

Tracking Social Isolation, Academic Self-Efficacy and Adjustment to College: Self-Reported Perceptions Across the First Semester of College

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The transition to college places major life change alongside rapid psychosocial and cognitive development. Despite the breadth of research on college transition, few studies have assessed the impact of psychological difficulties on first-year adjustment. This study aimed to fill this gap by examining the relationship between social isolation, rejection sensitivity, self-efficacy, and college adjustment over the course of the first year. Across multiple time points, higher reported social isolation and rejection sensitivity were both associated with lower reported academic self-efficacy and negative college adjustment.

College has been widely established to be a rewarding, but difficult time for those pursuing a degree after high school (Pascarella & Terenzini, 2005). Literature has established that students face numerous challenges in their pursuit of a degree. Factors such as mental health issues (American College Health Association, 2013), inter- and intrapersonal tensions (Ross, Niebling, & Heckert, 1999), and academic stresses (Ross et al., 1999) are a normal part of the academic experience of the college student.

Despite some of the issues that college students may face, there are well-established benefits to pursuing a college degree: College graduates earn more, over their lifetime, than non-college graduates; college students also experience higher levels of psychosocial and cognitive development when compared to their non-attending counterparts (Pascarella & Terenzini, 2005). Student success in college has also been widely studied (i.e., Astin, 1984, 1993; Kuh, Kinzie, Buckley, Bridges, & Hayek, 2006; Pascarella & Terenzini, 2005). While Kuh et al. (2006) expanded the definition of student success beyond academic achievement and graduation rates, most researchers have continued to define student success as graduation from college. Despite the research on college student success, college graduation rates have remained stable over time. Colleges have widely invested in programming (i.e., orientation, first-year seminars, capstone experiences, and learning communities) that have been demonstrated to impact student persistence and engagement rates (Young & Hopp, 2014). The Chronicle of Higher Education

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(2016) reported that the median six-year graduation rate for public four-year colleges was 44.7% and private four-year colleges was 55.8%. These percentages are nearly the same as those reported by Bowen, Chingos, and McPherson (2009) for the last 30 years, suggesting that a programming focus is not enough to solve the problem of students not succeeding to graduation. Although engagement and success have been widely studied, other factors have, at times, been neglected in regards to how these constructs may impact the success (broadly defined) of college students. As such, the present study was an initial attempt at exploring how several factors may interact to impact student success, and how psychological factors related to perceptions of the self may need greater attention when working with students at the start of their academic journey.

According to Bandura (1997), self-efficacy is a person's belief in their ability to complete a task to achieve goals. This confidence impacts an individual's motivation and ability to persevere in the face of difficulty. Bandura's theory has been applied to the collegiate setting in that students with high levels of self-efficacy (in regards to their academic abilities) will approach school-work as a challenge to be conquered, while students with low levels of (academic) self-efficacy will avoid school-work (Pajares & Schunk, 2001; Solberg, O'Brien, Villareal, Kennel, & Davis, 1993). It has also been shown that students who are high in self-efficacy perform better academically and have a greater likelihood of persisting in college compared to those who are lower in self-efficacy (Bong, 2001; Pajares & Schunk, 2001; Zimmerman, 2000).

Numerous studies have explored the experience of being socially excluded or perceiving oneself as being socially isolated. One extensive line of work has found that the immediate experience of social exclusion can have deleterious effects on the individual such as lowered feelings of control, belonging, and self-esteem (see Williams, 2007, for a review). It would make sense that these changes in perception of the self might strongly influence how one views oneself academically. Beyond perceptions of the self, social exclusion and social isolation have also been found to impact things such as blood pressure (Hawkey, Masi, Berry, & Cacioppo, 2006) and activation of areas of the brain associated with pain (Eisenberger, Lieberman, & Williams, 2003). It stands to reason that both over- and under-confidence may result in a new student feeling a disconnect from those around them who they perceive as being "more fit" for academic challenges.

In a related area of research, rejection sensitivity has been found to be a personality variable that, when the person scores high on this trait, predisposes the individual toward greater attention to situations that may be perceived as being social isolating or where social exclusion may be occurring (Ayduk, Gyurak, & Castriotta, 2005; Downey, Lebolt, Rincón, & Freitas, 1998; Downey & Feldman, 1996; Downey, Mougios, Ayduk, London, & Shoda, 2004; London, Downey, Bonica, & Paltin, 2007). As such, those high in rejection sensitivity may be more vigilant to possible exclusion, and more likely to interpret ambiguous situations as being one where they are being socially excluded (Downey & Feldman, 1996).

