

Feedback — Quiz: Week Four

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You submitted this quiz on **Sat 6 Jun 2015 10:08 AM PDT**. You got a score of **5.00** out of **5.00**.

Question 1

From a national dataset, you are asked to compare the odds of preterm birth according to the weight classification of the mother. There are three categories of mother's body weight – normal, under-weight and over-weight. Let normal weight category be the referent group.

You fit a logistic regression model with preterm birth as the outcome, and mother's body weight as the predictor. How would you interpret a logit coefficient of 1.25 for under-weight category?

Your Answer	Score	Explanation
<input type="radio"/> The odds of preterm birth are 1.25 times more for under-weight mothers as compared to normal weight mothers		
<input checked="" type="radio"/> The odds of preterm birth are 3.49 times more for under-weight mothers as compared to normal weight mothers	✓ 1.00	Great job, you got it right! We know that the odds ratio is $\exp^{(1.25)}$ which equals 3.49, with normal weight as the reference group.
<input type="radio"/> The odds of preterm birth are 1.25 times less for under-weight mothers as compared to normal weight mothers		
<input type="radio"/> The odds of preterm birth are 3.49 times more for under-weight mothers as compared to over-weight mothers		
Total	1.00 / 1.00	

Question 2

Consider whether the following statement is true or false:

Output from reference cell coding and output from deviation from means coding containing the same variables will result in the same likelihood ratio chi-square statistic for the overall model, but the coefficients for the variables will not be the same.

(please answer True or False below)

Your Answer	Score	Explanation
<input checked="" type="radio"/> True	1.00	<p>Nice work, you got it right!</p> <p>A model that is better than the naïve model using reference cell coding will also be better than the naïve model in using deviation from the means coding, and vice versa. However, the coefficients are results of different comparisons.</p> <p>The exponent of the coefficient when using deviation from the means coding is not an odds ratio (to be an odds ratio, it must be ratio of odds of two distinct groups)- it is the ratio of odds of one group to the geometric mean to all of the groups (i.e. non-distinct groups).</p>
<input type="radio"/> False		
Total	1.00 / 1.00	

Question 3

Consider whether the following statement is true or false:

You cannot obtain an odds ratio when using deviations from the means coding.

(please answer True or False below)

Your Answer	Score	Explanation
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☐ True

☒



1.00

Nice work, you got it right!

False

You **can** obtain an odds ratio, but it is tedious and not necessarily intuitive. While the exponent of the coefficient is not considered an odds ratio, you could calculate an odds ratio by exponentiating the difference in the logits for the two groups.

Total 1.00 /
1.00

Question 4

For which of the following scenarios would it be best to use deviation from the means coding?

Your Answer

Score Explanation

☐ Comparing the odds that defendants of one minority race are assigned “habitual offender” status over defendants of one majority race.

☒ Comparing the odds of graduating among students in private schools in the United States to the national average.



1.00

Great job!

Deviation from the means coding is used to calculate the ratio of odds of one group to the geometric mean to **all** of the groups.

☐ Comparing the odds of graduating among students in private schools to that of public schools.

Total 1.00 /
1.00

Question 5

Consider whether the following statement is true or false:

By adding additional variables to a model, you can generate an adjusted odds ratio.

(please answer True or False below)

Your Answer	Score	Explanation
<input checked="" type="radio"/> True	1.00	Nice work, you got it right! Adding variables to the model allows for you to control these variables in your analysis of the effect of an exposure of interest on the outcome.
<input type="radio"/> False		
Total	1.00 / 1.00	