

Referencing:

Use the following to refer to any of this presentation's contents:

Fleuren, B. P. I., Zijlstra, F. R. H., de Grip, A., van Amelsvoort, L. G. P. M., Kant, I. (2016). Sustainable employability as a formative construct. Congress presentation International Conference on Sustainable Employability 2016, Brussels.

Some of the contents are also part of a submitted paper.

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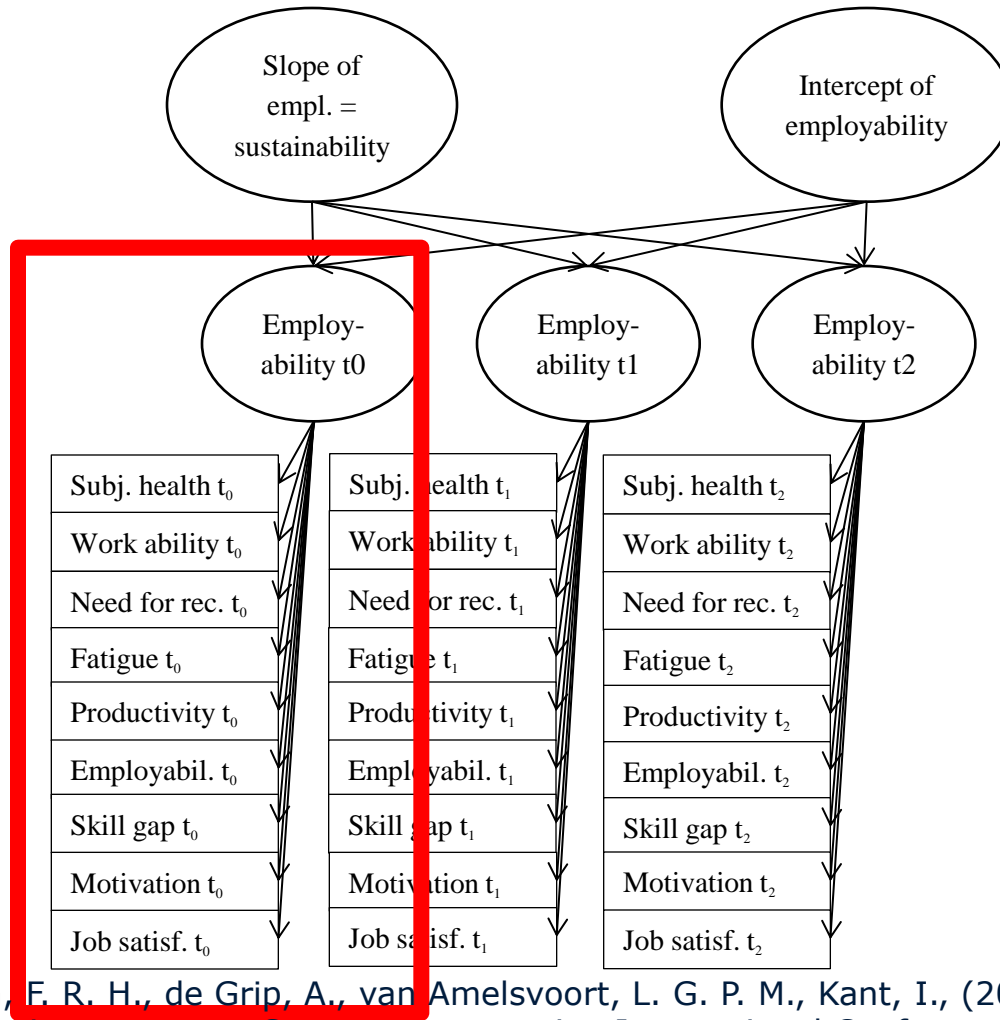
Sustainable employability as a formative construct