Social isolation can be a contributing factor to lack of success in college students. In one study, Walton and Cohen (2011) found that brief interventions to

increase perceptions of social belonging on college campuses were associated with higher GPAs in minority students. The work of Hall-Lande, Eisenberg, Christenson, and Neumark-Sztainer (2007) found that social isolation increased negative mental health symptomology, which has previously been established as a contributing factor in the lack of success for college students suffering from mental illness (Hefner & Eisenberg, 2009). This increased symptomology was argued, however, as having the potential to be offset with school-based interventions.

College, for many, is a difficult time filled with transitions (Tinto, 1987). Many college students face a myriad of stressors, and these stressors can negatively impact their college performance. Chickering (1969) argued that the social, academic, and emotional adjustment to college may negatively impact those who fail to positively adjust. From this, Pennebaker, Colder, and Sharp (1990) developed a test of college adjustment, examining facets such as homesickness, positive adjustment behaviors (e.g., liking and feeling optimistic about classes) or negative adjustment (e.g., feeling nervous, worrying about academics). Gerdes and Mallinckrodt (1994) found (through a longitudinal exploration) that emotional and social adjustment was a stronger prediction of retention than factors more directly related to academic matters (Allen, Robbins, Casillas, & Oh, 2008).

Purpose

Widespread investigations of the prevalence of experienced social isolation, and how social isolation, college adjustment and collegiate self-efficacy interact, have not been widely studied. Given the literature on each of these domains, it can be surmised that these factors all interact and impact first-year college students. As such, the purpose of this study was to examine the relationship between social isolation, rejection sensitivity, and collegiate self-efficacy with college adjustment. Specifically, the study sought to answer the following research questions:

1. How are perceptions of collegiate self-efficacy and social isolation interrelated in their impact on first-year students?
2. How do social isolation and rejection sensitivity interact with self-efficacy and self-reported college adjustment?

The information gained in this study can be utilized to inform practice in Student and Academic Affairs, and inform discussion on best practices relating to social factors in first-year students.

Methodology

The population studied was first-year students at a mid-size, private, non-sectarian college in the Northeastern United States. The school enrolls approximately 2,800 undergraduate students. The largest percentage of undergraduate students identify as Black (35%). Another 27% of students identify as White, and 18% identify as Hispanic/Latino. Forty-nine percent of undergraduate students receive a Pell grant. The sample studied here closely

mirrors the population overall in their racial identification, with 39.8% identifying as Black, 14% as Hispanic/Latino and 19% identifying as White. Pell grant recipient information was not available for the sample.

There were three data collection time points. For data collection Time Point 1, participants were asked to complete the set of surveys in-person during a welcome week program. The program was listed as a mandatory activity for first-year students. All new students were expected to attend, and orientation leaders walked students to the activity. Participants completed the College Self-Efficacy Inventory (CSEI), the UCLA Social Isolation (Loneliness) scale, the Rejection Sensitivity Scale, and the College Adjustment Test (CAT). Students who attended the program were read the invitation to participate by the researcher, and chose whether or not to complete the survey packet. Students who chose not to complete the survey packet had other tasks to complete during the time given. All participants were free to leave when they were done with their tasks. A total of N=160 was collected at Time Point 1.

Data collection (Time Point 2) occurred during the 6th week of classes. All first-year students (whether they had completed the first survey or not) received an invitation to participate and complete the same set of surveys they received during welcome week (Time Point 1). However, instead of paper instruments, the students received an invitation to participate and a link to complete the survey instruments through Survey Monkey. Seventy-nine students started the survey instruments at the second time point. However, twelve students entered only their ID number as item number 1 in Survey Monkey, and failed to answer any of the other instrument questions. These twelve students were removed from the data set for a total N of 67 at Time Point 2. The third, and final, data collection point was held during the last week of classes of their first semester. Students received the same invitation to participate in the survey and a link to the survey scales in their university email accounts. Sixty-three students started the survey instruments at the Time Point 3. However, six students only entered their ID number as item number 1 in Survey Monkey, and failed to answer any of the other instrument questions. These six students were removed from the data set for a total N of 56 at Time Point 3.

