Re: non−parametric equivalent of the MANOVA?

Source: http://sci.tech−archive.net/Archive/sci.stat.edu/2006−06/msg00012.html

- *From*: Art Kendall <Arthur.Kendall@xxxxxxxxxxx>
- *Date*: Wed, 07 Jun 2006 12:32:20 GMT

Is this a single group of respondents with 18 variables measured at 5*2 = 10 points in time?
Or are these 10 independent groups?

Is it reasonable in your situation to combine some DV as items in scale(s)? If you have not done so, you should see if there are common factor(s) you use to create summative scales? Be sure to check the internal consistency of any scales you create.

Are you sure that your rating scales are severely discrepant from interval level? Are the intervals "equal appearing"? Did the instrument use numeric anchors as well as verbal anchors? Is the underlying construct inherently ordinal? Or is it interval? Or are you thinking that just because rating scales can be poorly designed that these are? What was the response scale?

recommendations
If you can create scales, go ahead with a GLM analysis.

If you leave it as 18 variables to the GLM as above, but also use a Categorical Regression (CATREG). See if there is much substantive difference in your conclusions.

Art

Social Research Consultants

tamara.pejovic@xxxxxxxx wrote:

> Greetings,
>
> Here is my problem. I have a non−parametric data, participants were

giving responses based on a rating scale. I need to know how each BM (behavioural marker) varies with duty day and week (E/L).

So we have 2 IVs (DD with 5 levels; week with 2 levels). We have 18 DVs (18 BMs).

We cannot run ANOVAs because the BM data is non−parametric as the responses are based on a rating scale (ordinal data).

If we proceed with non−parametric tests this is what we'd have to do:
Kruskall Wallis tests:
DD * 18 FBMs = 90 tests
EL * 18 FBMs = 36 tests
Followed by a series of Mann Whitney U tests to determine post hoc results.
So incredibly laborious and time−consuming!!

The problem is that we need non−parametric equivalent of the MANOVA. SPSS does not support this functionality and I have searched for one elsewhere and found nothing.

Any suggestions and help is much appreciated.

Thanx,
Tamara Pejovic
ICL

.