Bram Fleuren

16-09-2016

Duurzame Zorg
Academische Werkplaats Limburg

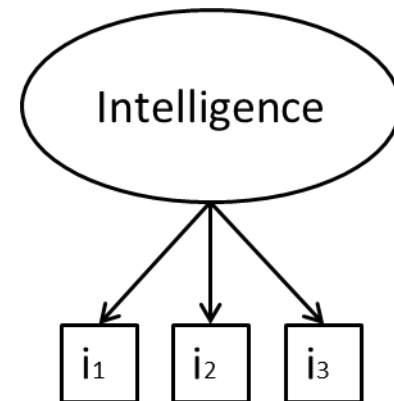
Focus



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Reflective measurement

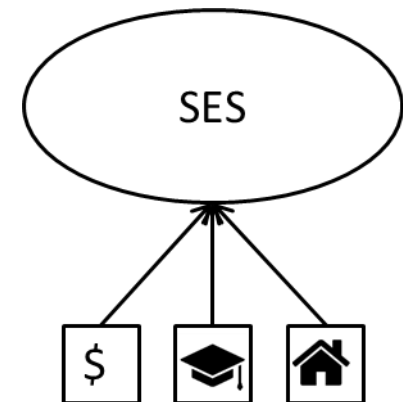
- Construct causes indicator-scores
- Covariance among indicators
- Items measure the same
- Dropping indicators doesn't change conceptual domain
- Error estimated



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Formative measurement

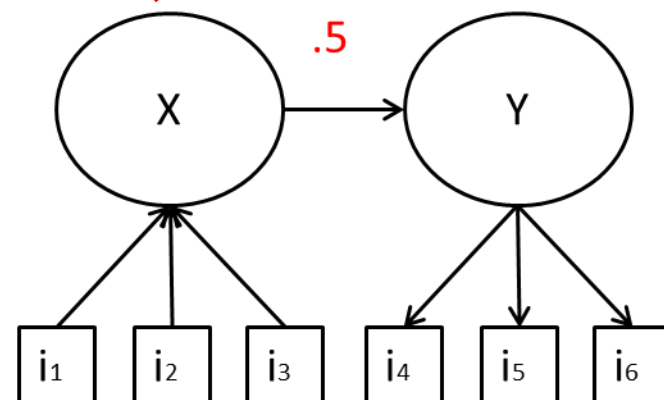
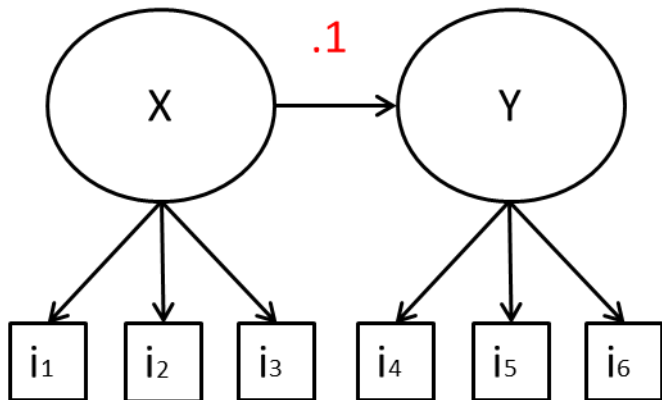
- Indicators cause construct
- Construct = combination of indicators
- Indicators measure different aspects
- Dropping indicators alters conceptual domain
- Covariance not required
- No error



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Who cares?

- Conceptual understanding
- Correct specification
- Model fit
- Structural paths



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How to tell?

- Jarvis, MacKenzie & Podsakoff (2003):
 1. Are the indicators (a) defining characteristics or (b) manifestations of the construct?
 2. Would dropping one of the indicators alter the conceptual domain of the construct?
 3. Should a change in one of the indicators be associated with changes in the other indicators?
 4. Are the indicators expected to have the same antecedents and consequences?

