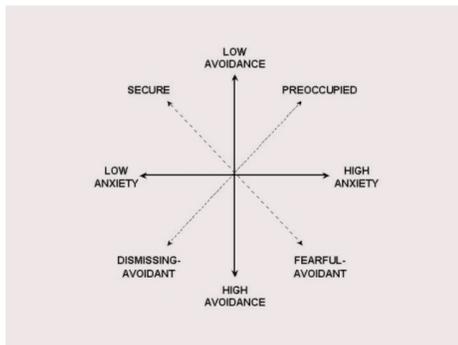


Introduction

- Adult attachment theory focuses on how individual differences in attachment relate to differences in regulating emotion and assessing relational experiences (Mikuliner & Shaver, 2007).
- Dimensional self-report measure are often used due to their strength and the number of studies conducted with these measures are notable (Crowell et al., 2008; Graham & Unterschute, 2015; Ravitz et al., 2010).
- These measures assess two attachment dimensions: attachment anxiety and attachment avoidance. Through bisecting these two dimensions a four-quadrant space is created that corresponds to Bartholomew's four attachment types: secure, preoccupied, dismissive, and fearful (Brennan, Clark, & Shaver, 1998).



- While strong in many ways, there are reasons to believe that traditional measures of the attachment dimensions may do a less than optimal job of assessing interpersonal ambivalence (IA), a key feature of Fearful-avoidance. IA involves desires for connection with others while simultaneously fearing that being close with others will be harmful.
- Siefert (2015) developed the Inventory of Interpersonal Ambivalence-18 (IIA-18), to better assess IA and compliment dimensional attachment measure.
- A prior Confirmatory Factor Analysis (CFA) found the IIA-18 to be unidimensional (Rammouni, 2017) and studies show that it incrementally predicts relevant variables (e.g., self-esteem; interpersonal problems; stress; reflective functioning; fear of intimacy [all variables known to be linked to attachment status]) beyond dimensional measures, like the Experiences in Close Relationships Inventory (ECR).
- The IIA-18 contains 18 items, which may limit its utility in some settings. Further, the IIA-18 was constructed to compliment traditional measures, such as the ECR, which have short-forms. Researchers using the short-form of the ECR are likely to desire a short form version of the IIA to use in their studies.

The Present Study

The present study focuses on developing a short-form for the Inventory of Interpersonal Ambivalence.

Using data from a large sample of community adults and college participants, we selected a number of items for inclusion of the short form.

We then examined how well data from our samples fit our expectations using CFA.

Study Hypotheses

This study has three hypotheses:

- 1) The IIA-SF will reduce redundancy among items and be internally consistent.
- 2) The IIA-SF factor will to be highly correlated with the full-form.
- 3) A CFA model will support a unidimensional factor structure.

Participants

	Community	College
n	713	326
African American/ Black	6.6%	8.0%
Caucasian/ White	79.4%	46.9%
Asian/ Asian American	6.6%	4.6%
Hispanic/ Hispanic American	4.5%	4.9%
Native American	0.5%	2.1%
Middle-Eastern/ Arab American	0.6%	24.8%
Other	1.0%	8.6%
Men	47.0%	50.0%
Women	53.0%	50.0%
Mean Age (SD)	38.78 (12.06)	20.19 (4.56)

Two samples were collected, a community sample from Mturk and a sample of college student participants.

Study Measure

The Inventory of Interpersonal Problems-18 (IIA-18; Siefert, 2015).

- The IIA-18 measures ambivalence about close relationships.
- It contains 18 items and produces a single scale (Alpha in this study was .94).
- Items are worded as statements respondents rate from 1 (False, Not True) to 4 (Very True) in terms of how true the statement is for them.

Procedures

College Sample: Students from a University subject pool system participated in exchange for course credit. After providing consent, they completed paper-and-pencil versions of the measures in groups of 10-20.

Mechanical Turk Sample (Mturk): Individuals read a study description at Mturk. Those interested linked to a consent form and the surveys on Qualtrics. Participants were paid \$1.25. All participants in the sample resided in the U.S. and met study cutoffs for validity and consistency.

Short Form Approach

- IIA-SF was conducted with AMOS 24.
- When evaluating models, we used common fit statistics. These included:
 - **Chi-Square**
 - **Root Mean Square Error Approximation (RMSEA)**
 - With 90% lower & Upper confidence intervals (CI)
 - **Confirmatory Fit Index (CFI)**
 - **Non-Normed Fit Index (NNFI)**

Index	Poor Fit	Adequate Fit	Good Fit
RMSEA	> .08	≤ .08	≤ .06
CFI	< .90	≥ .90	≥ .95
NNFI	< .90	≥ .90	≥ .95

Do Classical Test theory statistics support the psychometric adequacy of the IIA-SF?

