Great Expectations: Perfectionism and Residence Status Predict College Adjustment

Samuel O. Lapoint and Champika K. Soysa*
Worcester State University

ABSTRACT. Researchers have established college adjustment as a predictor of student retention (Credé & Niehorster, 2012). Using a social-cognitive framework, we examined perfectionism and residence status as predictors of college adjustment among first-year undergraduates ($N = 175$) from a public university. In hierarchical regression analyses, dissatisfaction and high standards aspects of perfectionism predicted academic adjustment, $R^2 = .41$, $p < .001$, Cohen's $f^2 = .69$, and institutional attachment, $R^2 = .23$, $p < .001$, Cohen's $f^2 = .30$. Dissatisfaction predicted social adjustment, $R^2 = .23$, $p < .001$, Cohen's $f^2 = .31$. Dissatisfaction, reactivity to mistakes, and black and white thinking predicted personal-emotional adjustment, $R^2 = .45$, $p < .001$, Cohen's $f^2 = .82$. In the second step, residence status added unique variance in predicting social adjustment, $\Delta R^2 = .08$, $p < .001$, Cohen's $f^2 = .12$ a medium effect size, and institutional attachment, $\Delta R^2 = .02$, $p < .05$, Cohen's $f^2 = .03$ a small effect size. This research advanced the literature because perfectionism and residence status have not been examined together in predicting college adjustment. These findings could improve academic success and retention efforts in universities.

Full-time college students are subject to all the rigors of higher education while they assimilate into a new community. The pressure is overwhelming to many students. More than 50% of cases of attrition in higher education included poor adjustment as at least a partial cause (Kerr, Johnson, Gans, & Krumrine, 2004), contributing to a graduation rate of less than 60% (U.S. Dept. of Education, 2011). In a meta-analytic review, Credé and Niehorster (2012) demonstrated the strength of college adjustment in predicting college retention. They stated that institutional attachment, a core construct of Baker and Syrik's (1989) model of college adjustment, was the strongest available predictor of retention, accounting for 7.6% of the variance. Researchers have shown that academic adjustment, another component of Baker and Syrik's model, was associated with grade point average (Hezlett et al., 2001), which in turn was related to attrition (Martinez, Sher, Krull, & Wood, 2009). In addition, poor overall adjustment heightened the risk of alcohol-related negative consequences among college students (LaBrie, Ehret, Hummer, & Prenovost, 2012). College adjustment is comprised of a complex array of thoughts, actions, and feelings that may have antecedents in the developmental history of college students. To this end, we examined perfectionism and residence status as potential social-cognitive predictors of college adjustment.

College Adjustment

Baker and Syrik (1989) defined college adjustment as wellness in relation to a student's academic, social, and emotional stability, as well as institutional attachment. Their model is a composition of four dimensions as follows. Academic adjustment addresses the degree to which a student has adapted to the academic demands that college

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*Faculty mentor

presents. Social adjustment refers to the extent of a student's integration into the college social community. Personal-emotional adjustment reflects the amount of psychological and physical distress that a student experiences in response to the demands of college. Institutional attachment refers to a student's level of emotional connection with his or her academic institution.

Researchers have identified several individual and group differences that predicted adjustment to college. Self-efficacy (Ramos-Sánchez & Nichols, 2007) and prior academic achievement (Coyle & Pillow, 2008) predicted overall college adjustment and academic adjustment, respectively, demonstrating a link between cognitive expectation, past experience, and wellness. In a recent meta-analysis, Credé and Niehorster (2012) found that, of the big five personality traits, emotional stability, agreeableness, openness to experience, and extraversion predicted social adjustment, and conscientiousness predicted academic adjustment. These results established a link between personality and college adjustment, and indicated that aspects of college adjustment are differentially predicted. Regarding group differences, they revealed that minority status (i.e., ethnicity, sex, disability, immigration status, socioeconomic status, age, and first-generation college student status) tended to negatively predict overall college adjustment. Importantly, however, this effect was moderated by perceived social support from friends on campus (Hertel, 2002), where greater social support predicted better adjustment. For the present study, we suggested that perfectionism and residence status may account for some of the relationships described above because they speak to both individual and situational dimensions that could influence college adjustment.

