Primary Research Questions

1. Are each of the four musical genres equally represented on Austin City Limits?
2. Are some genres more likely to draw a large (100K+) Twitter following than others?

Analysis

Let's break this question down into the different descriptive statistics that you will need to construct your answer. Be sure that your R output includes all of the following components.

Goodness of Fit Test:

1. Create a table to show the counts of each genre.
2. Create a vector of expected proportions.
3. Check the expected counts assumption.
4. Run a chi square test.
5. Interpret the chi square statistic and p-value.

Test of Independence:

1. Create a two-way table for genre and Twitter following.
2. Check the expected counts assumption.
3. Run a chi square test.
4. Interpret the chi square statistic and p-value.

(4/4 points)

Goodness of Fit Test

1a. What was the **expected count** of artists for each genre?

29 ✔

Answer: 29

29

1b. What was the **Chi-square** statistic? (round to 2 decimal places)

70.41 ✔

Answer: 70.41

70.41

1c. How many **degrees of freedom**?

3 ✔

Answer: 3

3

1d. What was the **p-value**?

less than 0.05 ✔ **Answer:** less than 0.05

You have used 1 of 1 submissions

(7/7 points)

Test of Independence

2a. Using the data from your two-way table, compute the proportion of artists in each genre with 100K+ Twitter followers. (Round to 3 decimal places).

Country?

0.353 ✔

Answer: 0.353

0.353

Jazz?

0.182 ✔

Answer: 0.182

0.182

Rock?

0.441 ✔

Answer: 0.441

0.441

Singer-Songwriter?

0.625 ✔

Answer: 0.625

0.625

2b. What was the **Chi-square** statistic? (round to 2 decimal places)

5.69 ✔

Answer: 5.69

5.69

2c. How many **degrees of freedom**?

3 ✔

Answer: 3

3

2d. What was the **p-value**?

greater than 0.05 ✔ **Answer:** greater than 0.05

You have used 1 of 1 submissions

(2/2 points)

Conclusions

3a. We should reject ✔ **Answer:** reject the hypothesis that each genre is equally represented at ACL Live.

3b. We should fail to reject ✔ **Answer:** fail to reject the hypothesis that genre is independent of Twitter followers.

You have used 1 of 1 submissions