

Interests and Self Efficacy: Distinct Constructs?

Matthew Zimmerman¹

✉ mdzimmerman@usf.edu

Brenton Wiernik¹

🐦 @bmwiernik

✉ wiernik@usf.edu

¹ Department of Psychology, University of South Florida

- Interactions between interests (I) and self-efficacy (SE) are used to predict domain relevant career paths.

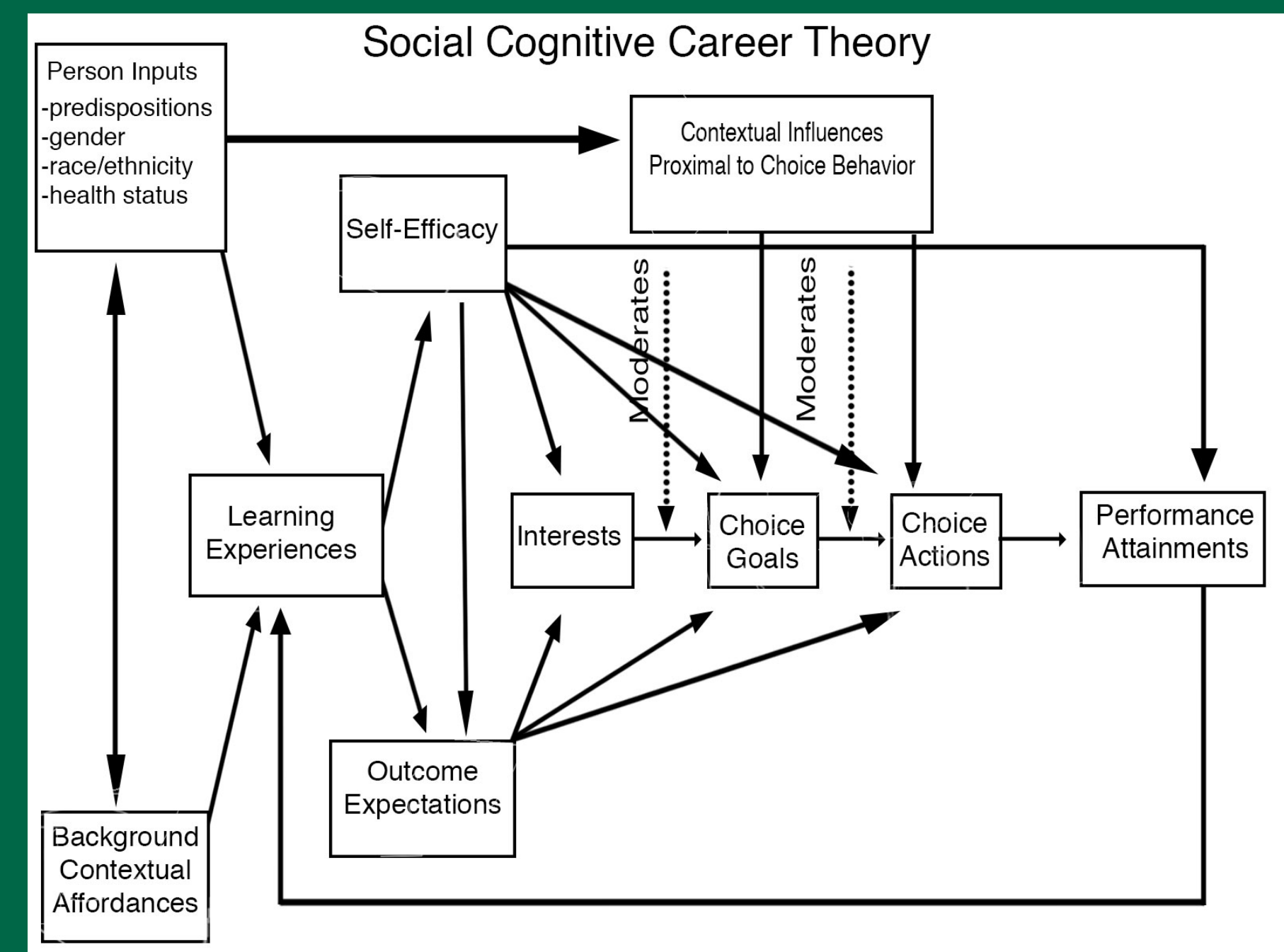


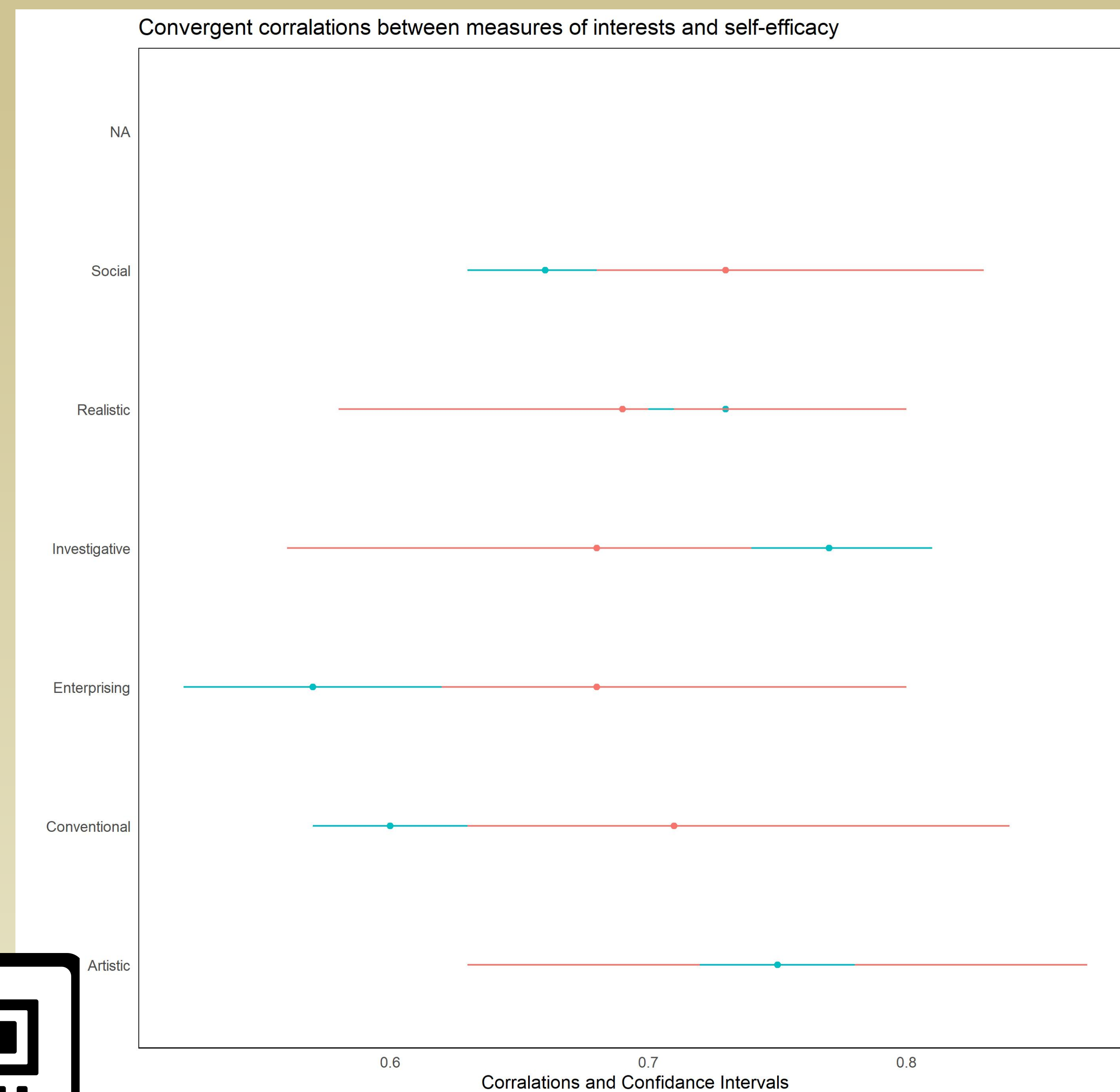
Figure 1: Social Cognitive Career Theory model

- SE is a precursor to I development, implying the two constructs are ‘related but distinct’.
- Previous meta-analytic results have found strong mean correlations between the two.
- Existing heterogeneity is attributed to tangible differences between the constructs.
 - But is it more likely that this is due to method effects?

Objectives

- Illuminate potential measurement artefacts between I and SE measures by:
 - Determining convergence between I and SE measures.
 - Analyzing the structure of cross method correlations.
 - Using multi-trait multi-method (MMTM) factor analysis for each construct

Interests and self-efficacy largely capture the same underlying attitudes toward work tasks.



Methods

- An exhaustive literature search resulted in 292 studies with unique samples made up of 834,087 people.
- Correlations were calculated using the R package psychmeta.
- The MMTM analysis: a correlated-traits, correlated-uniqueness (CTCU) model was fit to a synthetic meta-analytic correlation matrix constructed to reflect meta-analytic mean observed (not corrected for unreliability) correlations among:
 - Typical RIASEC interest scales
 - Typical RIASEC self-efficacy scales
 - RIASEC interest scales drawn from a different inventories
- To account for method variance the uniqueness's for the six scales from the same method to co-vary.
- Confidence intervals, were found through the harmonic mean sample size across included correlations.

Results

Construct	Parameter	Loading	95% CI
R	Interest	.894	[.869, .919]
	Self-efficacy	.714	[.685, .742]
	Interest (diff. inv.)	.742	[.717, .768]
I	Interest	.948	[.853, .975]
	Self-efficacy	.745	[.718, .773]
	Interest (diff. inv.)	.644	[.616, .672]
A	Interest	.838	[.812, .864]
	Self-efficacy	.732	[.704, .759]
	Interest (diff. inv.)	.787	[.761, .814]
S	Interest	.965	[.869, .994]
	Self-efficacy	.708	[.681, .736]
	Interest (diff. inv.)	.681	[.653, .710]
E	Interest	.751	[.721, .781]
	Self-efficacy	.667	[.639, .697]
	Interest (diff. inv.)	.734	[.707, .762]
C	Interest	.809	[.781, .836]
	Self-efficacy	.715	[.687, .744]
	Interest (diff. inv.)	.730	[.706, .754]
Mean (SD)	Interest	.868	
		(.083)	
	Self-efficacy	.714	
		(.027)	
	Interest (diff. inv.)	.720	
		(.050)	

Figure 2: Latent variable factor loadings for correlated trait-correlated uniqueness CFA model

- The model showed moderate fit:
 - Comparative fit index = 0.943
 - Root mean square error of approximation = 0.092 [0.089,0.096]
 - Mean absolute residual correlation = 0.042
- Only sources of misfit were modest overestimates of correlations among select self-efficacy scales and between select self-efficacy scales anddifferent-inventory interest scales.

References