TABLE 1

N at Data Collection Time Points

	N	Removed <i>*did not complete any scale items but started survey</i>	Total N
Time Point 1	160	0	160
Time Point 2	79	12	67
Time Point 3	63	6	56

Instrumentation

The College Self-Efficacy Inventory (CSEI) is a 22-item, Likert-scale instrument, with response points ranging from 0 (totally unconfident) to 8 (totally confident). The items are related to different areas of college life, with thirteen related to academic work and nine focused on the social aspects of college. Sample items ask students to rate their confidence in making new friends at college, their ability to research a term paper, their confidence in their ability to talk with academic and support staff, their ability to manage their time, and their ability to join a student organization. The internal consistency reliability is strong (.93; Solberg, O'Brien, Billarreal, Kennel, & Davis, 1993).

The UCLA Social Isolation Scale (Russell, 1996) measures social isolation across 20 items to explore the myriad of ways someone could feel isolated from others. The participants were asked to reply how they felt on a Likert-style scale from "never" to "always". Each item begins with "how often...", and sample items ask how often: "do you feel that you are in tune with people around you," "do you feel that there is no one that you can turn to," "do you feel friendly and outgoing," "do you feel close to people," and "do you feel that no one really knows you."

Relatedly, a separate Rejection Sensitivity Scale has been developed (Downey & Feldman, 1996) to explore how much individuals are sensitive to experiences of social rejection and isolation, as well as how much anxiety they have towards these experiences. The Rejection Sensitivity Scale presents the participant with a sample situation and follow-up questions. As an example, one of the situations presented states: "You ask your parents or another family member for a loan to help you through a difficult time." There are two follow-up questions to that situation. In the first question the participant is asked, "How concerned or anxious would you be over whether or not your family would want to help you?" In the second follow-up question the participant is asked, "I would expect that they would agree to help me as much as they can." The participant responds to these follow-up questions with a Likert-scale type response on a scale from "very concerned" to "very unconcerned", and "very unlikely" to "very likely".

Separate from these domains has been work on the experiences of first-year students and ways that we can measure their adjustment to college. One scale that attempts this (The College Adjustment Test/"CAT", by Pennebaker et al., 1990) assesses many of the ways students adjust to the experience of college. The CAT rates items on a scale of 1-7, from "not at all" to a "great deal." Each statement begins with, "Within the last week to what degree have you..." Sample items include: "missed your friends from high school," "missed your friends from home," "liked your classes," "liked your social life," "felt angry," "felt lonely," and "felt optimistic about your future at college."

Data Cleaning and Scale Creation

SPSS statistical software was utilized for the analysis. Social isolation questions 1, 5, 9, 10, 15, 16, 19, and 20 were recoded so that each item rated on the scale in

the same direction. Similarly, the “b” items on the rejection sensitivity scale were recoded so each item would rate in the same direction for statistical purposes. The college adjustment test additionally had subscales created (via the established formulas) for homesickness, positive affect, negative affect, and overall adjustment to college.

Following this recoding, median splits were created for self-efficacy and social isolation rejection sensitivity in order to obtain a high and low value of rejection sensitivity, social isolation and self-efficacy. This was then dummy-coded into a dichotomous variable for each item. Univariate Analyses (ANOVA) were utilized to determine the interactions between factors.

Results

Self-efficacy and social isolation. It was found that several main effects and interactions occurred with the target variables. Self-efficacy was found to interact with social isolation and with rejection sensitivity at various time points. The univariate analysis revealed that, at Time Point 1, higher reported social isolation was associated with lower reported self-efficacy ($F(1, 132) = 14.342, p < .001$) (See Table 2). As participants had not yet had measurable time in college, the CAT was not analyzed. No other significant relationships existed at Time Point 1.

TABLE 2

Social Isolation and Self-Efficacy Mean Values for Academic Self-Efficacy

	N	Mean Value For Academic Self-Efficacy	Std. Deviation
Low Social Isolation	64	138.95	21.02
High Social Isolation	70	125.44	20.16
Total	134	131.89	21.59

At Time Point 2, a significant relationship was found between self-efficacy and rejection sensitivity. Participants high in rejection sensitivity had significantly lower academic self-efficacy ($F(1, 33) = 15.37, p < .001$). At Time Point 2, a significant interaction was found between rejection sensitivity and social isolation on self-efficacy ($F(4, 30) = 9.808, p = .004$) (See Table 3). Using median split, those students high in rejection sensitivity had an overall lower academic self-efficacy, however, those high in rejection sensitivity and high in social isolation had higher academic self-efficacy than those high in rejection sensitivity and low in social isolation.

