# A Longitudinal Investigation of University Adjustment Among Students With and Without a History of Non-Suicidal Self-Injury


## Abstract

**Objective:** The present study explored differences in four domains of university adjustment (i.e., personal-emotional, social, academic, and institutional attachment) among students with and without a history of engaging in non-suicidal self-injury (NSSI) and examined the independent influence of NSSI on university adjustment.

**Participants and Methods:** Participants were 231 students from a large Canadian university who completed an online survey during their first and second year of university examining their perceived stress, perceived social support, coping self-efficacy, and university adjustment.

**Results:** Relative to students who never engaged in NSSI, those who did reported lower levels of university adjustment across domains. However, NSSI was not a significant predictor of university adjustment after accounting for perceived stress, perceived social support, and coping self-efficacy.

**Conclusions:** This study provides preliminary evidence that engaging in NSSI may not confer additional risk for university adjustment, as students' psychological resources appear to be stronger determinants of adjustment.


*Keywords*: university adjustment, non-suicidal self-injury, coping self-efficacy, social support

**NSSI History and the Transition to University**

Attending university for the first time can be a stressful experience for students[1] and many turn to different coping behaviours to manage their stress[2-4]. Non-suicidal self-injury (NSSI), defined as the deliberate damage of one's own body tissue performed without suicidal intent and for purposes not socially sanctioned[5,6], is a complex coping behaviour that is prevalent among university students[7,8]. As many as 15% to 39% of university students[9-11] report having engaged in NSSI at least once in their lifetime. Moreover, NSSI is a risk factor for future suicidal behaviour[12,13] and is associated with several psychosocial difficulties, such as emotional dysregulation[4], low family support[14], high perceived stress[15], and mental health challenges[16].

Furthermore, students face myriad challenges during the transition to university. These include, but are not limited to, living away from home, adapting to a new learning environment, developing meaningful friendships, and achieving work-study balance[1,17]. Students who have limited coping or psychological resources, such as students with a history of engaging in NSSI, may respond negatively to these challenges and be at increased risk for poor university adjustment[18]. Relative to university students who have never self-injured, those who have are at increased risk for experiencing stress[4,19], anxiety and depressive symptoms[16,20], suicidal ideation[12], and emotion dysregulation[4]. There is additional evidence that NSSI is negatively associated with perceived social support, social connectedness, and coping self-efficacy[21-24], all of which may be important psychological resources during the transition to university.

Coping self-efficacy (CSE), or one's confidence in their ability to effectively cope in response to challenging situations[25], is one example of a psychological resource that has particular relevance during the transition to university. For instance, there is evidence that CSE is negatively associated with emotion dysregulation[23,26] and academic stress[27]. In light of recent

research which has demonstrated that emotion dysregulation and academic stress are both inversely associated with university adjustment[28,29], these findings suggest that CSE may be an important protective factor during the transition to university. Indeed, Olivas[30] explored the role of various protective factors in predicting university adjustment and found CSE to be a significant predictor of successful adjustment.

Despite the elevated prevalence of NSSI among university students[8] and the demonstrated importance of CSE during the transition to university, research specifically exploring NSSI history and CSE in the context of university adjustment is limited. Nevertheless, a growing body of research has revealed that university students with a history of NSSI tend to report low levels of CSE relative to students without such a history[21-23]. In addition, given the positive relationship between CSE and successful university adjustment[30], this suggests that students who have an existing history of engaging in NSSI may be disadvantaged in terms of their university adjustment as a result of their relatively low levels of reported CSE.

In addition to coping self-efficacy, perceived social support is another protective factor during the transition to university[28,31,32]. There is a large body of research documenting the positive associations between perceived social support and university adjustment outcomes including mental health[33], academic adjustment and success[34,35], as well as social and personal-emotional adjustment to university[32,36]. Although a relationship between perceived social support from family and university adjustment has yet to be established, the positive relationship between perceived social support from friends and successful university adjustment has been well-documented in the literature[28,31,32].

Notwithstanding the above, less is known about perceived social support among university students who have a history of engaging in NSSI, particularly during the transition to

university. Rotolone and Martin[24] were the first to document differences in perceived social support among undergraduate students reporting a history of engaging in NSSI. These authors found that students who self-injured at least once perceived lower levels of support from their family, friend(s), and significant other, relative to students who had never self-injured. Similarly, additional studies have demonstrated that students with a history of engaging in NSSI (whether single act or repetitive acts) perceive less social support from their friends when compared to students who had never self-injured[14,37]. Given the relatively low levels of social support that are perceived by students with a history of NSSI, these individuals often report engaging in NSSI as a means of eliciting social support[38,39].

**NSSI History and Domains of University Adjustment**

Considering that students' choice of coping strategies have an impact on their university adjustment[40], research examining the specific influence of NSSI on their ability to effectively cope with demands and stressors in their new learning environment is needed. University adjustment is best conceptualized as a multidimensional process[41] that encompasses four domains of adjustment: *personal-emotional* (i.e., the degree to which students feel physically and mentally well in university), *social* (i.e., the degree to which students feel equipped to develop meaningful relationships with peers and professors on campus), *academic* (i.e., the degree to which students perform and feel motivated to meet the academic demands in university), and *institutional attachment* (i.e., the degree to which students feel satisfied with their university choice and committed to their education). Although the relation between these four university adjustment dimensions and NSSI has not been explored yet, scholars have identified several psychosocial vulnerabilities in university students who have a history of engaging in NSSI; these vulnerabilities may, in turn, influence their adaptation to and perception of university life.

**Personal-emotional adjustment.** To date, the NSSI literature has focused primarily on emotional vulnerabilities among university students who have a history of engaging in self-injury. Several scholars have documented positive associations between NSSI and emotion dysregulation[4], rumination[42], disordered-eating behaviours[43], sleep problems[44], and suicide ideation[12]. Furthermore, there is converging evidence that university students self-injure primarily to reduce the intensity of unpleasant emotions[9]. In light of these findings, students who transition to university with a history of NSSI are likely to have greater difficulty regulating their emotions in the presence of new stressors[4], and thus be at increased risk for poor mental and physical health outcomes when compared to students who have never engaged in NSSI.

**Social adjustment.** A recent review of psychosocial factors impacting university adjustment[28] documented a positive relationship between social interaction abilities and adjustment. However, interpersonal difficulties are common among individuals who have a history of engaging in NSSI[45,46]. For instance, Turner et al[46] found that, relative to emerging adults who never self-injured, those who engaged in NSSI in the past 12 months endorsed higher levels of social anxiety and excessive reassurance seeking, and were less inclined to seek social support at times of distress. In accordance with these findings, other researchers have found that youth engaging in NSSI had a greater likelihood of reporting loneliness[45], issues with bullying[47], and a preference for being alone[45] when compared to youth who had never self-injured. In the context of the transition to university, students who have engaged in NSSI may be more inclined to isolate themselves because of interpersonal challenges, and by the same token, may struggle in terms of their social adjustment to university[28].

**Academic adjustment.** Research investigating academic adjustment among students who engage in NSSI is nascent. In a study examining NSSI history and academic performance,

Kiekens et al[48] found that, compared to freshmen who never self-injured, those reporting a history of engaging in NSSI had a significantly lower academic year percentage at the end of the first year. Importantly, this difference was largely explained by the presence of co-occurring emotional difficulties (i.e., test anxiety and emotional distress). Moreover, university students with a history of NSSI are more susceptible to experiencing stress[4,15] and research has demonstrated an inverse association between perceived stress and academic performance in university[28,49]. Nevertheless, it remains unknown whether students who report a history of engaging in NSSI differ from those who have never self-injured on their academic adjustment during the transition to university.

**Institutional attachment.** Institutional attachment refers to the degree to which students identify with and commit to their institution as a whole[41]. It may manifest as a sense of pride in one's university, a commitment to complete one's degree at that institution, or seeing oneself as a typical student of the institution. Institutional attachment and attachment to peers (i.e., social adjustment) are likely to be entwined, both fostering a sense of belonging which then facilitates adjustment to university life[50]. Research investing institutional attachment in the context of self-injury is scant. It remains unknown whether university students who have a history of engaging in NSSI feel differently attached to, and satisfied with, their institution relative to those who have never engaged in this behaviour. To our knowledge, only a handful studies have examined NSSI in the context of school affiliation[51,52]. Using a prospective longitudinal approach, Kidger et al[51] examined the impact of students' school experiences on future engagement in NSSI. These authors found that negative perceptions of the school environment at age 14 was associated with NSSI engagement at age 16. Along the same line, Young et al[52] found that poor school connectedness in high school increased the likelihood of engaging in NSSI at age 19. While

these findings suggest a possible association between self-injury and school perceptions, the presence of a similar trend in university students remains to be examined.

**The Trajectory of University Adjustment**

Until recently, the literature on the transition to university focused primarily on the experience of first-year students, highlighting several protective and risk factors to their adjustment[30,32,53]. Yet, there is evidence that the passage from first to second year of university can be particularly challenging for students as they receive less institutional support and are faced with increased academic demands and responsibilities[54,55]. In fact, research has revealed that second-year students tend to report greater academic anxiety, self-regulation difficulties[56], procrastination[57], and dissatisfaction with university life than first-year students[58]. There is additional evidence that second-year students receive the least amount of support from their institution relative to students in other stages of their undergraduate degree[53,59]. The reduced support in the second year of university may increase the likelihood that at-risk or vulnerable students feel alienated from their institution, and consequently become increasingly disengaged from university life[54]. Notwithstanding the above, research examining the trajectory of university adjustment is limited and has provided inconclusive results.

**The Present Study**

Despite the fact many university students have a history of engaging in NSSI, no research to date has specifically examined how these students socially integrate themselves on campus, meet academic demands, take care of their physical and mental health, or feel attached to their institution. This line of inquiry is warranted given that early university adjustment plays a central role in predicting academic success, mitigating drop out, and influencing students' performance and persistence[28,30]. In addition, better adjustment to university is associated with favourable

psychosocial outcomes among students including lower levels of perceived stress[18,33] and maladaptive coping[18,40], as well as increased mental health[33], intrinsic motivation[18], self-esteem and social support[31], and life satisfaction[34]. Nevertheless, only a few longitudinal studies have investigated changes in psychosocial functioning in university students who have a history of engaging in NSSI[60]. Of those, scholars have focused primarily on emotional and social adjustment variables (e.g., changes in internalizing behaviours, suicidal ideation, perceived social support), and no other important domains of university adjustment, such as students' academic adjustment and satisfaction with their school environment. Overall, the present study aims to clarify the extent to which NSSI is a predictor of university adjustment.

The overarching goal of this study was to explore differences in university adjustment between students with and without a history of NSSI. The first objective was to compare the trajectory of university adjustment between students with and without a history of NSSI. Specifically, differences in four domains of university adjustment (i.e., personal-emotional, social, academic, and institutional attachment) were examined over the first two of years of university. No hypotheses were made regarding potential interaction effects. Students who reported a history of engaging in NSSI were expected to endorse lower levels of personal-emotional (H1a), social (H1b), and academic (H1c) adjustment to university than those who never self-injured. No hypotheses were formulated regarding group differences in institutional attachment given the absence of research in this area. In light of the evidence that the first two years of university are both associated with unique academic, developmental, and social challenges[58], no significant differences in the four domains of university adjustment were expected over time (H1d). The second objective was to explore the relative influence of NSSI on university adjustment while taking into account well-established risk and protective factors (e.g.,

perceived stress, perceived social support, and coping self-efficacy). It was hypothesized that perceived stress, perceived social support from friends and family, and coping self-efficacy would all significantly predict university adjustment (H2). However, no hypothesis was formulated regarding the role of NSSI history in predicting university adjustment given the absence of research in this area.

## Methods

### Procedure

Participants were first-year students at a large Canadian university who completed a screening measure in the fall semester which contained questions related to student stress and coping (including questions related to an array of coping strategies, such as NSSI), as well as a general question about whether students were willing to be contacted to participate in future studies. Students were then recruited separately for the present study (i.e., with different consent forms and compensation information) based on whether or not they reported a history of NSSI on the screening measure. All interested students completed an online survey in the winter semester, and those who fully completed the survey were invited to complete the same online measures 12 months later. At each time point, students who reported a history of NSSI on the screening measure were compensated $25 for their participation, while those who reported no history of NSSI were entered in a raffle for a one in 20 chance to win a cash prize of $25. This study was approved by the university's institutional ethics board.

### Participants

At Time 1 (T1), the sample consisted of 231 first-year students ($M_{age}$ = 18.45 years, *SD* = .94; 78% female) assigned to the NSSI (*n* = 109) or comparison (*n* = 122) group. Overall, 75% of

students had relocated to attend university, with most coming from Canadian provinces (57%), followed by the United States (22%), Europe (10%), and Asia (6%). Most (64%) lived with someone in their first year of university; of those, 43% lived with roommates in campus residences and 39% lived with family. Of the 231 students who participated at T1, 121 students participated again a year later, resulting in a retention rate of 52%. A small subset of participants ($n$ = 15) were excluded from Time 2 (T2) analyses due to missing data and/or inconsistencies in their reported NSSI history across timepoints. The final sample at T2 was composed of 106 university students ($M_{age}$ = 19.61 years, $SD$ = .87), assigned to the NSSI ($n$ = 54) or comparison ($n$ = 52) group. No significant differences were found between students who participated at both time points versus those who participated at T1 only on any demographic variables, NSSI history or characteristics, or domains of university adjustment.

**Measures**

***Non-suicidal self-injury.*** The first section of the Inventory of Statements About Self-Injury (ISAS) was used to determine students' history of engaging in self-injury and to assess NSSI methods, onset, and recency[61]. Students who completed the first section of the ISAS were prompted to answer a closed-ended question to ascertain if their NSSI engagement began before university (i.e., "Did you self-injure prior to starting university?"). Only students assigned to the NSSI group completed the ISAS at both time points.

***Perceived stress.*** The Perceived Stress Scale (PSS-4) was used to assess students' perceived level of stress in the past month[62]. The PSS-4 is a four-item measure scored on a five-point Likert scale (0 = *never*; 4 = *very often*). Higher scores are indicative of greater perceived stress. The PSS-4 had good internal consistency in the present study (α = .78).

***Perceived social support.*** The Multidimensional Scale of Perceived Social Support (MSPSS) was used to measure perceived family and friend support[63]. The MSPSS is scored on a seven-point Likert scale (1 = *very strongly disagree*; 7 = *very strongly agree*). Internal consistency was excellent for the family (α = .91) and friend (α = .92) subscales in this study.

***Coping self-efficacy.*** The 26-item Coping Self-Efficacy Scale (CSES) was used to measure participants' beliefs in their ability to cope with challenging situations[25]. The CSES is rated on an 11-point Likert scale (0 = *cannot do at all*; 5 = *moderately certain can do*; 10 = *certain can do*) and yields a total scale score and three subscale scores (i.e., problem-focused coping, emotion-focused coping, and social support). Only items pertaining to problem-focused and emotion-focused coping were used to reduce overlap with the MSPSS. Higher CSES scores indicate greater coping self-efficacy. In this study, internal consistency was excellent for the emotion-focused (α = .89) and problem-focused (α = .88) subscales.

***University adjustment.*** The Student Adaptation to College Questionnaire (SACQ) was used to examine students' university adjustment[41]. The SACQ comprises 67 items rated on a nine-point Likert scale (1 = *applies very closely to me*; 9 = *doesn't apply to me at all*) and yields a composite score and four subscales scores reflecting discrete domains of adjustment (i.e., academic, social, personal-emotional, and institutional attachment). Higher scores on the SACQ indicate better university adjustment. Internal consistency for the four individual subscales ranged from .84 to .88 at T1 and from .83 to .87 at T2 in the present study.

**Data Analysis**

Data were analyzed using SPSS version 21. A series of two-way mixed ANOVAs were performed to explore the trajectory of university adjustment among with and without a history of NSSI. The dependent variables were the four dimensions of university adjustment while group

(NSSI vs. comparison) and time (first vs. second year of university) were the between- and within-subject factors, respectively. Follow-up pairwise comparisons were conducted to identify group differences at each time point. A multiple linear regression analysis was then conducted to examine the relative contribution of NSSI on students' overall university adjustment after considering their perceived level of stress, perceived social support, and coping self-efficacy.

## Results

Of the 109 students who reported a history of NSSI at T1 (47% of sample at T1), an average of 3.61 (*SD* = 1.66) NSSI methods were endorsed, with 74% of these students reporting at least three methods. The most common methods were cutting (44%), self-hitting (18%), and severe scratching (18%). Close to 87% of these students reported having last self-injured in the past two years, and 98% reported having self-injured at least once prior to attending university. None of the participants started to self-injure for the first time during the one-year follow-up period.

### The Trajectory of University Adjustment from First to Second Year of University

The first research objective was to examine group and time differences on four dimensions of university adjustment (i.e., personal-emotional, social, academic, and institutional attachment). Table 1 provides a summary of the means and standard deviations for the university adjustment variables by groups and time points. Figure 1 depicts changes in university adjustment from first to second year of university as a function of group membership.

**Personal-emotional adjustment.** Results of the two-way mixed ANOVA revealed that there was no significant main effect of time ($F(1, 104) = 1.26$, $p = .265$), or group by time interaction ($F(1, 104) = .61$, $p = .438$), suggesting that students' personal-emotional adjustment was relatively stable from first to second year of university (H1d). However, significant group

differences emerged in reports of personal-emotional adjustment ($F(1, 104) = 24.81$, $p < .001$, partial $\eta^2 = .19$). In line with H1a, students in the NSSI group ($M = 62.43$, $SD = 16.24$) reported significantly lower personal-emotional adjustment than those in the comparison group ($M = 78.17$, $SD = 16.30$).

**Social adjustment.** The interaction between group and time trended towards statistical significance for social adjustment, $F(1, 104) = 3.79$, $p = .054$, partial $\eta^2 = .04$; power = .49. Consistent with H1b, a significant simple main effect of group did seem to emerge. Specifically, while the groups did not differ in their social adjustment in the first year of university, $F(1, 104) = .31$, $p = .580$, the NSSI group reported a significantly lower level of social adjustment when compared to the comparison group in their second year of university, $F(1, 104) = 5.84$, $p = .017$, partial $\eta^2 = .05$. Additionally, in line with H1d, levels of social adjustment did not significantly change from first to second year of university for participants in either the NSSI group, $F(1, 53) = 1.75$, $p = .19$, or the comparison group, $F(1, 51) = 2.10$, $p = .15$.

**Academic adjustment.** The interaction between group and time for academic adjustment was not significant ($F(1, 104) = 1.04$, $p = .311$), nor was there a significant main effect of time on academic adjustment ($F(1, 104) = 2.10$, $p = .150$), suggesting that students' academic adjustment was relatively stable from first to second year of university (H1d). Nevertheless, results revealed significant group differences in reports of academic adjustment, $F(1, 104) = 7.09$, $p = .009$, partial $\eta^2 = .06$. Overall, as hypothesized (H1c), the NSSI group ($M = 124. 47$, $SD = 24.10$) reported significantly lower academic adjustment than the comparison group ($M = 136.93$, $SD = 24.09$).

**Institutional attachment.** The interaction between group and time on the variable institutional attachment trended towards statistical significance, $F(1, 104) = 3.23$, $p = .075$,

partial $\eta^2$ = .03; power = .43. When further investigating the interaction, a significant simple main effect of time emerged, whereby institutional attachment significantly decreased from first to second year of university for students in the NSSI group ($F(1, 53) = 5.97$, $p = .021$) but not for students in the comparison group, $F(1, 51) = .04$, $p = .834$. Furthermore, and as shown in Figure 1, there was a significant simple main effect of group in reports of institutional attachment in the second year of university but not in the first year. Relative to the comparison group, the NSSI group reported a significantly lower level of institutional attachment in their second year of university, $F(1, 104) = 7.63$, $p = .007$, partial $\eta^2 = .07$. In contrast, the groups did not differ in their reports of institutional attachment in their first year of university, $F(1, 104) = .82$, $p = .368$.

**NSSI on overall university adjustment.** The impact of NSSI history on overall university adjustment, controlling for perceived stress, perceived social support from family and friends, and coping self-efficacy, was then explored. Results from a hierarchical multiple linear regression revealed that Model 1 was statistically significant ($F(4, 203) = 27.21$, $p < .001$) and predicted 34.9% of the variance in university adjustment. As shown in Table 2, perceived stress, perceived social support from friends, and coping self-efficacy significantly contributed to the prediction of university adjustment with the exception of perceived support from family. Interestingly, adding NSSI history to the model in Model 2 did not result in a significant increase in the variance of university adjustment explained, $F(1, 202) = .495$, $p = .483$.

## Discussion

The first research objective was to compare the trajectory of university adjustment between students with and without a history of engaging in NSSI. Specifically, group differences in four domains of university adjustment were explored over the first two years of university.

***Personal-emotional adjustment.*** As expected**,** students in the NSSI group reported lower levels of personal-emotional adjustment to university when compared to those in the comparison group (H1a). This is not surprising given that NSSI is associated with internalizing problems[60], suicidal ideation[64], and sleep and eating disturbances[43,44]. Additionally, in the present study, most students in the NSSI group (89%) self-injured at least once in their first two years of university, indicating that most had recently engaged in this behaviour. There is evidence from previous research that students who engage in NSSI during the university years tend to experience greater emotional and academic distress[48,60] when compared to those who stopped completely or temporarily. Taken together, these findings provide support for the differential levels of personal-emotional adjustment reported by students with and without a history of engaging in NSSI in the present study.

Consistent with our hypothesis (H1d), students in the NSSI and comparison groups did not report a significant change in their personal-emotional adjustment from first to second year of university. This finding is consistent with a growing body of research, which suggests that the second year of university is equally if not more challenging than the first one[56,65]. Indeed, the transition from first to second year of university is often described as a period of reflection and developmental growth during which students must make critical decisions around their education[58,65]. Ultimately, the challenges faced by students in their first and second year of university may explain the absence of fluctuation in reports of personal-emotional adjustment during this period of time.

***Social adjustment.*** The group by time interaction effect on social adjustment trended towards significance in the present study and, as such, results are tentative and require replication. Nevertheless, results revealed that students in the NSSI group reported lower levels

of social adjustment to university when compared to those in the comparison group during the second year of university, as hypothesized (H1b). A growing body of literature supports an association between social anxiety, interpersonal conflicts[46], an affinity towards aloneness[45], and NSSI engagement in emerging adults. In addition, given that self-injury continues to be stigmatized in educational settings[7], it is possible that students in the NSSI group may have experienced greater difficulty integrating themselves on campus as a result of social discomfort, shame about their residual scaring, and/or mental health challenges. Accordingly, students in the NSSI group may have preferred to spend time alone or prioritize people they were familiar with prior to transitioning to university (e.g., their romantic partner or friends from high school), in turn reducing their inclination to develop new relationships. In contrast, students in the comparison group may have developed new friendships on campus by the second year of university and felt more confident navigating their campus environment, approaching professors, and attending social events.

Also consistent with our hypothesis (H1d), students across groups did not report a significant change in their social adjustment from first to second year of university. Based on the work of Secuban[66], it is plausible that students across groups felt similarly impacted by the challenges of creating a new social network, interacting with professors, and participating in social activities offered on campus in their first year of university. Importantly, the vast majority of participating students had to relocate from another province or country (75%) and most lived in campus residences. As such, their perceptions of social adjustment to university have likely been influenced by their experience of moving away from home, leaving their friendship and family network behind, adapting to their new living situation, and navigating a large campus environment. Together, these external factors may partly explain the lower social adjustment

means obtained in this study when compared to previous studies on university adjustment[31] as well as the lack of change over time in social adjustment.

Although these findings are tentative, they provide a basis to suggest that the gap in social adjustment between students with and without a history of engaging in NSSI may widen during the second year of university. Considering the importance of social integration on university adjustment and institutional attachment[50], further research is needed to identify the factors underlying the seemingly low social adjustment among second-year students who have a history of engaging in NSSI, relative to students without such a history.

***Academic adjustment***. Adding support to the work of Kiekens et al[48], students in the NSSI group reported lower levels of academic adjustment when compared to those in the comparison group (H1c). Previous research has suggested that these lower levels of academic adjustment reported by students with a history of NSSI are likely attributed to a host of factors beyond the act of NSSI itself[48]. These factors may include underlying distress, a heightened susceptibility to perceived stress and its negative impacts, and their elevated tendency for maladaptive perfectionism, all of which may negatively impact academic performance [28,49,67,68]. These findings, though preliminary, highlight the importance of considering both personal and contextual factors when interpreting differences in academic adjustment between students with and without a history of engaging in NSSI.

***Institutional attachment***. Similar to the dimension of social adjustment, the group by time interaction for institutional attachment trended towards significance; our interpretation of the results is therefore tentative and additional research is needed to ascertain these findings. Specifically, consistent with the other dimensions of university adjustment, students in the NSSI group reported lower levels of institutional attachment relative to those in the comparison group.

The reduced support and guidance commonly observed in the second year of university represents another factor that may have partly contributed to these tentative findings. As argued by Pattengale and Schreiner[69], second-year students are at risk of experiencing feelings of abandonment by their institution given the emphasis is on supporting first-year students navigating their transition to university. The reduced institutional support can leave some students feeling dissatisfied with their educational experiences[58]. This perception may have been particularly salient among students who transitioned to university with fewer psychological resources. As discussed previously, students who have engaged in NSSI tend to experience greater stress[19], have a higher likelihood of turning to unhealthy coping behaviours[70,71], feel less supported by others[24], and have less confidence in their ability to problem-solve in stressful situations[72] relative to those who never self-injured. It is therefore possible that students with a history of engaging in NSSI transitioned to university with fewer psychological resources which, in turn, might have increased their vulnerability to emotional, social, and academic adjustment difficulties. Overall, the personal and institutional factors discussed above have likely contributed to the tentatively observed group differences in university attachment among students with and without a history of engaging in NSSI.

Overall, students with a history of engaging in NSSI significantly differed from those with no such history on the four university adjustment dimensions. Importantly, these differences were more pronounced in the second year of university relative to the first one for the dimensions of social adjustment and institutional attachment. Considering that students' early university adjustment is highly predictive of their academic engagement and university persistence[28], large-scale longitudinal studies are needed to identify personal (e.g., co-occurring

mental health difficulties) and contextual factors (e.g., level of institutional support) accounting for the increasing gap in university adjustment.

The final objective of this study was to examine the impact of NSSI on university adjustment after taking into account their perceived stress, perceived social support from family and friends, and coping self-efficacy. As expected and in line with previous research[28,30-32,36], perceived stress, social support from friends, and CSE all emerged as significant predictors of university adjustment. Interestingly, perceived social support from family did not emerge as a significant predictor of overall adjustment, although perceived social support from friends did. This is in line with previous research[32] and may be explained by the fact that, as noted earlier, a large proportion of the students in the present sample (75%) had to relocate from abroad to attend university. As such, the availability and support of peers in their immediate environment may be a particularly salient factor impacting their university adjustment[31].

Surprisingly, NSSI did not predict students' adjustment to university after taking into account their perceived stress, perceived social support from friends, and coping self-efficacy. This finding suggests that university adjustment may not be primarily affected by NSSI per se, but rather by students' access to psychological resources. While these findings challenge past research documenting the impact of coping behaviours on university adjustment[40,73], they need to be interpreted with caution. Importantly, this study examined the impact of having a lifetime history of engaging in NSSI on university adjustment. Considering there are individual differences among students who have a history of engaging in NSSI (e.g., in terms of frequency, methods, intensity of urges, and mental health needs), future research adopting a more nuanced approach is needed. Specifically, a direction for future research would be to examine whether the

frequency of engagement in NSSI during the first year of university has a direct influence on students' academic, social, and emotional adjustment.

Despite this limitation, it is conceivable that university adjustment is affected primarily by students' perceived stress level, access to social support from friends, and confidence in their ability to cope with challenges. In the current study, several personal and/or environmental factors have likely contributed to the lower adjustment means reported by students with a history of engaging in NSSI. As this is the first study to examine university adjustment in the context of NSSI, more research is needed to elucidate these findings.

**Limitations and Future Directions for Research**

Although this study adds a preliminary understanding of the relation between NSSI and university adjustment, it is not without limitations. For instance, the data are entirely based on answers provided by students attending a large, urban, and highly ranked competitive university in Canada where academic pressures may be greater than in other universities. Ultimately, their university adjustment may not be comparable to that of students attending smaller and less competitive community colleges or universities. In addition, the small sample size is a limitation in the current study, as it may have reduced the power to detect statistically significant interaction effects. For example, the power values to detect a significant interaction on the social adjustment and institutional attachment variables were .49 and .43, respectively. Replicating these findings with a larger sample would ensure that all differences are detected and provide support for wider generalization of conclusions. Furthermore, recency of NSSI engagement was not assessed in the present manuscript. An exploration into the continuity of NSSI engagement as students adjust to university would be a worthwhile future direction of research. Finally, the exploratory nature of the present study led us to interpret findings that trended towards

significance (i.e., *p*-values that were above .05 but below .10). While this statistical practice is in line with a number of best-practice recommendations for social science research[74-76], it is nonetheless controversial and may be considered a limitation of the study. As such, these preliminary findings require replication.

**Conclusion**

The results discussed above have significant implications for university service providers, including psychologists, counsellors, trainees, as well as directors of clinical services. The findings obtained in this study suggest that having a history of engaging in NSSI may not confer additional risk for poor university adjustment. Instead, they indicate that students' perceived stress, coping self-efficacy, and perceived social support from friends have a greater impact on their university adjustment. This reinforces the importance of building students' psychological resources rather than trying to reduce the frequency of their engagement in NSSI. Specifically, given that significant differences between students with and without a history of NSSI were found across all facets of university adjustment, this provides further support for the notion that limited psychological resources do, in fact, confer risk for university maladjustment. This is especially pertinent in the context where universities are increasing their efforts to promote students' wellness and self-care early on in their degree[77].

Overall, the findings obtained in this study add to the literature on NSSI by providing preliminary evidence that engaging in self-injurious behaviours may not confer additional risk for university adjustment in the context of the limitations previously discussed. This is perhaps the most important finding as it nuances previous research suggesting that engaging in NSSI increases the risk for social, emotional, and behavioural difficulties[16,78,79]. In the current study, NSSI was not a significant predictor of university adjustment after considering perceived stress,

social support from friends, and coping self-efficacy. Accordingly, students' psychological resources appear to be strong determinants of their adjustment to university. Overall, findings provide additional support to past research suggesting that NSSI is a symptom of underlying distress[48,80]. While these findings need to be replicated in a larger and more diverse sample of students with and without a history of engaging in NSSI, they reinforce the importance of prevention efforts to help students manage their stress, maintain healthy peer relationships, and develop self-confidence in their ability cope with the demands of university.

## References

1. Azmitia M, Syed M, Radmacher K. Finding your niche: Identity and emotional support in emerging adults' adjustment to the transition to college. *J Res Adolesc.* 2013;23(4):744-761. doi:10.1111/jora.12037

2. Ayalew M, Tafere M, Asmare Y. Prevalence, trends, and consequences of substance use among university students: Implications for intervention. *Int Q Community Health Educ*. 2018;38(3):169-173. doi:10.1177%2F0272684X17749570

3. Böke BN, Mills DJ, Mettler J, Heath NL. Stress and coping patterns of university students. *J Coll Stud Dev.* 2019;60(1):85-103. doi:10.1353/csd.2019.0005

4. Ewing L, Hamza CA, Willoughby T. Stressful experiences, emotion dysregulation, and nonsuicidal self-injury among university students. *J Youth Adolesc.* 2019;48:1379-1389. doi:10.1007/s10964-019-01025-y

5. American Psychiatric Association. *Diagnostic and Statistical Manual of Mental Disorders*. 5th ed. American Psychiatric Publishing, 2013. doi:10.1176/appi.books.9780890425596.

6. International Society for the Study of Self-Injury. About self-injury: What is nonsuicidal self-injury? https://www.itriples.org/category/about-self-injury. Updated May, 2018. Accessed January 20, 2019.

7. Lewis SP, Heath NL, Hasking PA, Whitlock JL, Wilson MS, Plener PL. Addressing self-Injury on college campuses: Institutional recommendations. *J Coll Counseling.* 2019;22:70-82. doi:10.1002/jocc.12115

8. Wester K, Trepal H, King K. Nonsuicidal self-injury: Increased prevalence in engagement. *Suicide Life Threat Behav.* 2018;48(6):690-698. doi:10.1111/sltb.12389

9. Cipriano A, Cella S, Cotrufo P. Nonsuicidal self-injury: A systematic review. *Front Psychol.* 2017;8:1946. doi:10.3389/fpsyg.2017.01946

10. Swannell SV, Martin GE, Page A, Hasking P, St John N. Prevalence of non-suicidal self-injury in nonclinical samples: Systematic review, meta-analysis, and meta-regression. *Suicide Life Threat Behav.* 2014;44(3):273-303. doi:10.1111/sltb.12070

11. Whitlock J, Prussien K, Pietrusza C. Predictors of self-injury cessation and subsequent psychological growth: Results of a probability sample survey of students in eight universities and colleges. *Child Adolesc Psychiatry Ment Health.* 2015;9:19. doi:10.1186/s13034-015-0048-5

12. Kiekens G, Hasking P, Claes L, Mortier P, Auerbach RP, Boyes M, et al. The DSM-5 nonsuicidal self-injury disorder among incoming college students: Prevalence and associations with 12-month mental disorders and suicidal thoughts and behaviors. *Depress Anxiety.* 2018;35(7):629-637. doi:10.1002/da.22754

13. Ribeiro JD, Franklin JC, Fox KR, Bentley KH, Kleiman EM, Chang BP, et al. Self-injurious thoughts and behaviors as risk factors for future suicide ideation, attempts, and death: A meta-analysis of longitudinal studies. *Psychol Med.* 2016;46:225-236. doi:10.1017/S0033291715001804

14. Muehlenkamp J, Brausch A, Quigley K, Whitlock J. Interpersonal features and functions of nonsuicidal self-injury. *Suicide Life Threat Behav*. 2013;43:67-80. doi:10.1111/j.1943-278X.2012.00128.x

15. Kiekens G, Bruffaerts R, Nock MK, Van de Ven M, Witteman C, Mortier P, et al. Non-suicidal self-injury among Dutch and Belgian adolescents: Personality, stress, and coping. *Eur Psychiatry.* 2015;30(6):743-749. doi:10.1016/j.eurpsy.2015.06.007

16. Burke TA, Piccirillo ML, Moore-Berg SL, Alloy LB, Heimberg RG. The stigmatization of nonsuicidal self-injury. *J Clin Psychology.* 2019;75:481-498. doi:10.1002/jclp.22713

17. Arnett JJ. College students as emerging adults. *Emerging Adulthood.* 2016;4(3):219-222. doi:10.1177/2167696815587422

18. Montgomery S, Gregg DH, Somers CL, Pernice-Duca F, Hoffman A, Beeghly M. Intrapersonal variables associated with academic adjustment in United States college students. *Curr Psychol*. 2019;38(1):40-49. doi:10.1007/s12144-016-9533-0

19. Richmond S, Hasking P, Meaney R. Psychological distress and non-suicidal self-injury: The mediating roles of rumination, cognitive reappraisal, and expressive suppression. *Arch Suicide Res.* 2017;21:62-72. doi:10.1080/13811118.2015.1008160

20. Serras A, Saules KK, Cranford JA, Eisenberg D. Self-injury, substance use, and associated risk factors in a multi-campus probability sample of college students. *Psychol Addict Behav.* 2010;24(1):119-128. doi:10.1037/a0017210

21. Bennett SE. *Childhood Abuse, Dissociation, and Coping Self-Efficacy as Predictors of Nonsuicidal Self-Injury* [dissertation]. Pasadena, CA: Fuller Theological Seminary; 2017.

22. Heath NL, Joly M, Carsley D. Coping self-efficacy and mindfulness in non-suicidal self-injury. *Mindfulness.* 2016;7(5):1132-1141. doi:10.1007/s12671-016-0555-3

23. Midkiff MF, Lindsey CR, Meadows EA. The role of coping self-efficacy in emotion regulation and frequency of NSSI in young adult college students. *Cogent Psychol.* 2018;5(1):1520437. doi:10.1080/23311908.2018.1520437

24. Rotolone C, Martin G. Giving up self-injury: A comparison of everyday social and personal resources in past versus current self-injurers. *Arch Suicide Res.* 2012;16:147-158. doi:10.1080/13811118.2012.667333

25. Chesney MA, Neilands TB, Chambers DB, Taylor JM, Folkman S. A validity and reliability study of the coping self-efficacy scale. *Br J Health Psychol.* 2006;11:421-437. doi:10.1348/135910705X53155

26. Luberto CM, Cotton S, McLeish AC, Mingione CJ, O'Bryan EM. Mindfulness skills and emotion regulation: The mediating role of coping self-efficacy. *Mindfulness.* 2014;5(4):373-380. doi:10.1007/s12671-012-0190-6

27. Watson JC, Watson AA. Coping self-efficacy and academic stress among Hispanic first-year college students: The moderating role of emotional intelligence. *J Coll Counseling,* 2016;19:218-230. doi:10.1002/jocc.12045

28. Fennie T, Mayman Y, van Louw C, Useh E. Psychosocial factors impacting the college adjustment of undergraduate students: A scoping review. *J Psychol Afr.* 2020;30(2):96-105. doi:10.1080/14330237.2020.1716548

29. Klaber J. *The Relationship Among Trauma, Attachment Style, