PALS0045 Week 8 Quiz

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This Quiz is designed to test your understanding of the learning objectives from the lecture in Week 8.

Complete each question and press submit to check your answers.

Q1:

In which of the following scenarios should we consider using logistic regression to model our data?

- We want to investigate if early language scores, gender and SES predict number of GSCE grades at C or above ✗
- A study whether a person's parents' driving status and their answers on an attitude to driving questionnaire will predict whether they pass their driving test ✓
- A study of whether being born during covid-19 or not has affected babies' head circumference ✗

Correct!

Q2:

Which of the following are binary outcomes (check all which apply)

- [x] result of a coin flip ✓
- [ ] blood type ✗
- [x] presence or absence of specific diagnosis ✓
- [x] screening result for dyslexia ✓

Correct!

Q3:

Which of the following is true?

- the range of probabilities is infinite ✗
- the range possible of log odds ratios goes from 0 to 1 ✗
- log odds ratios can only be positive ✗
- probabilities can only range from 0 to 1 ✓

Correct!

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Q4:

The probability of winning on a slot machine is .25. If you played 100 times the resulting binomial distribution would have:

- a mean of 18.75 and a variance of 25 ✗
- a mean of 25 and a variance of 75 ✗
- a mean of 25 and a variance of 25 ✗
- a mean of 25 and a variance of 18.75 ✓

Correct!

Q5:

Use R to calculate the natural log of the number 82

- 4.405 ✓
- 1.914 ✗
- 2,718282 ✗
- 0.012 ✗

Correct!

Q6:

Assumptions necessary for logistic regression: check all that apply

- [x] continuous predictors should not be highly correlated with each other ✓
- [x] independence of errors ✓
- [x] no influential outliers ✓
- [ ] normally distributed predictors ✗

Correct!

Q7:

The coefficients in a logistic regression model

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- indicate the change in probability of the dependent variable when the predictor variable increases by one unit ✗
- can be transformed to probabilities using the log10() function ✗
- indicate the change in log odds of the dependent variable when the predictor variable increases by one unit ✓
- always sum to 1 ✗

Correct!

Q8:

To assess how well our logistic model fits the data overall we look for

- a significant Hosmer-Lemeshow test ✗
- a non-significant Hosmer-Lemeshow test ✓
- a significant Wald statistic ✗

Correct!

Q9:

To report how much variance in the dependent variable our logistic regression model explains we use

- McFadden's pseudo R-squared ✓
- Hosmer-Lemeshow test ✗
- Wald statistics ✗

Correct!

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