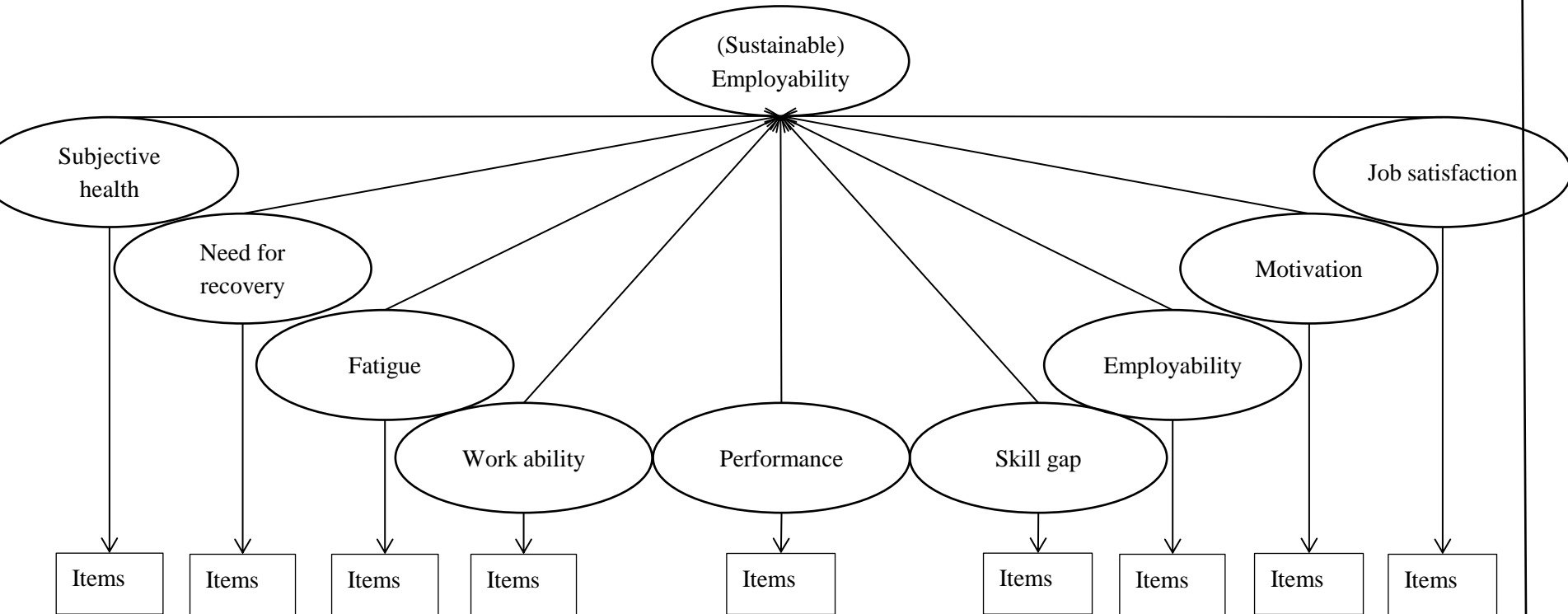
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Applying it to SE's definition

- *Sustainable employability* means that an individual's ability to function in current- and future work, is not negatively affected by that individual's employment over time. This ability consists of a set of characteristics (i.e. productivity, skill gap employability, need for recovery, fatigue, subjective health, workability, motivation, and job satisfaction) that collectively describe the degree to which an individual can be employed at different points throughout their working life.

SE = Formative

Theoretical measurement model



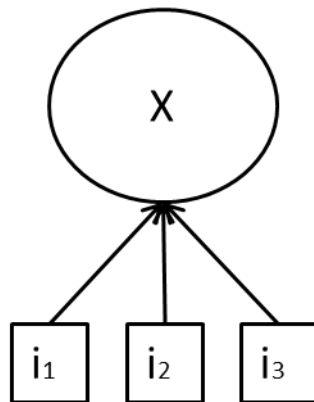
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Validating a formative construct..

