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# The College Adjustment Questionnaire: A Measure of Students' Educational, Relational, and Psychological Adjustment to the College Environment

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College adjustment has been of interest to researchers for decades, with articles on the topic first appearing in the 1940s. College adjustment research has shifted over time, from a focus on college adjustment as a predictor variable or mediator to increased emphasis on college adjustment as representative of a general level of ability or functioning that has been achieved. In the 1980s, in one of the hallmark studies in college adjustment, Baker and Siryk (1984) investigated the relationship among college adjustment and attrition, connection with mental health services, grade point average, and social activities. In a later study, the impact of expectations to adjustment and actual adjustment were investigated in relation to attrition and academic standing (Gerdes & Mallinckrodt, 1994). In recent years, the construct of college adjustment has been utilized as a primary outcome variable (e.g., Boulter, 2002; Dennis, Phinney, & Chuateco, 2005; Lapsley & Edgerton, 2002; Paul & Brier, 2001), which represents a shift from college adjustment as purely a predictor and increased emphasis on college adjustment as a general level of ability or functioning that can be achieved and is desirable.

The authors of previous research have

proposed that college adjustment is composed of multiple factors, which can be further grouped into general domains of adjustment (Baker & Siryk, 1984; Credé & Niehorster, 2012; Gerdes & Mallinckrodt, 1994). A large body of literature provides support for this proposition, with research demonstrating that there are several dimensions of adjustment—such as academic, social, and personal/emotional—that contribute to overall college adjustment (see Gerdes & Mallinckrodt, 1994, for a review of the research). Stress has been identified as a key link in difficulty to adjusting to college (Chemers, Hu, & Garcia, 2001), and considering that stress is high on college campuses and linked to increased susceptibility to mental health concerns (Smedley, Myers, & Harrell, 1993), a multidimensional measure of adjustment may provide relevant information for university personnel interested in student well-being.

Several instruments exist to measure college adjustment: the Student Adaptation to College Questionnaire (SACQ; Baker & Siryk, 1989), the College Adjustment Rating Scale (Zitzow, 1984), and the College Adjustment Scales (Anton & Reed, 1991). Of these, the SACQ is the most widely used and

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takes a multifaceted approach to measuring college adjustment, which is important given that many researchers “would advocate that [multiple] indicators be used simultaneously so a more comprehensive picture of a student’s adjustment can be obtained” (Taylor & Pastor, 2007, p. 1003). Although the SACQ is highly valuable to research studies and demonstrates clinical utility, it is important to develop measures that are briefer and more accessible as it may be beneficial for students to be screened for adjustment concerns. In the most recent update from the American College Health Association (2016), 75% of college students reported finding some aspect of their life “very difficult to handle.” Adjustment may be a key indicator of student well-being, and a psychometrically sound, multidimensional tool of adjustment could help to identify areas with which students can be provided support in the midst of multiple stressors, such as competing educational demands and navigating difficult social environments.

Insofar as college adjustment is useful as a predictor, mediating, and outcome variable, brief, accessible, user-friendly, easily interpretable, reliable, and valid measures of college adjustment become increasingly pertinent as an assessment tool to understand factors contributing to, explaining, and consequential to successful and poor adjustment. The College Adjustment Questionnaire (CAQ) was developed as a brief, reliable alternative, and we sought to establish the validity and reliability of this instrument with this study.

## METHOD

### Participants

A total of 301 students participated in data collection at a large Western university in the United States, and students from Introductory Psychology classes were recruited. In return for

participating in this study, individuals received credit toward Introductory Psychology course requirements. A total of 163 participants were female (54.2%), 222 were first-year students (73.8%), and 236 identified as White non-Hispanic (78.4%). The average age was 18.7 years ( $SD = 1.45$ ).

### Scale Development and Measures

Scale development for the CAQ followed the process outlined by Loevinger (1957). This process includes: (a) identifying the construct to be measured and review of existing scales, (b) development of an operational definition, (c) utilization of subject matter experts, (d) administration of the newly developed measure to study participants, (e) data analysis, examination of factor structure, and removal of weak or unnecessary items, (f) reliability analysis, and (g) correlation of scores from newly developed measure with preexisting measures.

*College Adjustment Questionnaire.* Respondents to the CAQ indicated how true certain statements about college experiences are for them at the time of the survey. Items were designed to sample across the domains of educational, relational, and psychological functioning in college. Responses were measured on a 5-point Likert-type scale ranging from *not true* to *completely true*. The Educational Functioning subscale focuses on features of academic functioning, such as performance in classes and achievement. The Relational Functioning subscale assesses for adjustment in social aspects of college life and explores social connectedness and feelings of satisfaction with interpersonal relationships. The Psychological Functioning subscale focuses on key features of emotional/psychological functioning and asks about how the individual presently feels about their college experience. To establish content validity, items for each domain were developed by subject matter experts using a rational/theoretical approach consistent with

**TABLE 1.**  
Summary of CFA Model Fit Indices for the College Adjustment Questionnaire

Model	$\chi^2$	df	p	TLI	CFI	RMSEA
Null Model, all 22 items	3185.81	231	.000	—	—	.21
Three-Factor Model, all 22 items	651.07	206	.000	.80	.79	.09
Null Model, 14 items	2088.55	91	.000	—	—	.27
Three-Factor Model, 14 items (final model)	196.07	74	.000	.93	.94	.07

adjustment theories (Baker & Siryk, 1984; Credé & Niehorster, 2012).

*Student Adaptation to College Questionnaire.* The SACQ, developed by Baker and Siryk (1989), was used in this study to support convergent validity for the CAQ. The SACQ has items arranged into four subscales that measure academic adjustment (23 items), social adjustment (18 items), personal-emotional adjustment (15 items), and institutional attachment (14 items). Participants rated their responses on a 9-point scale ranging from *applies very closely to me* to *doesn't apply to me at all*. The reliability of the SACQ in this study was .91, which is consistent with previous studies (e.g., Baker & Siryk, 1989). The measure also exhibits acceptable criterion-related and construct validity (Baker & Siryk, 1989).

## RESULTS

### Confirmatory Factor Analysis

The correlation matrix of the CAQ was subjected to confirmatory factor analysis (CFA) in order to examine the fit of the actual data with the proposed three-factor structure (educational, relational, and psychological adjustment subscales/factors) that was hypothesized to underlie the CAQ. CFA allows the systematic investigation of observed variables and their underlying latent constructs (Hu & Bentler, 1998). All latent factors were allowed to intercorrelate since we expected

them to be significantly correlated with each other. We did not allow any complex factor loadings in which an item would load on more than one factor. Several indices of model fit were used: the chi-square test, Tucker-Lewis index (TLI; values should be > .90), the comparative fit index (CFI; values should be > .90), and the root mean square error of approximation (RMSEA; values should be < .10), consistent with widely accepted cutoffs (Browne & Cudeck, 1993; Finch & West, 1997).

Based on investigation of initial model fit, several items were removed due to factor loadings being less than 0.50 (Bernstein et al., 2003, used a similar criterion) and having covariance residuals that were extremely large (i.e., greater than 0.15). As shown in Table 1, model fit for the remaining 14 items was good ( $\chi^2 = 196.07$ ,  $df = 74$ ,  $p < .001$ , TLI = .93, CFI = .94, RMSEA = .07). Although the chi-square was significant, the chi-square statistic is highly sensitive to large sample sizes, and few studies of this nature demonstrate nonsignificant chi-squares (McDonald & Ho, 2002). All factor loadings were significant and ranged from 0.55 to 0.86. This analysis confirmed a three-factor structure consistent with Educational Adjustment, Relational Adjustment, and Psychological Adjustment.

### Reliability

The internal consistency of the CAQ was assessed by examining interitem correlations.

TABLE 2.

Results of *t* Tests for Comparisons Between the Validation and Comparison Samples

	Validation Sample ( <i>n</i> = 238)		Comparison Sample ( <i>n</i> = 63)		Independent <i>t</i> Test		
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>df</i>	<i>p</i>
Age	18.38	0.71	18.69	1.45	−2.92	229	.00*
Gender	1.44	0.50	1.46	0.49	−0.25	229	.80
Year in School	1.27	0.55	1.44	0.85	−1.95	151	.05
Ethnicity	6.48	1.62	6.30	1.56	0.72	299	.44

\* *p* < .05.

According to George and Mallery (2003), a Cronbach's alpha above .7 is considered acceptable, above .8 good, and above .9 excellent. The CAQ subscale scores demonstrated good reliability, with alphas of .89 (Educational Functioning subscale), .84 (Relational Functioning subscale), and .79 (Psychological Functioning subscale).

Participant data for the entire sample (*N* = 301) were sectioned into two groups on the basis of completion of the SACQ. Participants who received the SACQ as part of their survey packet were considered part of the validation sample (*n* = 63), and their data were used to conduct correlation analyses between the CAQ and the SACQ. The participants who did not receive the additional measures were considered part of the comparison sample (*n* = 238), and their data were not used in the correlation analyses between the CAQ and SACQ. An independent *t* test was conducted to examine any potential differences between the validation sample (*n* = 63) and the comparison sample (*n* = 238; see Table 2). Results indicate that there were no significant differences between groups for gender, year in school, or ethnicity. There was a significant difference in age between the comparison and validation samples, but the difference does not appear to be substantively significant considering the difference between groups was four months.

A Pearson product–moment correlation coefficient was computed to assess the relationship between scores on the CAQ and scores on the SACQ. Both questionnaires purported to measure adjustment along academic/educational, social/relational, and emotional/psychological domains in college students. Results indicate positive correlations between the Academic/Educational subscale scores, *r* = .65, (*n* = 51, *p* < .001); the Social/Relational subscale scores, *r* = .67 (*n* = 51, *p* < .001); and the Emotional/Psychological subscale scores, *r* = .69 (*n* = 51, *p* < .001). Overall, the correlations between the two measures were large, indicating good convergent validity for the CAQ.

In addition, correlations between the subscales on the CAQ were examined. Psychological Adjustment was significantly, positively correlated with Educational and Relational Adjustment (see Table 3).

TABLE 3.

Intercorrelations of the Subscale Scores

	1	2	3
1. Educational Functioning	—		
2. Relational Functioning	−.01	—	
3. Psychological Functioning	.34**	.44**	—

\*\* *p* < .01.

## DISCUSSION

Using CFA, support for a three-factor structure of the CAQ was obtained. Fit indices were good, and factor loadings ranged from 0.55 to 0.86 for a model that contained 14 items predicted to factor onto three latent constructs. These results offer support for the theoretical argument that college adjustment is made up of several domains (Baker & Siryk, 1984; Gerdes & Mallinckrodt, 1994) and further confirm that the separate domains of educational, relational, and psychological functioning are important contributors to evaluating college adjustment.

In addition to evidence for factorial validity of the CAQ, results indicate that the measure has good convergent validity. Subscale scores correlated strongly between the measures, providing further support for the construct validity of the measure. Reliability estimates of the CAQ were also good, suggesting that, overall, the CAQ is a measure with strong psychometric properties that measures adjustment in college students.

Obtaining a reliable value associated with multiple domains of adjustment could have relevant implications for student affairs and higher education professionals. Considering the links between adjustment and retention, the CAQ could be utilized to identify areas that may need attention (Gerdes & Mallinckrodt, 1994). For example, after an initial assessment of adjustment, a student's academic advisor may be able to collaborate with students about strategies that could be helpful to better adjust to the college environment, such as connections with groups on campus, meetings with faculty, or a referral to mental health services.

## LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH

Some limitations to this study exist. Further validation of the CAQ must be considered, including test–retest reliability and further criterion-related validity. Another limitation was the restricted population from which the sample was drawn. Current results should be considered in light of our sample, which included 73.8% first-year students.

This study provides a new, brief, easily interpretable, accessible measure that offers a reliable, valid option for assessing the construct of college adjustment. The CAQ is meant to be a tool for practitioners, researchers, and college administrators to recognize, identify, and intervene on aspects of adjustment, which has been identified as a priority in the higher education literature (e.g., Fischer, 2007). The brevity and easy scoring allow for identification of areas of concern, and the CAQ could be administered in isolation or as part of a larger college or university screening initiative for advising, clinical, and research purposes. Our hope is that the CAQ will be utilized to identify specific domains of adjustment in which college students might be struggling, providing a platform for targeted intervention, and serving as a bridge between student affairs professionals and higher education resources on college campuses. Identifying early adjustment concerns and addressing them could make a significant impact on the lives of college students, decreasing the likelihood of dropping out and connecting students to powerful supports that may confer long-term benefits.

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