|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Supplementary Table S1. Confirmatory Factor Analysis for Attention Deficit/Hyperactivity Symptoms (n= 519)** | | | | | | | | | | | | | |
|  |  | **Correlated Models** | | | | | **Bifactor Models** | | | | | | |
|  | Uni (λ) | Two-factors (λ) | | Three-factors (λ) | | | Two-group factors (λ) | | | Three-group factors (λ) - (Non-orthogonal Hyp - Imp) | | | |
| Items |  | Ina | Hyp/Imp | Ina | Hyp | Imp | G | Ina | Hyp/Imp | G | Ina | Hyp | Imp |
| Fails to give close attention to details | **.57** | **.601** |  | **.599** |  |  | **.276** | **.52** |  | **.557** | .146 |  |  |
| Difficulty sustaining attention | **.676** | **.705** |  | **.702** |  |  | **.475** | **.588** |  | **.827** | -.091 |  |  |
| Does not seem to listen | **.64** | **.73** |  | **.731** |  |  | **.292** | **.658** |  | **.741** | .054 |  |  |
| Does not follow through | **.372** | **.483** |  | **.485** |  |  | -.118 | **.566** |  | **.332** | **.465** |  |  |
| Difficulty organizing tasks | **.327** | **.445** |  | **.448** |  |  | **-.259** | **.587** |  | .215 | **.803** |  |  |
| Reluctant to engage in mental tasks | **.227** | **.267** |  | **.268** |  |  | .001 | **.28** |  | **.285** | .073 |  |  |
| Loses objects | **.487** | **.537** |  | **.536** |  |  | .106 | **.527** |  | **.408** | **.403** |  |  |
| Easily distracted | **.498** | **.582** |  | **.583** |  |  | **.222** | **.54** |  | **.568** | .101 |  |  |
| Forgetful | **.394** | **.484** |  | **.484** |  |  | **-.081** | .542 |  | .364 | **.403** |  |  |
| Fidgets | **.199** |  | **.489** |  | **.575** |  | **.577** |  | **.205** | -.103 |  | **.684** |  |
| Leaves seat | **.621** |  | **.734** |  | **.789** |  | **.672** |  | **.391** | **.426** |  | **.666** |  |
| Restless | **.494** |  | **.722** |  | **.814** |  | **.673** |  | **.384** | **.227** |  | **.769** |  |
| On the go | **.188** |  | **.497** |  | **.532** |  | .344 |  | **.411** | -.099 |  | **.637** |  |
| Excessively loud | **.159** |  | **.398** |  |  | **.539** | -.154 |  | **.62** | -.076 |  |  | **.604** |
| Talks excessively | **.226** |  | **.505** |  |  | **.662** | -.13 |  | **.751** | -.063 |  |  | **.74** |
| Blurts out answers | **.352** |  | **.512** |  |  | **.654** | .022 |  | **.601** | **.154** |  |  | **.618** |
| Difficulty waiting his/her turn | **.444** |  | **.485** |  |  | **.486** | **.36** |  | **.299** | **.343** |  |  | **.367** |
| Interrupts or intrudes | **.245** |  | **.428** |  |  | **.579** | -.119 |  | **.61** | .035 |  |  | **.588** |
| **Factor correlations (Φ)** | |  |  |  |  |  |  |  |  |  |  |  |  |
| G | - | - | - | - | - | - | 1 | 0 | 0 | 1 | 0 | 0 | 0 |
| Ina | - | 1 | .187 | 1 | .158 | .138 | 0 | 1 | 0 | 0 | 1 | 0 | 0 |
| Hyp/Imp | - | .187 | 1 | - | - | - | 0 | 0 | 1 | - | - | - | - |
| Hyp | - | - | - | .158 | 1 | .477 | - | - | - | 0 | 0 | 1 | 0.425 |
| Imp | - | - | - | .138 | .477 | 1 | - | - | - | 0 | 0 | 0.425 | 1 |
| **Fit Indexes** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| FP | 36 | 37 | | 39 | | | 54 | | | **55** | | | |
| Model X2 | 918.8 | 513.4 | | 455.6 | | | 316.5 | | | **266.9** | | | |
| X2 test for difference testing | - | Ref [One-factor] | | Ref [Correlated Two-factors] | | | Ref [Correlated Two-factors] | | | **Ref [Bifactor Two-specific]** | | | |
| X2=135  (df=1; p<0.001) | | X2=30  (df=2; p<0.001) | | | X2=153  (df=17; p<0.001) | | | **X2=30**  **(df=1; p<0.001)** | | | |
| RMSEA | 0.106 | 0.074 | | 0.069 | | | 0.057 | | | **0.050** | | | |
| RMSEA CI90% | 0.099-0.112 | 0.067-0.081 | | 0.062-0.076 | | | 0.050-0.065 | | | **0.042-0.058** | | | |
| CFI | 0.433 | 0.726 | | 0.766 | | | 0.856 | | | **0.891** | | | |
| TLI | 0.357 | 0.687 | | 0.729 | | | 0.811 | | | **0.856** | | | |
| WRMR | 2.37 | 1.784 | | 1.652 | | | 1.305 | | | **1.164** | | | |
| AIC | 11704 | 11464 | | 11388 | | | 11304 | | | **11274** | | | |
| BIC | 11858 | 11621 | | 11554 | | | 11571 | | | **11508** | | | |
| ssaBIC | 11743 | 11504 | | 11431 | | | 11399 | | | **11333** | | | |
| **Reliability estimates** | |  |  |  |  |  |  |  |  |  |  |  |  |
| ω (Lucke) | .775 | .789 | .781 | .789 | .778 | .723 | .811 | .805 | .818 | .784 | .818 | .809 | .642 |
| ωh | - | - | - | - | - | - | .101 | - | - | .479 |  |  |  |
| ωs | - | - | - | - | - | - |  | .777 | .641 |  | .189 | .788 | .624 |