	Alpha		Mean (SD)		r
	18-items	6-items	18-items	6-items	
Sample 1	0.95	0.89	1.95 (0.72)	1.93 (0.81)	0.95
Sample 2	0.95	0.89	2.07 (0.76)	2.05 (0.84)	0.95

Cronbach's Alpha	Internal Consistency
α ≥ 0.9	Excellent
0.9 > α ≥ 0.8	Good
0.8 > α ≥ 0.7	Acceptable
0.7 > α ≥ 0.6	Questionable
0.6 > α ≥ 0.5	Poor
0.5 > α	Unacceptable

Yes. In both samples, internal consistency estimates for the IIA-SF were strong (α = .89) and associations with the full form were large in magnitude (r = .95).

Results: Does CFA support the unidimensionality of the IIA-SF?

	Chi-Square	df	RMSEA	CI-L	CI-U	CFI	NNFI
IIA-18 Original	611.98**	126	0.061	0.056	0.066	0.950	0.940
Community	26.45*	9	0.048	0.027	0.069	0.993	0.988
College	47.54**	9	0.079	0.058	0.101	0.98	0.968
Respecified Community	24.43**	8	0.049	0.028	0.072	0.993	0.988
Respecified College	23.48**	8	0.053	0.029	0.078	0.992	0.986
Resp. Invar (No Constraints)	47.90**	16	0.036	0.024	0.048	0.993	0.987
Resp. Invar (Fully Constrained)	55.64**	22	0.031	0.021	0.042	0.99	0.993

Yes. Fit for the Community sample was strong, while data from the College sample evidenced acceptable. A respecified model produced strong fit in both samples and evidenced metric invariance across the samples, as differences in Chi-Squares were *not* significant ($\Delta\chi^2 [\Delta df = 6] = 7.74, p = .26$). Figures below show the factor loadings.

Figure 1. Sample 1

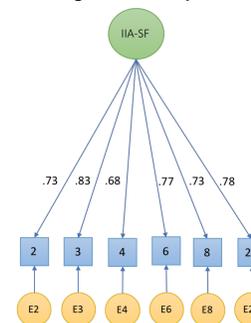


Figure 2. Sample 2

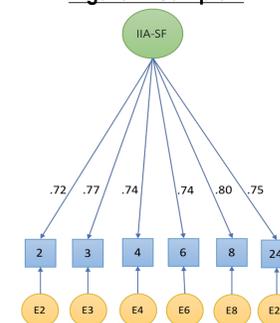
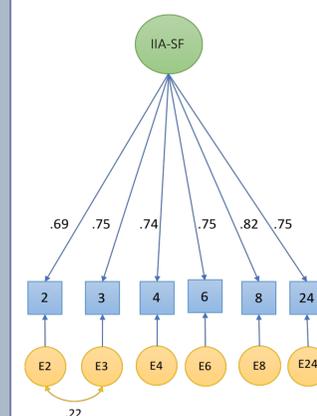


Figure 3. Respecified College

Figure 4. Respecified Community



Discussion

This study provides researchers with a shorter tool for assessing attachment ambivalence.

- We were able to make a short, six-item version that functions roughly as adequately as the full-form.
- The IIA-SF reduces respondent burden and does not require them to complete so many redundant items.
- Those who use the ECR-SF now have an option to include the IIA-SF in their studies, without adding a large number of new items.

Limitations

- 1) This interim analysis of the data focused exclusively on the psychometrics of the IIA-SF. We did not examine associations between the IIA-SF and attachment related variables or other measures of adult attachment.
- 2) Findings from our community sample and college sample may not generalize to all settings in which attachment measures are used.
- 3) We collected ECR-S data, but made no attempt to determine if a model containing all three scales evidenced good fit.

Future Directions

- 1) We are in the process of analyzing data that examines the validity of the IIA-SF by comparing associations generated with the IIA-SF with those generated by the IIA-18. This will help us determine if the short-form produces patterns of associations that are similar to the long-form.
- 2) In the future, we plan to examine the incremental validity of the IIA-SF relative to the ECR-SF to ensure that the short-form version notably compliments the ECR-SF in a manner that replicates how the IIA-18 compliments the ECR and ECR-R.
- 3) Beyond a focus on the development of the IIA-SF, we are conducting research that looks at factors that affect people's level of interpersonal ambivalence. We hope to employ the IIA-SF to achieve these aims in some studies precisely because the shorter version limits respondent burden.

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