Re: Help with composite scale

1 Nachricht

Patrick Mair <mair@fas.harvard.edu> 9. April 2020 um 10:18
An: "Schwarzenbach, Anina" <anina_schwarzenbach@hks.harvard.edu>

Hi Anna,

Given that you only have 30 observations (and 30 indicators) you can't apply any of the classical parametric psychometric techniques (IRT and friends) that you can do. If you want to do anything fancier than computing sum scores/means, you could compute use a method from the Gifi framework, as these techniques are exploratory (and nonparametric in some sense). To be precise, you can run a type of PCA called princals (see princals() function in the Gifi package) which is a PCA for mixed scale levels. You can find details in the Chapter 8 of my book "Modern Psychometrics with R" (Section 8.2.3 contains exactly much what you need), available through Hollis.

R code can be found here:

https://github.com/pmair78/MPsychoR

This method gives you (aggregate) PC scores which can then be used for subsequent modeling. If your indicators are unidimensional, you can use the scores from the first component; if it turns out that two dimensions are needed, then use the first 2 PC scores, etc.

Hope this helps,

Patrick

On 2020-04-08 7:11 p.m., Schwarzenbach, Anina wrote:

> Dear Patrick,
>
> I have received you contact info from Steve Harvard IQQS . He mentioned that you are very knowledgeable with methods of experimental psychology.
>
> I am currently building a composite scale with 30 indicators and 30 observations. The indicators are binary, discrete and continuous.
>
> As a next step, I have to decide how to aggregate the different indicators. Given that I have a large number of indicators (with different dimensionalities) and a small number of observations many of the standard techniques do not apply.
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> Could you point me to some literature in your domain that deals with this problem?
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> Any help and suggestion will be very much appreciated.
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> Thank you,
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> Anina
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> _____
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