Measuring Mattering: Problems Involved in Measuring College Students' **Perceptions of Their Mattering to Others** T. Jared Robinson, Richard Sudweeks, Ph.D., and Joseph Olsen, Ph.D.



Introduction

Mattering is "the perception that, to some degree and in any variety of ways, we are a significant part of the world around us" (Elliott, 2004)

> Mattering is highly correlated with sociological and psychological phenomena including:

- A strong negative correlation with truancy, vandalism, theft, violence, drug use, binge drinking, and suicide (Elliott, 2009)
- > A strong positive correlation with self-esteem, relationship satisfaction, and other measures of general wellness (Elliott, 2009)

Mattering is most commonly measured using Elliott's 2004 mattering to others index.

The Problem

- Theorists disagree about how many subcomponents should be included in the latent construct of mattering.
- Elliott (2004) advocates for a three-factor structure and validates the model using confirmatory factor analysis. These factors are (1) reliance, (2) awareness, and (3) importance
- France and Finney (2009) used data collected using the exact same instrument. Using confirmatory factor analysis, they championed a four-factor model of mattering, including (1) reliance, (2) awareness, (3) importance, and (4) ego-extension.
- > Neither study accounts for a possible method effect due to the presence of 12 negatively-worded items in the instrument.
 - Negatively-worded items can significantly alter model specification (see Brown, 2003; Marsh, 1996)

Research Question Is mattering a three-factor or a four-factor construct?

Data

F2 Importanc

Covariance matrix with standard deviations obtained from France and Finney (2009) Obtained from student responses to the mattering to others index

- ▷ N=593
- Students from a mid-Atlantic University

Results

- Elliott (2004) Items Awareness
 - Awareness Awareness Importance Importance Importance Ego-Extensior Ego-Extensior Ego-Extensior Reliance Reliance Reliance
 - Models

Method Effect Modeling with CTCU



A New Model to Test for Method Effects

Method

Confirmatory factor analysis (CFA) in MPlus Maximum likelihood (ML) estimation Model Fit Comparison Using RMSEA, SRMR, and CFI

Method Effect Modeling Using CTCU and CTCM-1

Significance test for possible method effect.

> Clear evidence that a method effect is present in the results. The presence of negatively-worded items introduces measurement error.

> Modeling the method effect (see path diagrams to the left) improves the fit for the three factor model to meet recommended fit thresholds.

> In the four-factor model, the correlation between Ego-**Extension and Importance increased to theoretically** impossible values (see below), which indicates model misspecification and a lack of discriminant validity. This finding provides a clear rationale to prefer the three-factor model of mattering championed by

Correlations for the Four-Factor Model (N=593) without method effect^a, with modeled correlated errors^b, and

d method effect factor ²				
	Awareness	Importance	Ego-extension	Reliance
	1.00	.90	.68	.67
	1.00	.88	.69	.71
	1.00	.75	.65	.68
		1.00	.90	.77
		1.00	<mark>1.04</mark>	.88
		1.00	<mark>1.10</mark>	.87
) ^a			1.00	.74
) ^b			1.00	.73
) ^c			1.00	.73
				1.00
				1.00
				1.00

Inter-factor Correlations for the three 4-factor



- of the new model



Discussion

Accurately understanding mattering has important implications for counselors and clinicians (Rayle, 2006; Elliott, 2009). The construct of mattering should be important for counselors and clinicians seeking to best help their clients and patients.

> These results clarify the reason for the divergent model specification conclusions between Elliott

(2004, 2009) and France and Finney (2009).

> The results give a clear reason to prefer a three-factor model. This precludes the possible need to re-

examine and potentially redevelop the instrument most frequently used to measure mattering to others. These results provide further evidence that

accounting for method effects due to item wording can affect model specification; researchers should be mindful of this and use models which account for method effects, like the CTCU or CTCM-1

This study presents a new model for ascertaining whether there is a significant method effect present in data collected given an instrument.

Future Research

Test and validate the new model for measuring the presence of method effects

Simulate data to explore sensitivity and implications

Examine method effects due to item wording in measurement of other latent constructs