- Edwards (2011): Formative measurement 'sucks' because:
 - Ignores item-level error
 - Impossible to achieve model identification
 - Difficult to evaluate construct validity

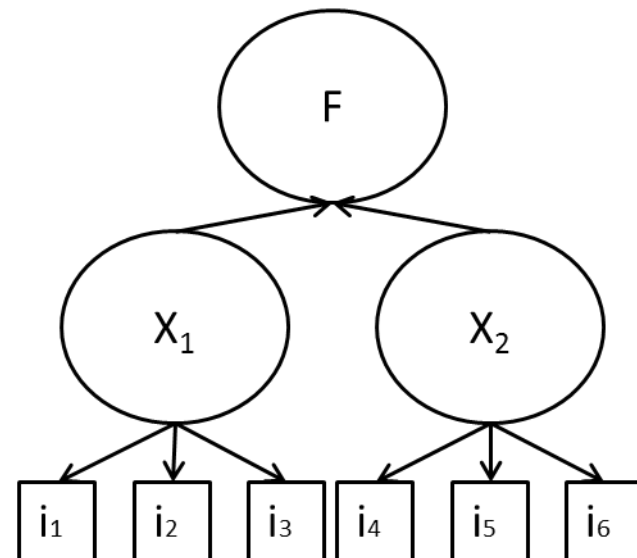
Item-level error

No item error:



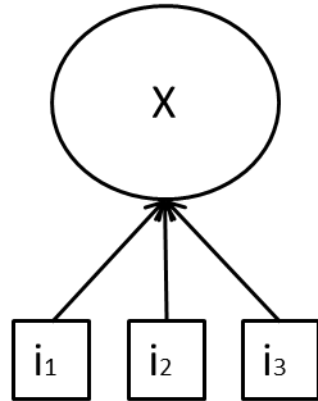
SE: no problem!

Item error:



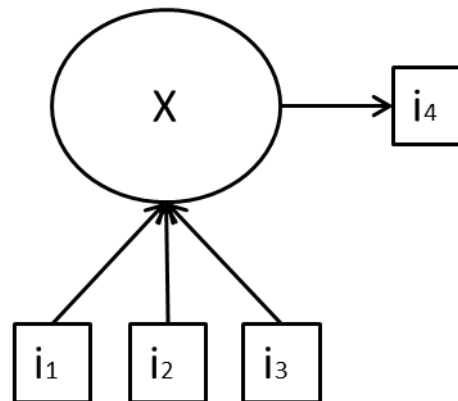
Model identification

No scaling:



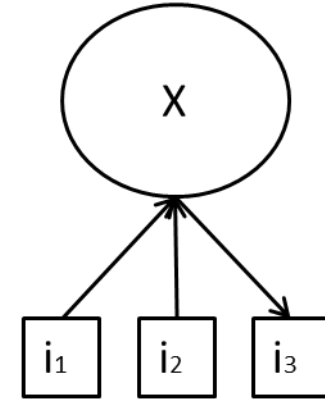
Unidentified

Scaling:



Identified

Scaling:



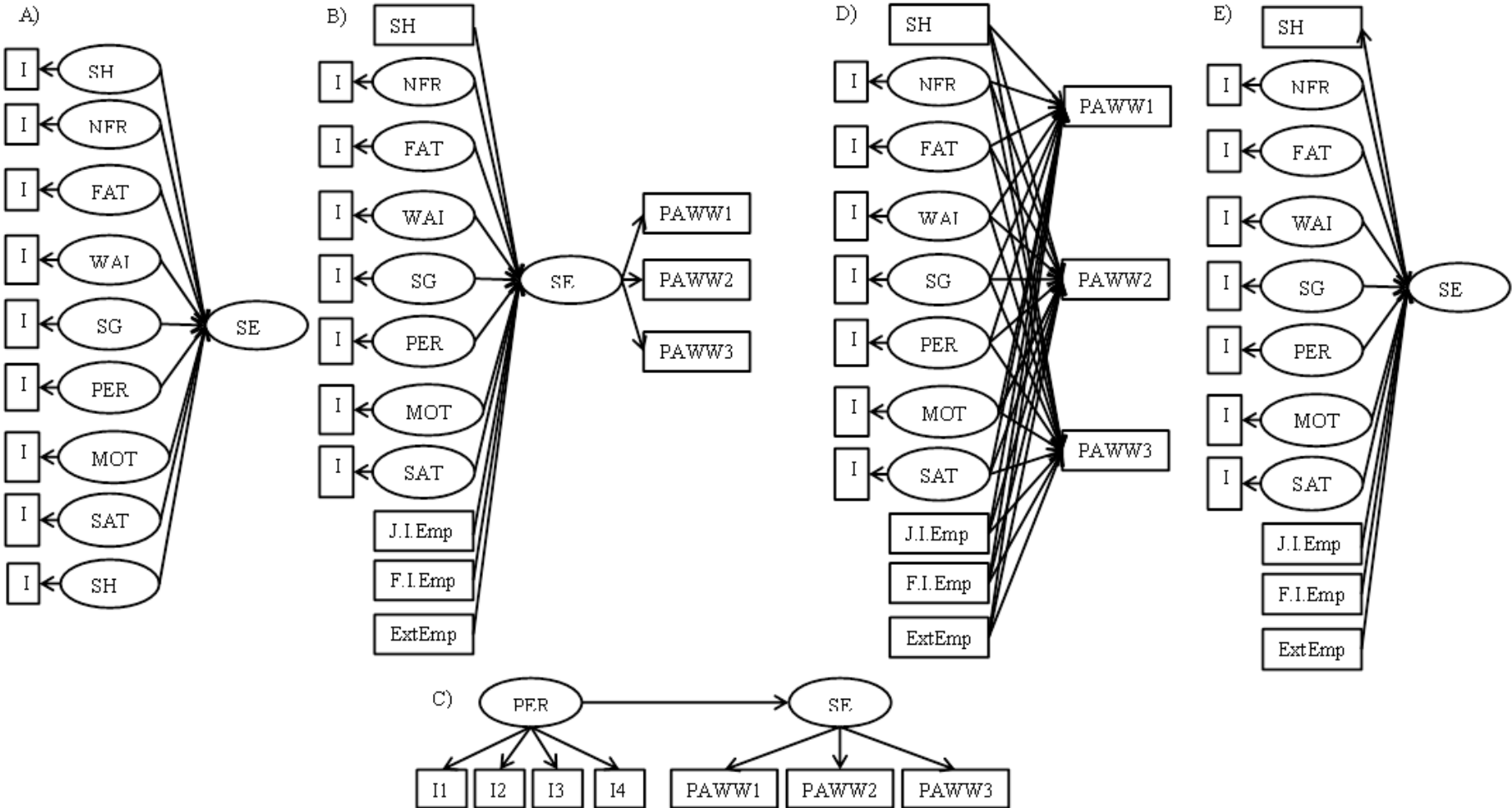
Identified

SE: test models 2 & 3

Construct validity

- Validity of indicators together as a set
 - Criterion validity (correlation with theoretically relevant outcomes)
 - But, issues of...
 - Completeness
 - Necessity
 - Collinearity
- SE: Consider indicator-outcome correlations separately

Tested models



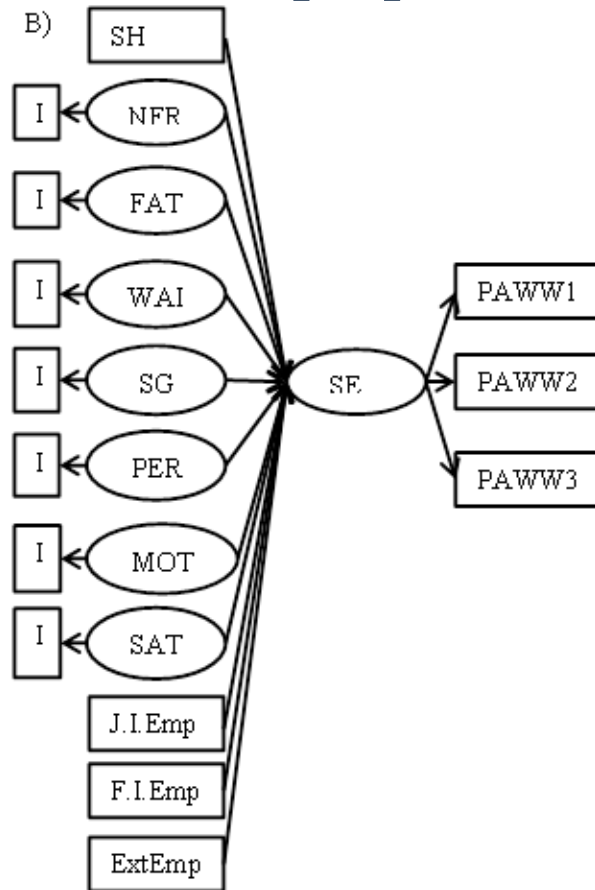
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Sample