Likewise, researchers have identified some experiential factors that affect college adjustment. Subjective experiences such as loneliness and depression hindered college adjustment because, among other reasons, they limited social engagement (Kim, Rapee, Oh, & Moon, 2008). In the same way, general negative experiences such as rejection were associated with poor college adjustment (Rice, Vergara, & Aldea, 2006). Such experiences by themselves, however, may not determine college adjustment. Supporting the preceding perspective, researchers have found that effective coping strategies for negative experiences predicted healthy college adjustment (Galatzer-Levy, Burton, & Bonanno, 2012). Others have found that healthy parent-child relationships (i.e., authoritative parenting) predicted healthy adjustment to college (Hickman & Andrews, 2003). Thus, it may be concluded that the acceptance experienced with authoritative parenting helped students to anticipate acceptance in a new setting. We studied perfectionism because it is likely developed through such early social experiences in the family and may influence adjustment in college.

Perfectionism

Individuals maintain standards of performance to which they hold themselves. When a person's standards are excessively high, they exhibit perfectionist beliefs (Flett & Hewitt, 2002). Once thought to be monolithic (Hollender, 1965), there is now consensus that there are two categories of perfectionism (Rice, Ashby, & Gilman, 2011). Hamachek (1978) was one of the first to propose a differentiation between *normal* and *neurotic* perfectionism. This was later refined as a distinction between *perfectionistic strivings* and *perfectionistic concerns* (Stoeber & Otto, 2006). That is, there are positive (striving) aspects of perfectionist beliefs such as a strong work ethic and high standards as well as negative (concerns) aspects such as excessive self-criticism and lack of fulfillment. Thus, researchers identified the broad categories of adaptive and maladaptive perfectionism, which subsumed the positive and negative aspects of perfectionism, respectively. Researchers have since expanded each category of perfectionism, further developing aspects such as need for organization, high standards, and concern over mistakes (Frost, Marten, Lahart, & Rosenblate, 1990).

Research has shown that adaptive perfectionism was associated with better social connectedness and higher academic adjustment in college, and the opposite associations were found with maladaptive perfectionism (Pritchard, Wilson, & Yamnitz, 2007; Rice, Leever, Christopher, & Porter, 2006; Rice, Vergara et al., 2006). Researchers have not examined the relationships between either adaptive perfectionism or maladaptive perfectionism and the other types of college adjustment (personal-emotional adjustment and institutional attachment). Building on previous research, the present study utilized four aspects of the conceptualization of perfectionism devised by Stairs, Smith, Zapolski, Combs, and Settles (2012) in predicting Baker and Syrik's (1989) four types of college adjustment. In particular, we examined one aspect of adaptive perfectionism, high standards, and three aspects of maladaptive perfectionism,

dissatisfaction, reactivity to mistakes, and black and white thinking.

Residence Status

There has been limited literature on the relationship between residency (resident/commuter status) and college adjustment, which is an important dimension, given the prominence of commuters in public universities like ours. In the existing literature, most researchers have addressed the relationship between residence status and potential correlates of college adjustment. For example, Mohammadi, Schwitzer, and Nunnery (2010) reported that resident students showed greater vocational commitment, persistence, and academic achievement than did commuters. Astin (1999) stated that commuters experienced less interaction with peers and faculty, and reported lower levels of social fulfillment, support, and opinion of the institution. Social fulfillment may be conceptually similar to social adjustment, as opinion of the institution is to institutional attachment, based on the definitions of Baker and Syrik (1989). It may be surmised that on-campus residency represents a greater immersion in the college community and may be beneficial to college adjustment. Residency appears to offer more opportunities to learn vicariously and develop encouraging relationships with peers, which may predict college adjustment.

Theoretical Perspective: Social Cognitive Theory

Bandura (1986) developed social cognitive theory to examine socially-informed human development. He proposed a triadic relationship between cognitive events, behavior, and the environment. The relationship is dynamic so that one's beliefs, for instance, at once influence and are influenced by environmental context and behavior. Through such a process, the cultural environment shapes our cognitions and behaviors, contributing to personality. In this reciprocal dynamic, Bandura stated that personality could impact decision-making (cognition), behavior, and the seeking of a preferred environment (Bandura, 1986). Researchers have argued that perfectionism constitutes a personality construct that is permanent, pervasive, and unique from other personality traits (Ayearst, Flett, & Hewitt, 2012).

In his theory, Bandura (1989) placed strong emphasis on self-efficacy, which is the degree to which a person believes in the power of his or her own actions. He described self-efficacy as a product of behavioral consequences and the environment. Self-efficacy is conceptually related to perfectionism, which is defined as the relative harshness of the standards to which people may hold themselves (Stoeber & Otto, 2006). That is, self-efficacy addresses subjective beliefs about the ability to produce, and perfectionism is about the perceived quality of the product. Those in the normative range of perfectionism have more lenient standards for themselves, having a realistic sense of how much effort is sufficient to attain goals.