| **Notes:**  **Bold** represent factor loadings with a p-value lower than 0.05;  **Confirmatory Factor Analysis (CFA)**: the CFA was performed for the 18 DSM-5 ADHD symptoms to identify the underlying most useful latent structure, testing for the following models: (1) one-factor (ADHD); (2) correlated two-factor (inattention and hyperactivity/impulsivity); (3) correlated three-factor (inattention, hyperactivity, impulsivity); (4) bifactor model with one general and two specific factors (inattention and hyperactivity/impulsivity); and (5) bifactor model with one general and three specific factors (inattention, hyperactivity, and impulsivity). The symptom “talks excessively” was considered under impulsivity domain, given its classification in ICD-10 (WHO,1993) and a recent finding showing this symptom better fit as part of impulsivity domain (Caci et al., 2013). “Excessively loud” was also included in the impulsivity domain due to the semantic proximity with “talks excessively”.  The CFA models were fitted to polychoric correlations among items using mean- and variance-adjusted weighted least squares (WLSMV) estimator, implemented by the Mplus 7.3 software (Muthén & Muthén, 2012). Model fit was judged to be good if CFI (Comparative Fit Index) and TLI (Tucker-Lewis Index) ≥ .95 and if RSMEA (Root Square Mean Error of Approximation) <.06. Model fit was judged to be acceptable if CFI and TLI ≥ .90 and RMSEA<0.8 (Hu and Bentler, 1998; Cook et al., 2009).  In order to assess reliability of the factors, we considered the following indexes: (a) Lucke’s omega (ω) (Lucke, 2005), a model-based reliability estimate, analogous to alpha coefficient; (b) the hierarchical omega coefficient (ωh) (McDonald, 1999; Zinbarg et al., 2005), which judges the degree to which composite scale scores are interpretable as measure of a single common factor, as result of sum of squared factor loadings on general factor, divided by (modeled) variance of scale scores; and (c) the omega subscale (ωs) reliability estimate for a residualized subscale, an index that controls for that part of the reliability due to the general factor (i.e., showing what would reliability of subscale score be if effects of general factor were removed) (Reise, 2012). Values of ω, ωh and ωs coefficients may vary between 0 and 1, where higher scores indicate greater reliability. A value of 1 indicates instrument’s sum score measures target construct with perfect accuracy.  The observed correlations among saved factor scores from the best-fitting model revealed the general ADHD factor was significantly associated with specific inattention (r=0.174, p<0.001), but no correlations were found between the general factor and specific hyperactivity (r=0.076, p=0.082) or between the general factor and specific impulsivity (r=0.028). We also found specific inattention was negatively associated with specific hyperactivity (r=-0.199, p<0.001), but specific inattention was not associated with impulsivity (r=0.009, p=0.833). Lastly, specific hyperactivity was significantly associated with specific impulsivity (r=0.552, p<0.001).  **References**:  **Caci HM, Morin AJ, Tran** A (2016). Teacher ratings of the ADHD-RS IV in a community sample: results from the ChiP-ARD study. *Journal of Attention Disorders* **20**,434–444.  **Cook KF, Kallen MA, Amtmann D** (2009). Having a fit: impact of number of items and distribution of data on traditional criteria for assessing IRT’s unidimensionality assumption. *Quality of Life Research* **18**,447–460.  **Hu L, Bentler PM** (1999). Cutoff criteria for fit indexes in covariance structure analysis: conventional criteria v. new alternatives. *Structural Equation Modeling* **6**,1–55.  **Lucke JF** (2005). The alfa and the omega of congeneric test theory: an extension of reliability and internal consistency to heterogeneous tests. *Applied Psychological Measurement* **29**,65–81.  **McDonald R** (1999). *Test Theory: A Unified Approach*. Lawrence Erlbaum Associates: Mahwah, NJ.  **Muthén LK, Muthén BO** (2012). *Mplus User’s Guide*. Muthén & Muthén: Los Angeles, CA.  **Reise SP** (2012). Invited paper: the rediscovery of bifactor measurement models. *Multivariate Behavioral Research* **47**,667–696.  **World Health Organization** (1992). *International Statistical Classification of Diseases and Related Health Problems, 10th Revision (ICD-10).* WHO: Geneva.  **Zinbarg RE, Revelle W, Yovel I, Li W** (2005). Cronbach’s α, Revelle’s β, and McDonald’s ω H: their relations with each other and two alternative conceptualizations of reliability. *Psychometrika* **70**,123–133. | | | | | | | | | | | | | |