

# Students' Attachment to a University and to its Members: A Construct Validity Study of the University Attachment Scale

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## Study 1: Factor Structure and Distinctiveness of Factors

### Research Questions

Is there an interpretable solution for the University Attachment Scale (UAS)?

Do group and member attachment have differential relationships with student affect and behavior?

### Method

The University Attachment Scale, the Perceived Cohesion Scale (PCS; Bollen & Hoyle, 1990), and the Positive Relationships with Others Scale (PRO; Ryff, 1989) were administered at a required university-sanctioned "Assessment Day".

◆  $N = 702$ ; sample split in two for cross-validation purposes (65.2% female, 84.5% Caucasian, mean age 20.2)

◆ All students had between 45 – 70 earned credits

◆ Testing conditions were controlled and administered via trained proctors

### Results

To determine if there was an interpretable factor structure for the UAS, four competing models were tested for fit within a CFA framework. Models were fit to the first half of our sample; cross-validation was performed on the second half of our sample.

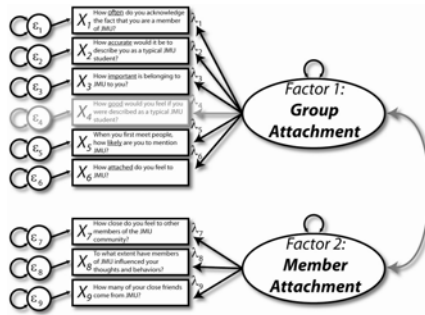
◆ The two-factor solution did not adequately fit the data. Local misfit indicated the probable cause was the repetitive nature of items two and four.

◆ A model with an error covariance between items two and four adequately fit the data.

◆ Because items two and four were repetitive, a model excluding item four was tested for fit. This model did adequately fit the data.

◆ The two-factor model excluding item four had an estimated factor correlation of  $r = .82$ , so a one-factor model (without item four) was fit to the data. This model did not adequately fit.

The two-factor model without item four was the best-fitting model for the first half of our sample, and this fit replicated on the cross-validation sample. We choose to champion this model at the best-fitting model for our sample.



Model	$\chi^2$	df	CFI	RMSEA	RMSEA 90% CI	SRMR
A) Two-factor	162.47	26	.922	.122	.108 - .144	.049
	(171.06)	(26)	(.900)	(.126)	(.111 - .147)	(.056)
B) Two-factor with error covariance	67.69	25	.976	.070	.051 - .090	.036
	(63.93)	(25)	(.973)	(.067)	(.046 - .087)	(.036)
C) Two-factor without item 4	49.89	19	.977	.068	.046 - .090	.034
	(45.52)	(19)	(.976)	(.063)	(.039 - .086)	(.033)
D) One-factor without item 4	92.83	20	.946	.102	.086 - .128	.047
	(91.22)	(20)	(.937)	(.101)	(.086 - .128)	(.050)

NOTE: Estimates of fit for sample one are listed first. Estimates of fit from sample two are listed below in parentheses.

## Implications

A two-factor solution excluding item four is the best-fitting model for sophomore/juniors.

Group and member attachment are differentiated in expected ways by theoretically-related constructs (feelings of morale, sense of belonging, positive relationships with others) and known groups (transfer vs. non-transfer, involved vs. non-involved).

Given the high correlation between the two factors ( $r = .82$ ), we found it necessary to determine if group attachment and member attachment factors were practically distinct from one another. If group and member attachment correlate differentially with external criteria in theoretically-hypothesized directions and of expected magnitudes, this shall serve as evidence of external validity and the distinctiveness of the factors.

◆ **Feelings of Morale:** As hypothesized, the correlation between group attachment and feelings of morale ( $r = .75$ ) was significantly stronger than the correlation between member attachment and feelings of morale ( $r = .53$ ;  $z = 9.49$ ,  $p < .05$ ).

◆ **Hypothesis partially supported**

◆ **Sense of Belonging:** As hypothesized, the correlation between group attachment and sense of belonging ( $r = .72$ ) was significantly stronger than the correlation between member attachment and sense of belonging ( $r = .61$ ;  $z = 5.36$ ,  $p < .05$ ).

◆ **Hypothesis fully supported regarding the distinctiveness of the factors**

◆ **Positive Relationships with Others:** We hypothesized that positive relationships with others would correlate positively with both group and member attachment, with the correlation being stronger for member attachment; however, we found that group and member both correlated equally with positive relationships with others ( $r = .35$ ).

◆ **Hypothesis partially supported**

◆ **Transfer vs. Non-Transfer Students:** As hypothesized, transfer students were not practically or statistically significantly different from non-transfer students ( $d = .19$ ; ( $t(697) = 1.59$ ,  $p = .112$ ) on group attachment. Also as hypothesized, transfer students had practically ( $d = .65$ ) and statistically significantly ( $t(697) = 5.49$ ,  $p < .001$ ) lower member attachment than non-transfer students.