Bandura (1986) highlighted the actions of others as influences on personality. He suggested that our understanding of behavioral consequences is largely a result of vicarious learning, by which we witness the actions of others and the consequences that they bear. Alternatively, verbal encouragement helps the individual to foresee positive consequences and engage in the behavior that will attain them. These ideas are especially salient in a close-knit, yet novel, college environment. For example, if students build strong social relationships, they are likely to garner more verbal encouragement and have more opportunities to learn vicariously, thus aiding adjustment. Because level of immersion is likely to affect the amount of peer exposure that a student experiences, we expected that residence status would predict college adjustment.

In the triadic determinism espoused by Bandura (1986), perfectionism constitutes the cognitive dimension based on its self-evaluative component. The college environment is the context in which these cognitions and particular behaviors occur, and residence status is an indicator of immersion in that environment. College adjustment is the behavioral dimension, reflecting behavioral reaction to the environmental transition. Because the relationship is dynamic and reciprocal, the college environment may influence students' beliefs and actions. Introduction to the college environment may, therefore, affect perfectionism, consequently shaping the degree of college adjustment.

The present study examined four of Stairs et al.'s (2012) conceptualizations of adaptive and maladaptive perfectionism and residence status as predictors of Baker and Syrik's (1989) four types of college adjustment from a social cognitive approach. Researchers have not previously investigated perfectionism and residence status together in predicting college adjustment.

We hypothesized that aspects of perfectionism (high standards positively, and dissatisfaction, reactivity to mistakes, and black and white thinking

inversely) would predict academic adjustment, social adjustment, personal-emotional adjustment, and institutional attachment.

In addition, it was expected that residential status would add unique variance in predicting academic adjustment, social adjustment, personal-emotional adjustment, and institutional attachment when examined together with aspects of perfectionism.

Method

Participants

Participants were 175 first-year students from a small, public university in the northeastern United States. All participants were full-time students (minimum of 12 credits per semester) and at least age 18. Only 37.7% of students gave their exact age on the demographic questionnaire. Of these, the mean age was 18.77 ($SD = 0.53$). Most participants were women (71%). Regarding race, our participants were White (83.4%), Black (2.3%), Latino (5.1%), Asian (2.9%), Native American (1.7%), and of biracial background (4.6%). Participants lived primarily on campus with one or more roommates (61.7%), on campus without a roommate (4%), or at home with parents (34.3%).

We recruited participants utilizing two methods. First, students in the first-year seminar responded to the protocol in their classes (69.7%). These students were required to participate in either the study or an alternate activity, which we provided. In the alternate activity, students were required to read through the protocol and answer questions regarding possible relationships between measures. None of the students selected the alternate option. Second, students in general psychology partially fulfilled their psychology subject pool research requirement by participating in this study (30.3%). These recruitment procedures encouraged students of many majors to participate, rather than just psychology students. Regardless of method, we collected all participant data in mid-October. We selected this time frame in order to minimize the effects of both the initial shock of transition as well as end-of-semester stress.

Participant data that did not fit the initial inclusion criteria (minimum age 18, full-time credit load) were discarded ($n = 15$). From the remaining participant data ($N = 201$), we narrowed our sample to include only first-year students in keeping with our aim to examine the transition to college of students living either in residence halls or at home with parents, thereby excluding those living in off-campus apartments. Participant data that did not meet these criteria were not used in data analyses ($n = 26$), leading to our final sample of $N = 175$. Some analyses had a lower n due to missing data.

Measures

Demographic questionnaire. We created a questionnaire specifically for this study in order to obtain general information. Participants were asked to report their residence status, as well as sex, age, race/ethnicity, class standing, and current credit enrollment. The questions about age and credit enrollment were used to cross-check participant recruitment criteria as described above.

Student Adaptation to College Questionnaire (SACQ). This is a 67-item instrument with a 9-point Likert-style response scale where 9 indicates the answer *applies very closely to me*, and 1 indicates the answer *doesn't apply to me at all* (Baker & Siryk, 1989). All points between represent relative agreement or disagreement with the statement. The measure consists of four subscales: Academic Adjustment (24 items), Social Adjustment (20 items), Personal-Emotional Adjustment (15 items), and Institutional Attachment (15 items). Thirty-seven items are reverse-scored. Two items do not fit into any subscale and contribute only to the total College Adjustment Score. In addition, nine items are included in two separate subscales. We excluded three of these items (all of which contributed to Social Adjustment; one of which also contributed to Institutional Attachment) because they applied only to the adjustment of resident students, excluding the commuters in our sample. Baker and Syrik (1999) reported Cronbach's alphas in the subscales ranging from .77 to .91. For our sample, subscale Cronbach's alphas ranged from .85 to .91 (See Table 1 for descriptive data).

