the test is considered statistically significant if:

- a. $P = 0.21$
- b. $P < 0.04$
- c. $P > 0.05$ but < 0.95
- d. All of the above

Answer: B. $P < 0.04$

8. When testing a hypothesis, it is important to know all of the following except:

- a. Level of significance
- b. Type of the test of significance
- c. Degree of freedom
- d. Type of the data we have
- e. Type of the sample we have

Answer: E. Type of the sample we have

9. All of the following are true about P- value except:

- a. It is a calculated probability of chance factor
- b. All statistical significance tests should consider P- values
- c. It is reflecting the sampling error
- d. It is the probability of the influencing factor
- e. If it is small, conventionally less than 0.05, H_0 is rejected as it is implausible

Answer: D. It is the probability of the influencing factor

10. If $\alpha = 0.01$, the test is considered statistically insignificant when:

- a. $P = 0.005$
- b. $P = 0.007$
- c. $P = 0.001$
- d. $P = 0.000$
- e. $P = 0.013$

Answer: E. $P = 0.013$

11. Obtaining a sound generalized information about population depending on the evidence of the sample is termed:

- a. Presentation of data
- b. Descriptive biostatistics
- c. Confidence interval
- d. Inferential biostatistics
- e. Collection of data

Answer: D. Inferential biostatistics

12. If $\alpha = 0.001$, the test is considered statistically significant when:

- a. $P = 0.0100$
- b. $P = 0.0002$
- c. $P = 0.1000$
- d. $P = 0.0500$
- e. $P = 0.0040$

Answer: B. $P = 0.0002$

13. When the result of any test of significance falls in the rejection region, one of the following is incorrect:

- a. The probability of the influencing factor decreases
- b. The probability of the chance factor decreases
- c. P value is less than 0.05
- d. We reject null hypothesis
- e. We accept alternative hypothesis

Answer: B. The probability of the chance factor decreases

14. The acceptance region when the sample size of a confidence level of 95% increases will become:

- A. Narrower
- B. Wider
- C. Unchanged
- D. It varies

Answer: A. Narrower (NOT SURE)

15. A study to find the correlation between undescended testicles in newborns and

maternal smoking was done. A specific test of significance was used and yielded a critical value of 3.841 and a test statistic of 15.68. The proper statistical decision to make in this case:

- a. there is a significant association between maternal smoking and undescended testicles.
- b. there is no association between maternal smoking and undescended testicles
- c. Cannot determine based on the given info
- d. None of the above is correct

Answer: A. there is a significant association between maternal smoking and undescended testicles.

16. When using a confidence level of 0.95, the test is considered statistically significant if:

- a. $P > 0.05$
- b. Calculated value fall above the critical region
- c. Calculated value fall behind the critical region
- d. Calculated value is less than the critical value

Answer: C. Calculated value fall behind the critical region