

# Noncognitive Factors for Probationary Students Engaged in Academic Recovery Courses: A Preliminary Study

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*Studies of academic recovery courses (ARCs) focus almost exclusively on academic outcomes, such as postcourse grade point average (GPA) and academic standing. This study explores the role of noncognitive factors—specifically attribution perspective, shame resilience, and academic identity—for students engaged in ARCs. Pre- and postcourse data from ARC students revealed significant correlations between noncognitive factors and academic standing and statistically significant relationships among non-cognitive factors, as well as a significant difference in mean shame scores by gender. Practice implications are presented to guide educators in their retention efforts with probationary students and to encourage future research.*

[doi:10.12930/NACADA-21-04]

**KEY WORDS:** academic probation, academic recovery course, attribution, shame, academic identity, retention

Students whose grade point averages (GPA) fall below their institution's academic standards find themselves on academic probation and at risk for academic dismissal (Miller et al., 2019; Wlazelek & Coulter, 1999). At most institutions, probation occurs when a student's GPA falls below 2.0 on a 4.0 scale (Cruise, 2002). To reverse the trend of pre-degree student departure, institutions often use academic recovery courses (ARCs). These courses typically focus on academic skill development, time management, study skills, and test taking. Though they vary in curriculum, credit hours, and requirement status, all ARCs support probationary students. They often lead to improved postcourse academic outcomes, including GPA and academic standing (Hendrickson, 2014; Seto-Friel, 2016; Shea, 2018).

While positive academic outcomes have been established in relation to ARCs, less attention has been paid to noncognitive ARC-related outcomes. In general, noncognitive factors have been found to play an important role in academic performance. Such factors fall into five categories: academic behaviors, perseverance, learning strategies, social

skills, and mindset. This study investigates three noncognitive factors from Weiner's (1972) Attribution Theory, Brown's (2006) Shame Resilience Theory (SRT), and Student Academic Identity Theory (Marcia, 1966, 1993; Was & Isaacson, 2008) in relation to ARC course outcomes.

## Attribution

Attribution Theory stated that individuals assign causes to their successes and failures (Weiner, 1972, 1986). They perceive such causes as either internal or external and stable or unstable. Internal factors involve perception of one's traits and abilities based on disposition, perceived abilities, and personality. External attributions involve environmental or situational aspects such as social influences. Stable factors are fixed and unchanging across time; unstable factors are perceived as just the opposite. A newer conceptualization of attributions adds the dimension of optimistic versus pessimistic. With an optimistic perspective, individuals attribute failure to external and unstable factors and believe they can achieve success if they change their efforts. In contrast, individuals with a pessimistic perspective attribute failure to internal and stable factors, such as lack of ability (Martinko et al., 2002; Weiner, 1982, 1985) and have little belief in achieving future success (Abramson et al., 1978). When students believe that lack of ability caused their poor academic outcome, they are less likely to try when faced with similar tasks (Kelley, 1973; Vispoel & Austin, 1995; Weiner, 1986). Conversely, if students attribute low performance to their own lack of effort, they are more likely to increase exertion on the next task.

Barry (2015) conducted a qualitative study involving in-depth interviews of 14 mandated ARC students' perceptions of their academic struggle after earning less than a 2.0 GPA in their first semester in college. The results indicated that students attributed poor academic performance to their own lack of focus. Students subsequently showed improvement in study skills, time management, and self-regulation while enrolled in the

course. Thus, students' attribution styles relate to their subsequent approach to similar academic tasks (Weiner, 1972, 1986). In postsecondary at-risk students, the affective reaction of shame aligns with a pessimistic attribution perspective (Kirschner & Hendrick, 2020; Turner, 2014; Weiner, 2000).

### Shame

Shame Resilience Theory (SRT) defines shame as a psychological factor that impacts success (Brown, 2006). Shame involves "the intensely painful feeling or experience of believing we are flawed and therefore unworthy of acceptance and belonging. . . . Shame creates feelings of fear, blame, and disconnection" (Brown, 2008, p. 30). Shamed people cope by withdrawing, denying responsibility, and blaming others for their failure (Tangney & Dearing, 2003). SRT conceptualizes a recovery pathway away from negative emotional consequences to mental wellness or wholehearted living. Building the shame resilience needed for mental wellness involves four key elements:

- Conceptualizing shame to categorize feelings of unworthiness;
- Developing critical awareness about shame triggers;
- Developing positive relationships with others (rather than hiding and isolating); and
- Having the ability to practice vulnerability by telling their story to trusted people to deconstruct shame experiences (Brown, 2015).

In a qualitative study exploring the lived experiences of 15 academically at-risk undergraduate students at a highly selective institution of higher education, Blaney (2014) found that these students felt ashamed and believed that probation and seeking help carried a negative stigma. As a result, they reported isolating themselves and feeling disappointed and upset that they were on probation. They also experienced an academic identity crisis as they attempted to understand their identity as a student on probation compared to previous academic identity where they saw themselves as being academically successful. Shame arises for the student because they are not performing commensurate with their academic identity.

### Academic Identity

Academic identity is critical to academic success and involves an individual's academic values, practices within their sense of self, and level of commitment to the practices of the academic community (White & Lowenthal, 2011). A strong correlation exists between academic identity and success because students with positive academic identity are more likely to persist and succeed (Berger, 1998; Berzonsky, 1997; Berzonsky & Kuk, 2000). Lange and Byrd (2002) found that students with positive academic identity exhibit healthy study habits and stronger course performance.

According to Erikson's (1963) Stages of Psychosocial Development, individuals engage in a process of exploration to resolve their own personal identity crisis. In this resolution, what emerges is a sense of identity in which values, attitudes, and beliefs are formulated (Waterman & Waterman, 1976). Individuals in early adulthood, including many college students, typically fall into Erikson's (1968) Identity versus Role Confusion stage, which involves exploration of questions such as "Who am I?" and "What do I want to do with my life?" Within this stage, Marcia (1966; 1993) expanded upon the dimensions of identity exploration and categorized academic identity into four statuses:

- **Foreclosed:** refers to the student's adoption of goals and values of people who are influential in their life (typically parents) without exploring their own values and beliefs.
- **Diffused:** exists for a student who has not made a commitment to an identity, who lacks direction, and who does not have a clear idea of their own values, beliefs, and goals.
- **Moratorium:** refers to the process of actively exploring personal and occupational values and beliefs. In this status, a student may struggle to make commitments as they lack belief in their ability to resolve their crisis.
- **Achieved:** occurs when a student has explored and critically analyzed values and options in comparison to their self-view and has chosen to pursue certain options with a commitment to a set of values and an academic identity.

While studies have focused on academic identity, shame resilience, or attribution theory, little research has explored the relationship among these three factors in academically at-risk students in the academic recovery process. A deeper understanding of the relationship between these noncognitive factors and academic recovery can guide institutions in their retention efforts aimed at probationary first-year students.

### The Current Study

This study investigates noncognitive factors of attribution perspective, shame resiliency, and academic identity in relation to the academic recovery process for probationary first-year students engaged in an ARC. Research questions included:

- RQ1.** What changes occurred from the beginning to the end of the semester among first-year students on academic probation enrolled in an ARC in relation to their attribution perspective, shame resiliency, and academic identity?
- RQ2.** Did precourse attribution perspective, shame, and academic identity relate to their postcourse academic standing?

### Method

#### *Participants and Procedure*

The study took place at a public, midsized, comprehensive, four-year university in the Midwest. Participants ( $N = 83$ ) were all probationary students, new to the university, enrolled in one of nine single-credit sections of ARCs taught in four colleges within the university. Students in the ARC courses were on academic probation based on a cumulative GPA below 2.0 after their first semester. During their probationary semester, these students were required to achieve a semester GPA of at least 2.0 to avoid academic dismissal (Academic standards policies and information, 2018). A pre- and post-ARC student survey was used to collect data. The precourse survey was administered the first week of class. The postcourse survey was administered the last week of the semester. At the end of the semester, the student's academic standing, whether dismissed or retained, was also determined.

At their first ARC course meeting, 87 of the 118 enrolled students were in attendance. Partic-

ipants provided informed consent, allowing the researcher to gather data through university records. Of those present, two opted not to participate in the study and two were not first-year students, leaving 83 participants in the precourse sample. At the last course meeting of the semester, 45 of these original participants completed the postcourse survey. The 83 participants included 51 (61.45%) who identified as White, 19 (22.89%) Black or African American, 5 (6.02%) Hispanic or Latino, 4 (4.82%) American Indian or Alaska Native, and 4 (4.82%) Asian. In this group, 50 (60.24%) individuals identified as male and 33 (39.75%) as female. The 45 participants (54.21%) who completed the postcourse survey included White ( $n = 25$ ; 55.56%), Black or African American ( $n = 13$ ; 28.89%), Asian ( $n = 3$ ; 6.67%), Hispanic or Latino ( $n = 3$ ; 6.67%), and American Indian or Alaska Native ( $n = 1$ ; 2.22%) students, with 25 (55.56%) males and 20 (44.44%) females.

The pre-post course sample size reflects removal of students who only took one survey (either just the precourse or the postcourse survey) and participants with missing or incomplete data. Thus, this sample represents students who took the precourse survey and produced postcourse data. Analyses were run using the sample sizes depicted in Table 1.

After the end of the semester, university records indicated that 55.42% ( $n = 46$ ) of the original 83 participants were retained at the university and 44.58% ( $n = 37$ ) were dismissed. From the pre-post sample ( $n = 45$ ), 68.89% ( $n = 31$ ) were retained and 31.11% ( $n = 14$ ) were dismissed. Students who did not complete the postcourse survey ( $n = 38$ ) were dismissed at 60.53% ( $n = 23$ ) and were retained at 39.47% ( $n = 15$ ). These were students who essentially did not complete the course because of high absenteeism.

University academic advisors taught the ARCs. The curriculum varied for each course section. All students had access to volunteer tutors and academic coaches.

#### Measures

Participants completed pre- and postcourse surveys containing three validated instruments. The Attributional Style Questionnaire (ASQ; Peterson et al., 1982) measured attribution perspective, the Test of Self-Conscious Affect for Adolescents (TOSCA-A; Tangney et al., 1991) measured shame, and the Academic

**Table 1.** Attributional Style Questionnaire (ASQ), Test of Self-Conscious Affect for Adolescents (TOSCA-A), and Academic Identity Measure (AIM) Data for Precourse and Postcourse

Constructs and valid values	N	M	SD
CPCN			
Precourse score	77	3.19	2.64
Matched sample postcourse score	44	4.23	2.73
Shame			
Precourse score	83	41.70	11.62
Matched sample postcourse score	40	37.50	11.67
Moratorium identity			
Precourse score	43	31.94	7.04
Matched sample postcourse score	19	35.17	8.55
Achieved identity			
Precourse score	23	29.34	6.61
Matched sample postcourse score	11	35.73	6.56

*Note.* CPCN is the range of the composite positive minus composite negative attribution perspective score. Given the small number and percentage of students in the foreclosed and diffused identity status categories, means and standard deviations were calculated for the moratorium and achieved identity status categories only. Only moratorium and achieved identity status categories were considered in reference to academic identity for the remainder of the analysis.

Identity Measure (AIM; Was & Isaacson, 2008) assessed academic identity status.

#### *Attributional Style Questionnaire*

The ASQ was adopted for use in this study to capture attributional style regarding a broad range of student experience (Kirschner & Hendrick, 2020; Turner, 2014; Weiner, 2000). The ASQ asks respondents to rate the cause of an event in 12 scenarios (six negative and six positive) on each of three causal dimensions: internal versus external, stable versus unstable, and global versus specific. Ratings fall along a seven-point continuum. Using a scoring key that accompanies the questionnaire, a composite positive minus composite negative score (CPCN) was determined for each participant. Composite scores range from -18 to +18, where -18 reflects the most pessimistic attribution perspective and +18 indicates the most positive attribution perspective. Peterson et al. (1982) concluded that the ASQ has considerable construct, criterion, and content validity. Using Cronbach's alpha, the internal reliability of each subscale was reported. Coefficients of 0.75 and 0.72 were obtained for the composite scales for good and bad events, respectively.

#### *Test of Self-Conscious Affect for Adolescents*

TOSCA-A (Tangney et al., 1991) was used to measure shame. This test utilized a 5-point Likert-style scale, with response choices ranging

from 1 (*not likely*) to 5 (*very likely*). Participants were presented with 15 scenarios that measured shame and 15 that measured guilt. To determine level of shame, the number of items a student selected that corresponded to shame was totaled. In relation to the scale's internal consistency reliability, Tangney et al. (1991) found Cronbach's alpha for the shame subscales at 0.76. Analysis of the TOSCA-A shows strong support for the validity of the shame subscales as indicated by their relationship to indexes of anger, empathy, and psychological symptoms (Tangney et al., 1996).

#### *Academic Identity Measure*

AIM (Was & Isaacson, 2008) was used to determine primary academic identity status. Participants answered 40 questions using a Likert-style scale ranging from of 1 (*not at all like me*) to 5 (*very much like me*). Four subscales measured diffused, foreclosed, moratorium, and achieved identity status. To determine a student's academic status, subscale scores were calculated based on the totals for each subscale. The subscale with the highest number of chosen items reflected the student's academic identity status. Was and Isaacson (2008) concluded that the AIM has internal consistency based on the reliability analysis of the subscales. Cronbach's alphas indicate internal consistency at 0.76 for achievement, 0.76 for diffusion, 0.77 for

**Table 2.** Means (M) and Standard Deviations (SD) for Shame, Attribution Perspective, and Academic Identity as a Function of Gender

Gender	Shame		Attribution Perspective		Achieved Identity		Moratorium Identity	
	M	SD	M	SD	M	SD	M	SD
Women	45.90	11.02	2.30	3.10	29.58	6.82	32.65	7.66
Men	38.87	11.26	3.32	2.31	29.17	6.53	31.46	6.63

foreclosure, and 0.85 for moratorium (Was & Isaacson, 2008).

**Results**

**Data Analysis**

In the precourse survey administration, participants’ scores fell in one academic identity category: foreclosed ( $n = 2$ ), diffused ( $n = 4$ ), achieved ( $n = 23$ ), and moratorium ( $n = 43$ ). The remaining 11 participants did not have higher scores in any one status or had missing data and thus discrete status was not assigned. (See Table 1.)

RQ1 focused on examining the academic change, from the beginning to end of the semester, in students’ reported attribution perspective, shame resiliency, and academic identity. Three paired t-tests were employed to test the differences. Any change in the factors was tested separately by comparing the mean differences between pre- and postcourse survey results among the matched samples. A series of correlational analyses were adopted to investigate the relationship among probationary students’ reported change in the three factors. Additionally, analysis for this question also employed composite construct scores from the precourse sample in three one-way analyses of variance (ANOVAs) to see if gender affected attribution perspective, shame, and academic identity. The dependent variables were the scores of these three factors and the independent variable was gender.

RQ2 looked at the correlation of precourse scores with postcourse academic standing (dismissed or retained). A logistic regression analysis was conducted to determine the factors that relate to academic standing. The dependent variable—academic standing—was dummy coded into dismissal = 0 or retention = 1. The independent variables were gender, race/ethnicity, major, and precourse composite scores for attribution perspective, shame, and academic identity. Additionally, independent t-tests were conducted to determine differences in precourse attribution perspective, shame, academic identity, and post-

course academic standing for the 83 students in the precourse sample.

**Research Question One**

No statistically significant results were found in relation to changes in students’ attribution perspective, shame resiliency, and academic identity. As moratorium identity increased, shame increased ( $r = 0.42, p < 0.001$ ). However, as moratorium identity increased, attribution perspective decreased ( $r = -0.27, p = 0.02$ ). Additionally, there was a statistically significant difference between males and females in relation to shame ( $F = 7.35, p = 0.01$ ) with the mean shame score being 7.03 points higher for women in the precourse survey (see Table 2).

**Research Question Two**

The analysis of the logistic regression indicated that whether the students were dismissed or retained at the end of the course could not be predicted based on their gender, major, race/ethnicity, or precourse scores of attribution perspective, shame, or academic identity. Multiple independent t-tests were analyzed, and a statistically significant mean difference was found between the dismissed students and the retained students on precourse attribution perspective scores with  $t(81) = -2.22, p = 0.03$ . The retained students scored 1.25 points higher in their precourse attribution perspective compared to dismissed students. However, there were no significant mean differences on precourse scores of shame and academic identity between dismissed and retained students. Table 3 shows mean score differences for each precourse factor.

**Discussion**

This preliminary study explored the relationship between attribution perspective, shame resiliency, and academic identity on academic success for probationary students engaged in ARCs. Associations between shame and gender, moratorium identity and shame, and attribution perspective

**Table 3.** Precourse Means (M) and Standard Deviations (SD) for Dismissed Students and Retained Students and Independent t-test Scores

Precourse variable	Dismissed		Retained		Change	
	N	Mean (SD)	N	Mean (SD)	t-value	p value
CPCN	37	2.48 (2.58)	46	3.73 (2.53)	-2.22	.03*
Shame	36	42.11 (12.00)	44	40.93 (11.14)	.455	.65
Academic identity	35	29.20 (6.92)	43	29.45 (6.34)	-.19	.85

Note. CPCN is the range of the composite positive minus composite negative attribution perspective score.

\* $p < 0.05$

and postcourse academic standing emerged. These findings provide insight into the role these factors may play in academic recovery for probationary students engaged in ARCs.

### Shame and Gender

A statistically significant difference for level of shame was found between males and females. Female probationary students experienced shame at a significantly higher rate. Literature supports the higher incidence of shame associated with failure for women, compared to men (Brown, 2006; Simpson & Maltese, 2017). Shame is a psycho-social-cultural construct in which contradictory role expectations; unwanted identities within social and cultural contexts; and conflicting messages from religion, media, family, and friends can trigger shame for women (Brown, 2006). Simpson and Maltese (2017) also suggested that failure, when accompanied by negative emotions, may be particularly detrimental for females in science, technology, engineering, and mathematics (STEM) education compared to males. They found that females were more likely to attribute failure to internal, stable factors such as ability (negative attribution perspective) compared to males who are more likely to attribute failure to internal, unstable factors, such as effort (positive attribution perspective). When failure is perceived through a lens of negative attribution, students also experience shame (Martinko et al., 2002; Weiner, 1985, 2008), which can negatively influence their approach to challenges, responses to failure, and future performance goal orientation.

### Moratorium Identity

Moratorium identity and shame were moderately correlated. As moratorium identity increased, shame increased ( $r = 0.42$ ,  $p < 0.001$ ). These results indicate that academic identity confusion aligns with shame. The more students struggle with their commitment to their

educational journey, the less power they feel they have over their academic success. Shame and moratorium are both associated with unresolved identity statuses in which students are unsure of the roles they will occupy within their academic and occupational careers (Marcia, 1966, 1993; Was & Isaacson, 2008; Waterman & Waterman, 1970, 1976).

Moratorium and attribution perspective were also weakly correlated; as moratorium identity increased, attribution perspective decreased ( $r = -0.27$ ,  $p = 0.02$ ). The more students feel in control over their successes and failures as they develop a more positive attribution perspective, the closer they move toward an achieved identity. The correlation between achieved identity and attribution perspective ( $r = 0.14$ ,  $p = 0.23$ ) corroborates this and indicates growth for students engaged in a recovery course.

### Attribution Perspective and Academic Standing

Results relevant to RQ2 indicated significantly different mean scores for attribution perspective between dismissed ( $M = 2.48$ ,  $SD = 2.58$ ) and retained ( $M = 3.73$ ,  $SD = 2.53$ ) students ( $t = -2.22$ ,  $p = 0.03$ ). Precourse attribution perspective scores were 1.25 points higher for students retained at the end of the semester compared to dismissed students. These differences indicate that students with higher attribution perspective scores could take responsibility for their successes and failures and change their behaviors to produce more positive academic outcomes during their probationary semester.

Students with this positive attribution perspective respond to their academic failure by employing success strategies with a belief they can learn from their mistakes and that their success is linked to their effort (Clifford et al, 1988; Mortenson, 2006; Smiley et al., 2016). Comparatively, students with a negative attribution perspective tend to

attribute their academic failures to uncontrollable causes and cope by complaining, avoidance, and withdrawal behaviors (Lou & Noels, 2017; Mortenson, 2006; Smiley et al., 2016). Brown (2008) suggested that withdrawing is a maladaptive coping strategy for shame. As such, withdrawal behaviors do not contribute to the academic well-being of probationary students.

Student attribution perspective correlated with retention rates. It is therefore likely that students who have a more positive attribution perspective and take responsibility for their academic success or failure are more likely to benefit from an ARC and to be retained by the institution. Focusing on activities to improve attribution perspective for probationary students, therefore, is a worthy endeavor.

### Academic Recovery Course Improvement

ARCs are comprised of probationary students with varying needs. The results of this exploratory study suggest that advisors who teach probationary freshmen must create and deliver lessons aimed at the development of a strong attribution perspective and shame resiliency in addition to core academic skills. ARC curriculum should include lessons and activities that foster growth in building positive attribution perspectives, shame resiliency, and movement toward an achieved identity status. However, instructors need training regarding how to deliver on student learning objectives around these factors.

Sriram (2014) determined that when academically high-risk college students were taught to view intelligence as malleable rather than static, their academic effort improved significantly. Advisors could ask students to engage in writing assignments about their beliefs regarding their success or failure, including asking them to identify how they felt (tying attribution perspective to shame resiliency), whether their success or failure was due to an internal or external cause, whether the result could change with different effort (stable/unstable), and to identify actions they could take with anticipated outcomes (controllability). Then, students could share their thoughts; their instructor and peers could address and help process the information to practice shifting negative attributions to positive. For instance, “I was just lucky to get the good grade” could change to “I got the good grade because I studied hard.” Likewise, a student who might attribute failure to a reason outside themselves could learn how they have power over their

success or failure. For instance, “I received a poor grade on the assignment because the teacher did not explain the concept well,” could change to “I could have gone to office hours to ask for help to get a better grade.”

Reflection papers could encourage vulnerability and increase shame resiliency as students share their stories with others. Shame loses its power when it is talked about or when individuals *speak* shame (Brown, 2008). Helping students overcome the shame and fear associated with public failure by reframing failure as an opportunity for growth, and teaching students the specific steps of processing shame feelings, can help students develop shame resiliency. Using ARCs and probationary status as an opportunity to teach students about setting mastery-oriented or learning goals, and focusing feedback upon the learning that can take place with use of those strategies while de-emphasizing negative consequences of making mistakes, can help encourage students to take personal responsibility for their successes and failures.

To develop movement toward achieved academic identity, assignments to help students explore their strengths, talents, and interests—even if that exploration catalyzes an identity crisis—could be beneficial (Shaffer & Zalewski, 2011). An assignment requiring students to meet with a career counselor to uncover their personality strengths and natural talents, and then reflecting on those experiences and how they tie to choosing a major and career path, would be valuable. Engaging students with other campus resources and peers outside the classroom could help develop a sense of community as a key component to thriving in higher education (Schreiner et al., 2012). Expressive writing is helpful in identity formation. Future research could explore creative writing assignments as a tool in academic recovery journeys.

Effectively working with students in academic crisis requires skill in creating lessons that are relevant and connect with students’ lived experiences. Advisors need professional development to acquire understanding of key noncognitive skill areas, develop alternate lesson plans, and foster a sense of community and belonging in which students feel comfortable sharing struggles and interacting with similarly situated peers in a supportive environment. Within a safe environment, an interrelationship of resilience between students in the course can emerge to help students form positive attributions so that obstacles that

would formerly be triggers of more shame, negative thinking, and identity confusion now become challenges to overcome. Designing ARCs as settings for emotional, social, behavioral, psychological, and academic growth and the formation of achieved academic identity, shame resilience, and positive attribution can help produce a more positive result. That is, a student who eventually would have left the university, either on their own or because of academic dismissal, is now empowered and redirected to a path of success leading to graduation. Brown (2015) talks about how wholehearted living is “engaging in our lives from a place of worthiness” (p. xix). Helping probationary students feel worthy and worth the extra effort required to help them succeed is worthwhile for institutions committed to the success of all students.

Another aspect of effectively working with ARC students is to raise their attendance rate. In this study, many probationary students attended more regularly at the beginning of the semester compared to the end. Overall attendance dropped nearly 50% over the semester (from  $n = 83$  to  $n = 45$ ). Helping ARC instructors learn to engage and connect may help maintain student engagement and attendance (Hernandez, 2015, 2021; Keyser, et al., 2022). In light of the attrition throughout the ARCs, establishing specific attendance requirements and reaching out to students consistently absent may be beneficial. Because course attendance emerged as a key factor in this study and contributes to the academic failure of some probationary students (Durfee et al., 2012; Humphrey, 2005), future studies could analyze attendance records and requirements.

### Limitations

This study is correlational in nature with use of a pre- and postcourse test design, without a control group. Variability also existed in the curriculum across the ARCs. Both presented limitations. Future research could also involve larger sample sizes and expand beyond one institution to enhance statistical power, analyses available, and generalizability of findings. Larger sample sizes would provide the opportunity to explore differences that emerged in this study related to gender and race/ethnicity.

Future research also could replicate the study with students who have been academically dismissed and readmitted to their institution to understand if dismissal would result in higher shame outcomes resulting from public knowledge

of students' academic failure. Another study would be to replicate the current study after a revision of the ARC curricula based on the outcomes of the study. Adding attribution and shame resilience retraining and interventions aimed at helping students respond to failures and to build academic identity would be useful to see if revised curricula would produce different results. This could also be approached after course instructors underwent professional development to see if instructional change could improve academic outcomes for students on probation.

### Conclusion

The purpose of this study was to explore the role of attribution perspective, shame resilience, and academic identity for probationary students engaged in ARCs with the aim of providing data to help inform higher education professionals seeking to improve the success of this population. The study builds upon research based in Weiner's (2008) Theory of Attribution, Brown's (2006) SRT, and Academic Identity Theory (Marcia, 1966; Was & Isaacson, 2008). Data indicates that helping probationary students develop an optimistic attribution perspective, shame resiliency, and an achieved academic identity shows promise. Given the results, improved academic outcomes may be realized through a well-designed ARC that includes activities with a focus on these noncognitive factors.

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#### Authors' Notes

*The authors wish to acknowledge Dr. Andrea Beach, Dr. Louann Bierlein Palmer, and Dr. Randy Ott who helped guide this research study. Additionally, the authors wish to acknowledge instructors of the academic recovery courses used in this study: Diana Blouin, Ben Carr, Nancy Cretsinger, Ronald Dillard, Breezie Gibson, Melissa Holman, Ayla Ludwig, Kyle Manninen, Richard McMullen, Lindsey Millet, Paul Oshefsky, Sarah Thomas, Cassie Watts, Deanna Welter, and Lenore Yeager. The work*

*you do to support student success is incredibly important!*

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