Measures of Constructs Underlying Perfectionism (M-CUP). This instrument was based on 15 popular perfectionism measures (Stairs et al., 2012). The authors designed nine subscales to subsume all aspects of perfectionism examined by those measures. The M-CUP is a 61-item instrument with a 5-point Likert-style response scale ranging between 1 (*strongly disagree*) and 5 (*strongly agree*). We utilized four of the nine subscales including high standards (measuring adaptive perfectionism) and dissatisfaction, black and white thinking, and reactivity to mistakes (measuring maladaptive perfectionism). These four subscales were most pertinent to our subject matter. Stairs et al.

(2012) reported that all nine subscales had coefficient alphas of more than .80. For our sample, Cronbach's alphas ranged from .87 to .92 (See Table 1 for descriptive data).

Procedure

After receiving institutional review board approval from the author's university, we assessed participants in a group setting using a paper protocol. The investigators read brief, standardized instructions to participants. First, informed consent was obtained. Participants then completed the research protocol. Because many participants responded to the protocol during class, investigators instructed those who qualified (based on age and full-time student status) to complete the protocol, and directed others to the alternate activity found within the same packet. The protocol consisted of three questionnaires in the following order: a demographic questionnaire, Measures of Constructs Underlying Perfectionism, and the Student Adaptation to College Questionnaire. Because we did not want to prime participants by revealing the focus of the study, college adjustment was consistently examined last instead of counterbalancing the two measures. Following completion of either the protocol or the alternate activity, we offered participants a chance to enter a raffle for an incentive prize of a $20 gift card and handed out an information sheet containing researcher contact information and a brief description of the study. Further, we gave a credit slip to those who participated as part of the psychology subject pool.

TABLE 1

Intercorrelations for Mean Scores on the M-CUP and the SACQ

	1	2	3	4	5	6	7	8
1. mPHS (α = .92)	–							
N	175							
2. mPDS (α = .91)	.019	–						
N	174	175						
3. mPBW (α = .88)	.193*	.537**	–					
N	172	172	173					
4. mPRM (α = .88)	.173*	.683**	.585**	–				
N	174	174	172	175				
5. mAA (α = .91)	.252**	-.578**	-.202*	-.314**	–			
N	160	160	158	161	161			
6. mSA (α = .91)	.067	-.449**	-.251**	-.312**	.565**	–		
N	160	160	158	160	148	161		
7. mPEA (α = .85)	.018	-.640**	-.271**	-.517**	.697**	.536**	–	
N	163	163	161	163	152	152	164	
8. mIA (α = .89)	.137	-.422**	-.201*	-.284**	.664**	.865**	.568**	–
N	162	162	160	162	150	157	153	163
M	3.91	2.68	2.05	2.61	6.27	5.28	5.70	6.52
(*SD*)	(0.95)	(0.88)	(0.84)	(0.82)	(1.22)	(1.28)	(1.39)	(1.28)
N	175	175	173	175	161	161	164	163

Note. *N*s ranged from 148 to 175 due to missing data. α = Cronbach's alpha internal consistency reliability. For all scales, higher scores are indicative of more extreme responding in the direction of the construct assessed. All scores are presented as means for comparison purposes. M-CUP = Measures of Constructs Underlying Perfectionism; SACQ = Student Adjustment to College Questionnaire; mPHS = mean Perfectionism: High Standards; mPDS = mean Perfectionism: Dissatisfaction; mPBW mean Perfectionism: Black and White Thinking; mPRM = mean Perfectionism: Reactivity to Mistakes; mAA = mean Academic Adjustment; mSA = mean Social Adjustment; mPEA = mean Personal-Emotional Adjustment; mIA = mean Institutional Attachment.

Data Analysis

We conducted hierarchical regression analyses to test both hypotheses. In each instance, we entered all four aspects of perfectionism in the first step. In the second step, we added residence status (on campus or living with parents). Using hierarchical regression with the variables in this order reflected the foundational nature of perfectionism as a personality trait with residency (recent immersion in a new environment) as a secondary influence on behavior. Missing data ranged from 9.7% to 11.4% for the four regression analyses.

Results

A correlation matrix (Table 1) displayed the interrelationships between the aspects of perfectionism and types of college adjustment as well as mean and standard deviation for each variable. The data showed that adaptive perfectionism (high standards) was not significantly correlated with maladaptive perfectionism (dissatisfaction, black and white thinking, and reactivity to mistakes). On the other hand, the three aspects of maladaptive perfectionism were highly intercorrelated.

