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Oral presentation

Exploring the Consensus Emergence Model as a Tool for Analyzing Intra-Individual Variability in Psychological Development

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Abstract

Introduction:
The Consensus Emergence Model (CEM) is an advanced analytical model widely utilized in Organizational Psychology to study the development of shared perceptions, feelings, or climates within groups over time. This approach extends traditional multilevel methodologies by incorporating the examination of residual variances within growth models, capturing the dynamic processes underlying consensus emergence. The CEM formally tests for consensus formation in longitudinal designs where timepoints are nested within participants and participants are nested within groups.
Building on this framework, we propose that the CEM is also a suitable tool for analyzing intra-individual changes in the variability of psychological constructs. By extending its application to longitudinal designs where timepoints are nested within items and items are nested within participants, the CEM provides a unique lens for studying dynamic psychological processes at the individual level.

Objective:
This study aims to explore the potential of the CEM as a valid and innovative tool for analyzing changes in intra-individual variability of psychological constructs over time.

Method:
We re-analyzed data from a previously published study on the development of the Moral Self-Concept (MSC) in children. The study involved 76 children assessed at two time points –when they were 4 and 5 years old –using a puppet-interview methodology. The original authors computed MSC coherency scores manually (based on the variability of item responses) and used paired t-tests to examine developmental changes. In contrast, we applied the CEM to investigate the possible emergence (i.e., increased coherency) of MSC and its subdimensions: helping, sharing, and comforting self-concepts. All analyses were conducted using the R programming environment.

Results:
Our findings align closely with those reported in the original study. While the initial analysis revealed a significant increase in MSC coherence between ages 4 and 5, our results reflect a similar pattern (δ_1 = -0.10, p

= .041). In addition, we observed a statistically significant emergence pattern in the 'sharing'subdimension of the self-concept (δ_1 = -0.21, p = .019).

Conclusions:
Our preliminary findings suggest that the CEM is a valuable and complementary analytical method for studying changes in intra-individual variability. This approach may offer meaningful insights, even in scenarios where traditional longitudinal invariance tests fail to provide conclusive evidence. By expanding the use of the CEM beyond its conventional applications, we contribute to advancing the methodological toolkit for longitudinal research in Psychology.

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