◆ **Hypothesis fully supported regarding the distinctiveness of the factors**

◆ **Involved vs. Non-Involved Students:** As hypothesized, involved students showed statistically ( $t(700) = 4.10$ ,  $p < .001$ ) and practically ( $d = .45$ ) significantly higher group attachment than non-involved students. Also as hypothesized, involved students showed significantly ( $t(700) = 4.69$ ,  $p < .001$ ) higher member attachment than non-involved students; however, as predicted this difference was smaller than that found for group attachment ( $d = .11$ ).

◆ **Hypothesis fully supported regarding the distinctiveness of the factors**

### Correlations between Attachment and Affect

	GA	MA	FM	SB	PR
1. GA					
2. MA	.652 (702)				
3. FM	.746 (688)	.532 (688)			
4. SB	.722 (683)	.608 (683)	.878 (683)		
5. PR	.347 (213)	.345 (213)	.247 (209)	.34 (208)	
Mean	19.03	10.24	20.86	20.87	43.62
SD	3.91	2.23	5.77	5.96	7.11
Minimum	5	3	3	3	24
Maximum	25	15	27	27	54
Possible range	5-25	3-15	3-27	3-27	9-54

NOTE: Sample sizes are listed in parentheses.

Attachment: GA = Group attachment, MA = Member attachment

Perceived Cohesion: FM = Feelings of morale, SB = Sense of belonging

Well-Being: PR = Positive relationships with others

### Transfer vs. Non-Transfer Students

	Non-Transfer Students (N = 618)		Transfer Students (N = 81)		Cohen's d
	Mean	SD	Mean	SD	
Group Attachment	3.82	.78	3.68	.78	.19
Member Attachment	3.47	.70	3.00	.88	.65

### Involved vs. Non-Involved Students

	Involved (N = 89)		Non-Involved (N = 613)		Cohen's d
	Mean	SD	Mean	SD	
Group Attachment	4.12	.61	3.77	.79	.45
Member Attachment	3.75	.59	3.67	.75	.11

## Study 2: Relationship between Attachment and Two Achievement-Related Variables: Goal Orientation and Help Seeking

### Research Questions

Will the same two-factor structure that was championed in Study 1 be replicated and generalize to a freshman sample?

Will the UAS be related to students' achievement goal orientations?

Will the UAS be related to students' help seeking?

Will students' year in school moderate the relationship between the UAS and these external criteria?

### Method

The University Attachment Scale, a measure of achievement goal orientation (ATL; Finney, Pieper, & Barron, 2004), and a measure of help-seeking (Karabenick, 2003, 2004) were administered via the university's psychology subject pool.

◆ Sample 3:  $N = 233$  sophomore/juniors (66.1% female; 81.5% Caucasian; mean age 19.55)

◆ Sample 4:  $N = 293$  freshmen (76.8% female; 84.3% Caucasian; mean age 18.13)

◆ All students received course credit for participating

◆ Testing conditions were controlled and administered via trained proctors

◆ Proctors read the instructions for each questionnaire aloud as an intentional technique to slow participants' response time and ensure that participants were paying attention to the instructions and response scale.

### Results

To determine if there was an interpretable factor structure for the UAS for both the freshman and sophomore/junior samples, four competing models were tested for fit.

◆ Results were extremely similar to those found in Study 1, suggesting less-than-adequate fit of the two-factor model due to the repetitive nature of items two and four.

◆ The two-factor model excluding item four had an estimated factor correlation of  $r = .79$  (for the sophomore/junior sample) and  $r = .84$  (for the freshman sample), so a one-factor model (without item four) was fit to the data. This model did not adequately fit.

The two-factor model without item four was stable across upper- and under-class samples. We again choose to champion this model at the best-fitting model for our samples.

Model	$\chi^2$	df	CFI	RMSEA	RMSEA 90% CI	SRMR
A) Two-factor	150.98	26	.842	.144	.115 - .160	.070
	(83.24)	(26)	(.941)	(.087)	(.071 - .112)	(.044)
B) Two-factor with error covariance	59.25	25	.966	.078	.047 - .099	.046
	(38.45)	(25)	(.986)	(.043)	(.011 - .069)	(.031)
C) Two-factor without item 4	41.22	19	.963	.071	.037 - .098	.044
	(27.57)	(19)	(.989)	(.039)	(.000 - .069)	(.027)
D) One-factor without item 4	66.80	20	.922	.100	.081 - .134	.058
	(41.17)	(20)	(.973)	(.060)	(.035 - .087)	(.038)

NOTE: Estimates of fit for sophomores/juniors are listed first. Estimates of fit from freshmen are listed below in parentheses.

