A Confirmatory Factory Analysis of a Brief Version of the Secondary Traumatic Stress Informed Organization Assessment (STSI_OA)

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Abstract

- Previous research has shown that child welfare professional are likely to experience symptoms of secondary trauma stress (STS; (Baugerud et al., 2018).

- It is important that organizations support workers who are exposed to trauma as part of their daily work to help mitigate the effects of secondary trauma stress.

- As part of these efforts, one Kansas Strong initiative examined organizational behavior and response influencing STS among child welfare professionals using a modified version of the STSI_OA (Sprang et al., 2017).

Introduction

- The purpose of this study is to describe the validation of the modified STSI_OA measure.

> **RESEARCH QUESTION** – *Does the modified version of the STSI_OA demonstrate adequate internal consistency reliability and construct validity?*
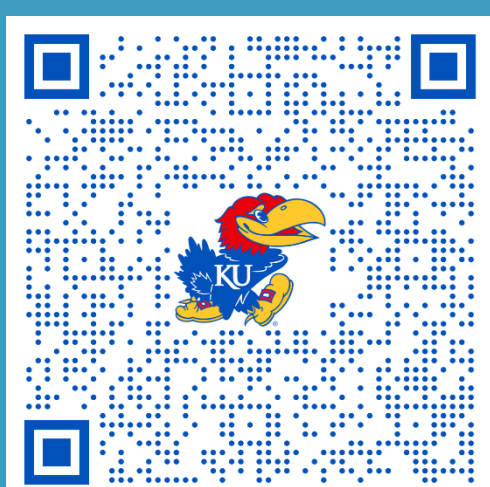
For additional information on this project or the Kansas Strong Initiative, take a picture of this image, or contact project director Becci Akin (beccia@ku.edu)

Methodology

- Data was collected as part of a statewide annual online survey of child welfare professional and supervisors in one Midwestern state (N = 366, however, missing data was addressed using FIML, thus, the CFA analysis is based on a smaller sample; n = 318).
- The data assessed the rates of organizational responses to STS, burnout, and compassion satisfaction among child welfare professionals.

Participants
- 74% self-identified as white (non-Hispanic)
- 91% identified as female
- 58.3% were employed in public and private agencies as frontline workers and 26.6% were supervisors.
- 57.2% of participants had either 1-3 years or 10 or more years of experience in child welfare.
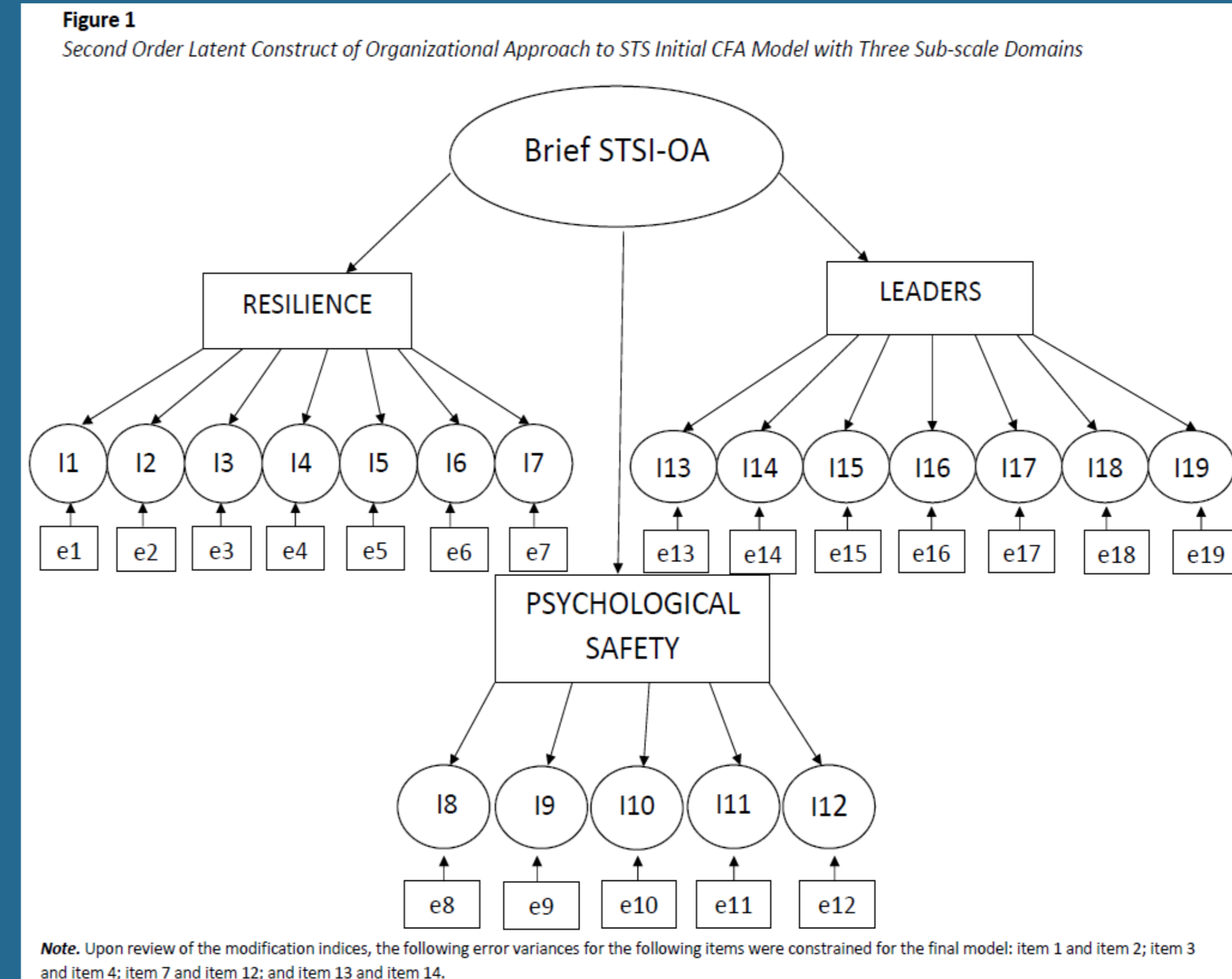
Measure
- The modified version of STSI_OA consisted of fewer items (19 items) than the original 40-item scale.
- The measure includes domains: related to an organization's promotion of resilience building (Resilience Building), how much an organization promotes psychological safety (Promoting Safety), and STS informed leadership practices (Leadership Practices).
- Higher scores indicated a higher level of competency of each domain and the broader measure.