Regarding the first hypothesis, as indicated in Tables 2 through 5, at least one aspect of perfectionism (adaptive: high standards; maladaptive: dissatisfaction, black and white thinking, and reactivity to mistakes) predicted all four types of college adjustment. Specifically, high standards (positively) and dissatisfaction (inversely) predicted academic adjustment and institutional attachment. Dissatisfaction (inversely) predicted social adjustment. Dissatisfaction (inversely), reactivity to mistakes (inversely), and black and white thinking (positively) predicted personal-emotional adjustment. Aspects of perfectionism contributed significant variance in predicting academic adjustment, $R^2 = .41$, $p < .001$, Cohen's $f^2 = .69$, social adjustment,

R^2= .23, p < .001, Cohen's f^2 = .31, personal-emotional adjustment, R^2 = .45, p < .001, Cohen's f^2 =.82, and institutional attachment, R^2 = .23, p < .001, Cohen's f^2 = .30, supporting the first hypothesis.

Testing the second hypothesis, in the second step of each hierarchical regression analysis, we added residence status as a predictor of college adjustment (see Tables 2–5). In this way, we examined whether residence status contributed unique variance in predicting college adjustment when examined together with the four aspects of perfectionism. Perfectionism and on-campus residency together positively predicted social adjustment, R^2 = .32, p < .001, Cohen's f^2 = .46, post-hoc observed power = 1.00, and institutional attachment, R^2 = .25, p < .001, Cohen's f^2 = .34, post-hoc observed power = 1.00, but only perfectionism predicted academic adjustment, R^2 = .42, p < .001, Cohen's f^2 = .72, post-hoc observed power = 1.00, and personal-emotional adjustment, R^2 = .45, p < .001, Cohen's f^2 = .82, post-hoc observed power = 1.00, partially supporting the second hypothesis. Residence status added significant unique variance for social adjustment (8%) and institutional attachment (2.5%). Effect sizes for the changes in variance were Cohen's f^2 = .12 (medium) and .03 (small), respectively.

Discussion

Researchers have established aspects of perfectionism (Pritchard et al., 2007; Rice, Leever et al., 2006; Rice, Vegara et al., 2006) and residence status (Astin, 1999; Mohammadi et al., 2010) as predictors of some types of college adjustment. We studied aspects of perfectionism as predictors of four types of college adjustment. We then examined whether residence status added additional unique variance in predicting college adjustment.

Adding to the previous literature, at least one aspect of perfectionism predicted all four types of college adjustment as expected. Residence status added unique variance in predicting both social adjustment and institutional attachment in keeping with the findings of Astin (1999), who found an association between residency and analogues of these types of adjustment. Our results were consistent with our theoretical underpinnings and hypotheses. Bandura (1986) posited that belief

TABLE 2

Hierarchical Regression With Perfectionism and Residence Status as Predictors of Academic Adjustment

N = 156	β	95% CI	*M*	*SD*
Predictors				
Step 1				
Perfectionism				
High Standards	.24***	[0.58, 1.94]	23.23	5.68
Dissatisfaction	-.64***	[-3.03, -1.72]	24.13	8.03
Black and White Thinking	.07	[-0.80, 1.98]	8.15	3.39
Reactivity to Mistakes	.03	[-0.79, 1.09]	18.40	5.85
Step 2				
Perfectionism				
High Standards	.23***	[0.54, 1.89]		
Dissatisfaction	-.63***	[-2.98, -1.67]		
Black and White Thinking	.07	[-0.74, 2.05]		
Reactivity to Mistakes	.03	[-0.80, 1.07]		
Residence Status	.08	[-2.64, 13.01]		
Outcome–Academic Adjustment			150.39	29.81

Note. R^2 = Proportion of outcome variable variance explained by predictors. ***p < .001, Cohen's f^2 = effect size. Step 1 R^2 = .41, $F(4, 151)$ = 26.24, p < .001; Cohen's f^2 = .69. Step 1 to Step 2 ΔR^2 = .01, $\Delta F(1, 150)$ = 1.71, *NS*. Step 2 R^2 = .42, $F(5, 150)$ = 21.43, p < .001; Cohen's f^2 = .72; post-hoc observed power = 1.00, with five predictors, p = .05 and N = 156.

TABLE 3

Hierarchical Regression With Perfectionism and Residence Status as Predictors of Social Adjustment

N = 155	β	95% CI	*M*	*SD*
Predictors				
Step 1				
Perfectionism				
High Standards	.10	[-0.20, 1.09]	23.26	5.75
Dissatisfaction	-.45***	[-2.04, -0.76]	24.17	7.98
Black and White Thinking	-.02	[-1.52, 1.19]	8.30	3.34
Reactivity to Mistakes	-.02	[-1.02, 0.81]	18.43	5.76
Step 2				
Perfectionism				
High Standards	.05	[-0.38, 0.85]		
Dissatisfaction	-.41***	[-1.91, -0.69]		
Black and White Thinking	-.03	[-1.09, 1.50]		
Reactivity to Mistakes	-.04	[-1.03, 0.70]		
Residence Status	.30***	[8.35, 22.92]		
Outcome–Social Adjustment			105.75	25.08

Note. R^2 = Proportion of outcome variable variance explained by predictors. ***p < .001, Cohen's f^2 = effect size. Step 1 R^2 = .23, $F(4, 150)$ = 11.48, p < .001; Cohen's f^2 = .31. Step 1 to Step 2 ΔR^2 = .08, $\Delta F(1, 149)$ = 17.98, p < .001, Cohen's f^2 = .12 (medium range effect size) . Step 2 R^2 = .32, $F(5, 149)$ = 13.82, p < .001; Cohen's f^2 = .46; post-hoc observed power = 1.00, with five predictors, p = .05 and N = 155.

in the power of one's own actions is conducive to proactive interaction with one's environment, and that this triad of cognitions, behaviors, and the environment reciprocally inform each other. Based on our results, this model applied to first-year undergraduates in their transition to the novel environment of the college campus.

Regarding perfectionism, supporting the first hypothesis, high standards (adaptive perfectionism) positively and dissatisfaction (maladaptive perfectionism) inversely predicted both academic adjustment and institutional attachment, accounting for 41% and 23% of the variance respectively (see Tables 2 and 5). The effect sizes for these predictions were high for academic adjustment, $f^2 = .69$, and in the medium-high range for institutional attachment, $f^2 = .30$. Dissatisfaction inversely predicted social adjustment, accounting for 23% of the variance (see Table 3). The effect size for this prediction, $f^2 = .31$, was in the medium-high range. Finally, dissatisfaction (inversely), black and white thinking (positively), and reactivity to mistakes (inversely) all predicted personal-emotional adjustment, accounting for 45% of the variance (see Table 4). The effect size for this prediction was extremely high, $f^2 = .82$, indicating that aspects of maladaptive perfectionism were most effective at predicting this particular type of college adjustment.

Our results were consistent with the findings of Rice, Leever et al. (2006), who found that adaptive perfectionism was conducive to academic adjustment, and maladaptive perfectionism debilitated social connectedness. Further, lending support to our social-cognitive perspective of the reciprocal relationships between cognitions, behavior, and the environment (Bandura, 1986), perfectionist attitudes and beliefs represented socially informed cognitions that predicted adjustment to the college environment.

Supporting the second hypothesis, residence status added unique variance when examined together with aspects of perfectionism in predicting some types of college adjustment. That is, residency added 8% unique variance in predicting social adjustment and 2.5% for institutional attachment (see Tables 3 and 5). These two outcomes were most consistent with the expected effects of residency, based on the work of Astin (1999). Resident students spend significant time within a community of people similar to themselves, offering a camaraderie not experienced by commuter students. These forms of adjustment are, further, the most pertinent in predicting long-term retention. Credé and Niehorster (2012) found that institutional attachment was the best predictor of retention, and social adjustment was the second-best predictor.

Few studies have addressed residence status in relation to college adjustment, thereby excluding examination of the college experience of commuter students. Our study improved the literature in this regard. Resident students have greater possibility for immersion in the life of the institution. They experience more opportunities to learn vicariously and garner encouragement from peers, faculty, and staff, key components of Bandura's (1986) social cognitive interpretation for the development of belief in the power of one's own actions. This appears to be especially salient for social adjustment, consistent with the findings of Astin (1999). This makes sense, considering the amount of time spent with peers that sharing a living space provides. The counterpoint is that commuter students lack these social-learning opportunities, thereby placing them at greater risk for poor social adjustment and institutional attachment, which in turn, are the best predictors of college retention.

In contrast to our hypotheses, black and white thinking, an aspect of maladaptive perfectionism, positively predicted personal-emotional adjustment. This finding was especially intriguing because the associations between black and white thinking and all four types of college adjustment were negative and significant (see Table 1). It appears that black and white thinking positively predicted personal-emotional adjustment in conjunction with dissatisfaction and reactivity to mistakes inversely predicting this outcome, demonstrating the value of examining them together. Black and white thinking may have produced unexpected results because there is still so much unknown about the construct. Stairs et al. (2012) developed the construct of black and white thinking to assess a person's propensity for perfectionist false dichotomies that reflect maladaptive perfectionism. For example, one statement read "If I cannot do something perfectly, I might as well not do it at all." However, we may consider this to be a call to action or an expression of confidence to reflect adaptive perfectionism. Indeed, it runs parallel to the proverb "Anything worth doing is worth doing well," though it differs in severity of the terms *well* as opposed to *perfectly*. This construct is further obscured by structural problems. The subscale consists of only four questions, the smallest

number of questions of any subscale in Stairs et al.'s (2012) M-CUP. The assessment of black and white thinking is also unique to the M-CUP. In the 15 measures that the authors examined, such a conceptualization did not explicitly exist. It was an aspect of perfectionism of the authors' own conception, derived from several items on previous assessments of dichotomous thinking. The present study could be considered a preliminary test of this new aspect of perfectionism, and future studies could shed further light on whether it accurately reflects maladaptive or adaptive perfectionism, or whether its impact is contextual.

Limitations

In conforming to the needs and availability of our sample, our participants responded to all of the self-report questionnaires in one session. If the option was feasible, we might have otherwise utilized a two-phase design. That is, we would have examined incoming students' residence status and perfectionism at the beginning of their first semester, and assessed their adjustment to college months later. A longitudinal design might have yielded more accurate data about the role that residence status and perfectionism play in a new student's transition to college.

Our participant sample was not ideal in terms of demographics. Despite our best efforts, only 29% of the study sample was comprised of men, reflecting the compositions of the classes from which we drew participants. Furthermore, our participants were predominantly White (83.4%), significantly higher than in the American population (77.9%), and included fewer other ethnic groups (e.g., Black: 2.3% compared to 13.1% nationally). It is important to note, however, that the sample more adequately reflected the population of the area surrounding the university (e.g., 88.4% White, 5% Black; U.S. Dept. of Commerce, 2013). A large sample size likely would have yielded a more representative group and more reliably established outcomes.

We did not counterbalance the perfectionism and college adjustment measures in our protocol. The rationale was that we did not want to prime respondents to the primary object of study, college adjustment. Further, this questionnaire was placed last in order to minimize respondent fatigue, because it was significantly longer than others used in the study (67 items as opposed to 26 in the measure of perfectionism). As a result, order effects might have played a role in the results.

Future Directions

In light of our results, it appears that dimensions of perfectionism are the most pertinent to potential applications of the present study. Future researchers could examine the effectiveness of curbing maladaptive perfectionist ideation. Although perfectionism is a personality trait (Ayearst et al., 2012) and is therefore resistant to change, there are promising options for coping with maladaptive perfectionism. Chang (2012) demonstrated the effectiveness of curtailing maladaptive perfectionist beliefs using emotion-focused coping strategies, and Gnilka, Ashby, and Noble (2012) found that coping methods can reduce anxiety related to maladaptive perfectionism. Argus and Thompson (2008) found that mindfulness-based interventions had the potential to moderate the negative impact of maladaptive perfectionism on depression. Given our findings regarding the negative impact of maladaptive perfectionism and the positive impact of adaptive perfectionism, psychoeducation on appropriate interventions is one avenue for aiding the college transition. Although the literature on managing perfectionist concerns is promising, there has

TABLE 4

Hierarchical Regression With Perfectionism and Residence Status as Predictors of Personal-Emotional Adjustment

$N = 158$	β	95% CI	*M*	*SD*
Predictors				
Step 1				
Perfectionism				
High Standards	.04	[-0.30, 0.61]	23.47	5.72
Dissatisfaction	-.58***	[-1.96, -1.08]	24.15	8.04
Black and White Thinking	.18*	[0.13, 2. 03]	8.22	3.43
Reactivity to Mistakes	-.24**	[-1.49, -0.24]	18.35	5.90
Step 2				
Perfectionism				
High Standards	.05	[-0.30, 0.63]		
Dissatisfaction	-.58***	[-1.97, -1.08]		
Black and White Thinking	.17*	[0.11, 2.02]		
Reactivity to Mistakes	-.24**	[-1.49, -0.23]		
Residence Status	-.03	[-6.63, 4.31]		
Outcome–Personal-Emotional Adjustment			85.34	21.13

Note. R^2 = Proportion of outcome variable variance explained by predictors. $^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$, Cohen's f^2 = effect size. Step 1 $R^2 = .45$, $F(4, 153) = 31.50$, $p < .001$; Cohen's $f^2 = .82$. Step 1 to Step 2 $\Delta R^2 = .00$, $\Delta F(1, 152) = .18$, *NS*. Step 2 $R^2 = .45$, $F(5, 152) = 25.10$, $p < .001$; Cohen's $f^2 = .82$; post-hoc observed power = 1.00, with five predictors, $p = .05$ and $N = 158$.

yet to be research on the influences of such processes on college adjustment. We recommend that researchers investigate how these intervention strategies could improve the college experience of incoming students.

Research on commuter experiences is sparse. The majority of students at the university at which this study was conducted are commuters (69%), yet the majority of our participants were residents (65.7%), highlighting the efforts of the university at retaining students from the first to second year when attrition is at its peak. Institutions with majority commuter populations need to develop alternate means of creating institutional attachment, which is currently the single best predictor of college adjustment (Credé & Niehorster, 2012). Perhaps creating cocurricular opportunities that combine classroom instruction with high levels of peer interaction and institutional identity merit investigation. Furthermore, college adjustment could be investigated in multi-institutional studies with varying degrees of commuter representation.

Further, there is more research needed on predicting college adjustment. Perfectionism and residence status accounted for only part of the variance in predicting adjustment. In keeping with the theoretical perspective of the present study, we posit that related socially derived cognitive processes may contribute variance in predicting college adjustment. In an extension of the present study, we found that self-esteem and cultural capital accounted for 32% and 25% of the variance, respectively, in predicting academic and social adjustment (Soysa, Lapoint, Lahikainen, Fitzpatrick, & McKenna 2013). This finding was consistent with recent research that established self-esteem and generational status (a component of cultural capital) as predictors of college adjustment (Aspelmeier, Love, McGill, Elliott, & Pierce, 2012). However, this effect may be moderated by fit because universities are diverse, and more research is needed concerning predictors of individual fit to various institutions (Nora, 2004).

TABLE 5

Hierarchical Regression With Perfectionism and Residence Status as Predictors of Attachment to Institution

N = 157	β	95% CI	*M*	*SD*
Predictors				
Step 1				
Perfectionism				
High Standards	.18*	[0.11, 1.06]	23.27	5.76
Dissatisfaction	-.43***	[-1.49, -0.54]	23.89	7.98
Black and White Thinking	-.00	[-1.01, 0.99]	8.22	3.34
Reactivity to Mistakes	-.02	[-0.75, 0.61]	18.23	5.73
Step 2				
Perfectionism				
High Standards	.16*	[0.04, 0.99]		
Dissatisfaction	-.41***	[-1.44, -0.50]		
Black and White Thinking	.02	[-0.89, 1.11]		
Reactivity to Mistakes	-.03	[-0.77, 0.58]		
Residence Status	.15*	[0.28, 11.70]		
Outcome–Attachment to Institution			98.18	18.76

Note. R^2 = Proportion of outcome variable variance explained by predictors. $^*p < .05$, $^{***}p < .001$, Cohen's f^2 = effect size. Step 1 $R^2 = .23$, $F(4, 152) = 11.37$, $p < .001$; Cohen's $f^2 = .30$. Step 1 to Step 2 $\Delta R^2 = .02$, $\Delta F(1, 151) = 4.29$, $p = .04$, Cohen's $f^2 = .03$ (small effect size). Step 2 $R^2 = .25$, $F(5, 151) = 10.15$, $p < .001$; Cohen's $f^2 = .34$; post-hoc observed power = 1.00, with five predictors, $p = .05$ and $N = 157$.

Conclusion

Perfectionism and residence status both contribute unique variance in predicting college adjustment. Our findings were consistent with social cognitive theory in the following ways. Perfectionism and residence status constituted different components of the triadic model (cognitive events and social environment, respectively). Each has bearing on the behavioral component of college adjustment. We expanded the literature by identifying aspects of perfectionism and residence status as differential predictors of the types of college adjustment. College adjustment is an important construct because it is a predictor of negative alcohol consequences (LaBrie et al., 2012), and each type of adjustment is indicative of a student's well-being in a particular area. Institutional attachment is an especially pertinent construct to examine because it was the foremost predictor of college attrition (Credé & Niehorster, 2012), yet was inadequately researched. Based on our results, we suggest identification of and intervention for maladaptive perfectionism, as well as an emphasis on resident housing as a means of increasing college adjustment and perhaps decreasing attrition, a prevalent concern of undergraduates and the institutions that serve them.

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Author Note. Samuel O. Lapoint, Champika K. Soysa, Worcester State University, Worcester, MA.

Correspondence regarding this paper should be directed to Champika K. Soysa, Worcester State University, 486 Chandler Street, Worcester, MA. E-mail: csoysa@worcester.edu

