

Re: How to calculate OR from estimated coefficients of a multinomial log regression?

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- *From:* Bruce Weaver <bweaver@xxxxxxxxxxxxx>
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gothamjack08@xxxxxxxxxx wrote:

Hi all

I am a total novice with regard to more complex statistics.

I was wondering if there is a way to calculate adjusted OR and their 95%CI from the estimated coefficients of a multinomial logistic regression (by use of STATA). There's a publication where this has been done (Lancet. 2004 Sep 11-17;364(9438):937-52). However, this study was a case-control study.

Preferring OR over RRR for interpretation, I would like to do the same for a retrospective cohort study for which I have run a multinomial log regression model (since I have a multilevel dependant variable). But I am not sure if this is possible and correct to do at all, respectively.

Thanks for any help!

I'm not very well versed in Stata, but I suspect you're using the mlogit procedure, right? Here is its help file:

<http://www.stata.com/help.cgi?mlogit>

And here are some examples of its use:

<http://www.ats.ucla.edu/stat/stata/examples/alr/alrstata8.htm>

According to the help file, "mlogit, rr" generates a report of "relative-risk ratios". But the "relative-risk ratios" in those examples are equal to $\text{Exp}(b)$ from the preceding output. That seems a bit odd to me, because $\text{Exp}(b)$ in a logistic regression is usually described as giving the odds ratio.

This has me wondering if you're running into a terminological issue here. I know that some epidemiology books when discussing case-control studies give the formula for the odds ratio $((ad)/(bc))$, but call the result a relative risk (presumably because in a case-control study, the OR provides a good estimate of the RR). Could it be that the Stata documentation is doing the same thing?

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HTH.

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"When all else fails, RTFM."

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