Data Analyses
- Tests of construct validity and internal consistency reliability, including Confirmatory Factor Analyses (CFA) and Cronbach's alpha were conducted.

Table 1
Fit Indices for each Model tested for the Second-Order Confirmatory Factor Analysis (CFA) of the modified STSI_OA Measure (n = 318)

Model Step	x^2	df	p	CFI	TLI	RMSEA
Initial Model	735.43	149	< .001	.89	.88	.11
Final Model w/modification indices	444.37	145	< .001	.95	.94	.08

Note. CFI, Comparative Fit Index; TLI, Tucker Lewis Index; RMSEA, Root Mean Square Error of Approximation. Modification indices for the final CFA model include added error paths between items 1 and 2, items 3 and 4, items 7 and 12, and items 13 and 14.

Figure 1
Second Order Latent Construct of Organizational Approach to STS Initial CFA Model with Three Sub-scale Domains

Note. Upon review of the modification indices, the following error variances for the following items were constrained for the final model: item 1 and item 2; item 3 and item 4; item 7 and item 12; and item 13 and item 14.

Table 2. Adapted STSI_OA Scale with Factor Loadings

Factor 1: Resilience Building
My agency engages in activities that:
1. Build basic knowledge about secondary traumatic stress (STS) (.71)
2. Monitor how STS impacts professional well-being (.73)
3. Maintain positive focus on the agency's core mission (.70)
4. Build a sense of hope regarding our clients (.74)
5. Build worker skills to enhance professional competency (.79)
6. Support strong peer support among staff across all levels (.79)
7. Teach healthy coping strategies to manage the stress of the job (.84)
Factor 1 indicator loadings .93

Factor 2: Promoting Safety
My agency promotes a sense of psychological safety by:
8. Encouraging minimal unnecessary sharing of graphic details of trauma stories (.60)
9. Surveying staff to monitor our feelings of psychological safety (.88)
10. Adopting defined practices to address the psychological safety of staff (.92)
11. Adopting practices that promote staff resiliency (.94)
12. Adopting policies to intervene with staff who report high levels of STS (.86)
Factor 2 indicator loadings .93

Factor 3: Leadership Practices
Leaders in my agency:
13. Actively encourage self-care (.75)
14. Model good self-care (.71)
15. Regularly address signs of STS among staff (.85)
16. Promote safety and resilience to STS by providing consistent supervision that addresses the impact of the work on the worker (.88)
17. Promote safety and resilience to STS by offering extra supervision during times of high risk of STS (.89)
18. Manage caseloads and assignments with the dose of indirect trauma exposure in mind (.84)
19. Respond to STS as an occupational hazard and not a weakness (.87)
Factor 3 indicator loadings .92

Results

- Results showed preliminary establishment of reliability and construct validity of a second-order latent construct of Organizational Approach to STS comprised of the three sub-scale domains.

- The confirmatory factor analysis (CFA) of the initial model demonstrated poor fit (CFI = .89, TLI = .89, RMSEA = .11).

- Post-hoc review of the modification indices showed that constraining the error variances of the items 1 and 2, items 3 and 4, items 7 and 12, and items 13 and 14 would improve the model fit.

- Applying these modification indices demonstrated a final CFA model with acceptable model fit (see Table 1); all indicator loadings were statistically significant (see Table 2).

- Cronbach's alpha indicated sufficient reliability (Resilience Building a = .91; Promoting Safety a = .92; Leader Practices a = .94; measure a = .97) and were consistent with the original STSI-OA measure.

Conclusion

- Strong preliminary evidence for psychometric soundness of a modified STSI_OA measure.
- Child welfare organizations may use this modified version to assess the degree to which STS is addressed at the organizational level.
- This brief version may be preferable when time constraints are challenging, or when measuring certain measures of organizational STS response.
- May help strengthen the workforce, because use of this measure may facilitate the process of child welfare organizations to become more STS-informed and implement trauma informed organizational practices.

Acknowledgements