- Maastricht Cohort Study 2012 wave
- 2544 participants (after exclusion)
- Self-report measures

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Results (1)



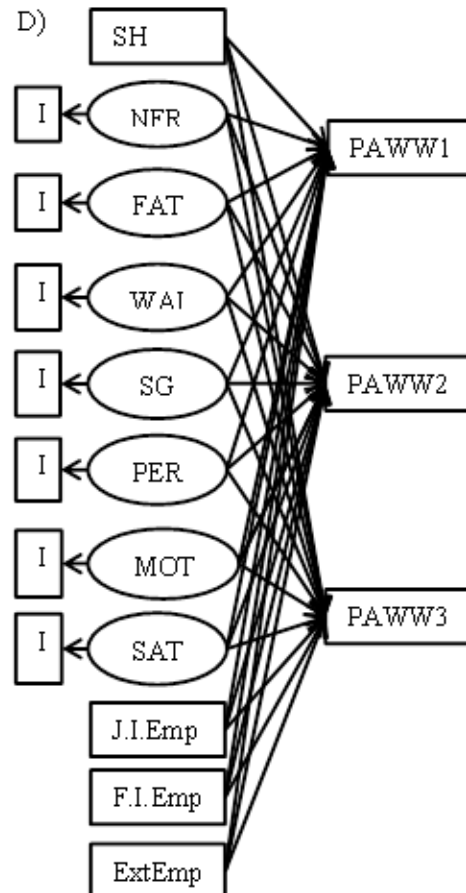
Fit:

- CFI: .937
- TLI: .930
- RMSEA: .031

Construct-indicator paths:

- 5/11 paths
- Mixed directions

Results (2)



Fit:

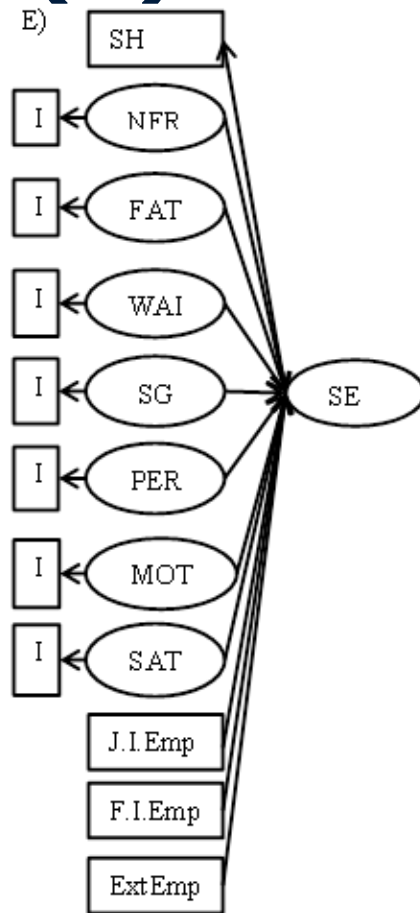
- CFI: .941
- TLI: .933
- RMSEA: .030

Indicator-outcome paths:

- At least 1 significant for each indicator
- Mixed directions

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Results (3)



Fit:

- CFI: .942 / .932
- TLI: .936 / .925
- RMSEA: .030 / .034

Construct-indicator paths:

- Most / all significant
- Mixed / expected directions

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Conclusion

- Indicators of SE
 - Work together as a set
 - Together: effects distorted
 - Individually: expected path coefficients
- Retain all indicators

Implications

- SE measurable
- Consider individual indicators
- Relationships among indicators
- Intervene on indicators
- Look at it longitudinally

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