### Relationship between Attachment and Two Achievement-Related Variables: Goal Orientation and Help-Seeking

	1	2	3	4	5	6	7	8	9	10	11
1. GA		.594*	.039	.127*	.245*	.048	.123*	-.146*	-.113	-.133*	-.031
2. MA	.573*		.097	.046	.222*	.046	.067	-.020	-.083	-.090	.008
3. PAP	.234*	.204*		.459*	.274*	.174*	-.072	-.010	-.198*	.113	.055
4. PAV	.187*	.144*	.362*		.098	.207*	.100	.055	.102	.054	-.015
5. MAP	.211*	.239*	.227*	.066		.343*	.328*	-.316*	-.027	-.179*	.116*
6. MAV	.070	.064	.045	.287*	.354*		.154*	-.017	.200*	.059	.015
7. HS	.088	.056	-.010	.025	.253*	.083		-.118*	-.346*	-.418*	.163*
8. EHS	-.101	-.019	-.160*	.099	-.357*	.045	.028		.150*	.224*	-.009
9. HST	-.073	-.006	.123	.126	-.121	.063	-.381*	-.002		.708*	-.083
10. HSA	-.098	-.047	-.031	.147*	-.292*	-.016	-.418*	.106	.640*		-.196*
11. FI	-.032	-.015	-.103	-.136*	.269*	.020	.176*	-.226*	-.093	-.202*	

NOTE: \*  $p < .05$

Values below the diagonal are sophomores/juniors, Sample 3 ( $N = 233$ )

Values above diagonal are freshmen, Sample 4 ( $N = 293$ )

Attachment: GA = Group attachment, MA = Member attachment

Achievement Goals: PAP = Performance-approach, PAV = Performance-avoidance, MAP = Mastery-approach, MAV = Mastery-avoidance

Help Seeking: HHS = Instrumental help-seeking, EHS = Executive help-seeking, HST = Help-seeking threat, HSA = Help-seeking avoidance, FI = Formal vs. informal help-seeking

## Implications

A two-factor solution excluding item four is also the best-fitting model for freshmen.

Attachment appears to be related to approach goals (MAP and PAP), but does not appear to be related to avoidance goals (MAV and PAV). However, year in school is an important moderator for some of these relationships.

Similarly, year in school may be an important variable to consider when examining the relationship between help-seeking and attachment. Although, no significant interactions were found, relationships between group attachment and help seeking were stronger for freshmen than upperclassmen.

Further study of the relationships between attachment and both motivation and help seeking are needed in postsecondary context.

## Abstract


Two studies examined the psychometric properties of the University Attachment Scale (UAS), a measure that operationalizes group and member attachment as two separate dimensions of attachment to a university. In Study 1, a two-factor model was championed over a one-factor model providing evidence of a distinction between university attachment and member attachment. External validity evidence (relationships with involvement, perceived cohesion, duration of membership) provided further support for this distinction and construct validity evidence. In Study 2, we employed the UAS to explore the relationships between university attachment and two academic-related constructs: achievement goal orientation and help-seeking. As expected, group and member attachment were positively related to master-approach orientation. However, group and member attachment had weak relationships with both avoidance goals: performance-avoidance and mastery-avoidance. Interestingly, performance-approach goals were positively related to both group and member attachment for upperclassmen, whereas no significant relationships were found for freshmen. Help-seeking was not related to attachment for upper-classmen. However, increased group attachment resulted in an adaptive help-seeking profile for freshmen.

## For More Information

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For a copy of this paper, please see:

 <http://www.jmu.edu/assessment>

## The Instrument

### University Attachment Scale

In this section, the response options are different for every item, so please read each item and their accompanying options carefully before responding to each item. **As with the previous items, there are no right or wrong answers; everyone behaves and feels differently. Just answer as honestly as possible.** PLEASE BUBBLE IN ONLY ONE ANSWER FOR EACH STATEMENT.

1. How often do you acknowledge the fact that you are a member of JMU?

1	2	3	4	5
Never	Rarely	About Half the Time	Most of the Time	Always

2. How accurate would it be to describe you as a typical JMU student?

1	2	3	4	5
Not at all Accurate	Slightly	Moderately	Very	Extremely Accurate

3. How important is belonging to JMU to you?

1	2	3	4	5
Not at all Important	Slightly	Moderately	Very	Extremely Important

- 4\*. How good would you feel if you were described as a typical JMU student?

1	2	3	4	5
Not at all Good	Slightly	Moderately	Very	Extremely Good

5. When you first meet people, how likely are you to mention JMU?

1	2	3	4	5
Not at all Likely	Slightly	Moderately	Very	Extremely Likely

6. How attached do you feel to JMU?

1	2	3	4	5
Not at all	Slightly	Moderately	Very	Extremely

7. How close do you feel to other members of the JMU community?

1	2	3	4	5
Not at all Close	Slightly	Moderately	Very	Extremely Close

8. To what extent have members of JMU influenced your thoughts and behaviors?

1	2	3	4	5
Not at all	Slightly	Moderately	Very	Extremely

9. How many of your close friends come from JMU?

1	2	3	4	5
None	Few	About Half	Most	All

\* Item 4 did not function well and was removed from the scale