TABLE 3

Interaction of Rejection Sensitivity and Social Isolation on Academic Self-Efficacy

	Mean Value For Academic Self-Efficacy	Std. Deviation	N
Low R.S. + Low S.I	169.90	17.57	10
Low R.S. + High S.I	153.50	14.40	6
Total Low R.S.	163.75	17.93	16
High R.S. + Low S.I.	118.83	26.14	6
High R.S. + High S.I.	144.33	14.33	9
Total High R.S.	134.13	22.99	15

Note: R.S. = Rejection Sensitivity and S.I = Social Isolation

At Time Point 3, self-efficacy was significantly related to social isolation, with those scoring high in social isolation having significantly lower academic self-efficacy ($F(1, 34) = 6.70, p = .014$), and with those participants high in perceived social isolation having a mean self-efficacy score of 160.31 versus a score of 140.00 for those low in perceived social isolation. Also at Time Point 3, self-efficacy was significantly related to rejection sensitivity. Participants high in rejection sensitivity also had significantly lower academic self-efficacy ($F(1, 32) = 6.13, p = .019$) with those participants high in rejection sensitivity having a mean self-efficacy score of 162.47 versus a score of 141.39 for those low in perceived social isolation. No interaction of these factors was significant.

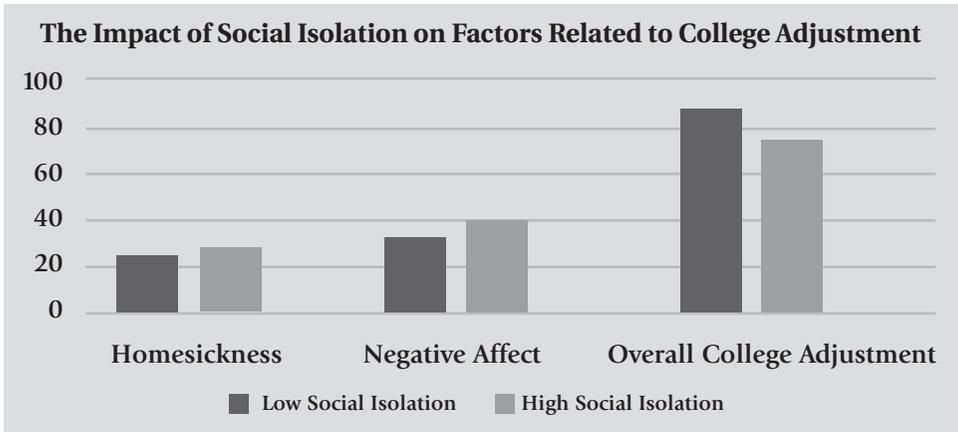
The interaction between self-efficacy, rejection sensitivity, and college adjustment. Univariate statistical analysis also demonstrated that several of the variables had a significant interaction on college adjustment at Time Point 2 and Time Point 3. At Time Point 2 (see Table 4 and Figure 1) the participants with higher social isolation scores also had greater negative affect ($F(1, 33) = 4.59, p = .039$). Participants with higher social isolation also had higher homesickness scores on the CAT ($F(1, 35) = 7.58, p = .009$), and participants with lower social isolation had better college adjustment overall ($F(1, 34) = 8.61, p = .006$). No other relationships were significant at Time Point 2 in regards to college adjustment factors.

TABLE 4

The Impact of Social Isolation on Factors Associated with Adjustment to College at Time Point 2

College Adjustment Factor Mean Scores	Low Social Isolation	High Social Isolation
Homesickness	22.26	28.47
Negative Affect	31.58	38.65
Overall College Adjustment	88.00	74.58

FIGURE 1



At Time Point 3, participants who scored low in self-efficacy also scored lower in positive college adjustment ($F(1, 39) = 11.35, p = .002$), with a mean of 29.30 for the low group versus 34.40 for the high group. Participants who scored high in social isolation had lower overall college adjustment ($F(1, 37) = 9.41, p = .004$), with those participants high in perceived social isolation having an average (mean) overall adjustment to college score of 74.35 vs. 88.72 for those low in perceived social isolation.

Discussion

This study demonstrates that social isolation, rejection sensitivity, and academic self-efficacy are related in the first-year college student sample studied.

Students who perceive themselves to be socially isolated or who are sensitive to rejection have their academic self-efficacy negatively impacted. This perception can result in a perpetuated feeling of isolation from their peers and create a cycle of perceived rejection and low collegiate self-efficacy.

It is not surprising then, that this study additionally demonstrates that each of these, individually, is related to college adjustment at varying points in the semester. Self-efficacy, as well as social isolation, affected the first-year students' adjustment to college. These results illustrate that students need to perceive that they belong to the academic and social systems of the college in order to feel that they are able to achieve collegiate success. Given that this study simply measured perceptions of these factors, it may be the case that a student is objectively prepared for college, or objectively has a large friend network, but still perceives that they are underprepared or lacking in social connections.

In the models of student involvement and student engagement (Kuh et al., 2006; Tinto 1994), the focus is on engaging the student in the academic and social systems of the college. As a result of this focus, a great deal of effort is placed on the college to create programs for groups of students so that all students find a place that they can get involved. Research in the area of engagement has led to expanded orientation and first-year programming, living and learning communities, faculty-led seminars, expanded campus activities, and freshmen interest groups (and many other programs). These programs are a valuable addition, yet retention and graduation rates remain relatively stable (Bowen et al., 2009). This research suggests that there is more to be uncovered. Individual differences in personality (rejection sensitivity), and perceptions of the self in regards to social connectedness and academic competence are impacting the first-year student by influencing their adjustment to college. Couple this with other well-established factors that can harm the first-year student, and there exists a situation that must be addressed. Students sometimes come to college with a positive psychological mindset, but this may change within a few weeks to a mindset that makes successful college adjustment more difficult. It may be helpful for these students to receive individual assistance prior to the start of school and throughout their first year, to assist in changing their perceptions. The attributions students make to explain why they feel disconnected, or why they feel they are less prepared than their peers, may truly be based on their perception, and this presents a challenge for a one-size-fits-all first-year programming model. Recent research has shown that perceived social isolation can negatively impact physical and mental wellbeing (Cacioppo & Cacioppo, 2014), while self-efficacy beliefs can affect GPA and student persistence (Vuong, Brown-Welty, & Tracz, 2010). Therefore, a student may objectively have strong academic skills and a large friend network, but if they believe they do not, they often suffer negative consequences. Perhaps an intervention program can be designed to improve students' feelings of connectedness with the campus and their peers, thereby decreasing perceived social isolation and increasing academic self-efficacy.

Future Research

This study provides the initial steps in determining if the impact of social isolation, rejection sensitivity, and academic self-efficacy on college adjustment is extended to retention and grades. Do these students who feel less adjusted to college (due to feelings of social isolation or a lack of academic efficacy) also leave at a higher rate than those who have higher self-efficacy, less rejection sensitivity, and higher college adjustment? Do those who stay have a GPA that is negatively impacted? As previously discussed, it is shown that self-efficacy is also related to grade point average, and persistence (Bong, 2001; Pajares & Schunk, 2001; Zimmerman, 2000). However, it is necessary to extend this research to see how this interaction (academic self-efficacy with social isolation, rejection sensitivity and college adjustment) impacts grade point average, and to determine if the impact of self-efficacy on grades is direct, or if it is indirect through factors such as rejection sensitivity, social isolation, or college adjustment. As stated above, an intervention program could be designed to improve perceived social connection and academic self-efficacy as well as to present the students high in rejection sensitivity with strategies to avoid assuming that others are leaving them out. Future research would need to assess such a program to determine its impact and effectiveness.

Additionally, future research should assess if there is a baseline at which social isolation and academic self-efficacy become problematic for the student. In the present study, a median split was used to separate high vs. low on these factors. As such, there is no objective cutoff for what should be viewed as a critical level of perceived isolation, or for when self-doubt about one's academic abilities becomes a cause for concern. By replicating this study with additional cohorts, with different campus environments, and varied student backgrounds, it might be possible to learn when these factors become truly deleterious to the individual. Once this is established, future research can then begin to focus on targeted interventions for the most at-risk students.

Limitations

First, this study was limited by the number of participants who completed the series of questions across all time points. It was anticipated that there would be a larger sample size in the first group because students were brought to complete the survey by their orientation leader. While incentives were utilized, these were not a strong-enough incentive to encourage students to participate in the online survey. This resulted in a lower sample size at Time Points 2 and 3. Although comparing individual students across time points would have been ideal, the sample size of students who participated in all three time points was not large enough for meaningful comparisons. In order to address this issue, the study should be replicated.

The study was also limited by the fact that it was conducted on a single campus. While the data came from a large cross section of the first-year class, the students from this private not-for-profit university may be different in these factors

than students from other universities (including other private schools, community colleges, and state colleges and universities). It would be valuable to repeat this methodology again with multiple sites.

Lastly, while not fully a limitation, no analyses were conducted assessing demographics of the student participants in the sample. Although there were no direct hypotheses relating to demographic background of the student, the present study cannot determine if factors such as gender, first-generation status, or racial/ethnic background may also be an interactive factor with the other variables.

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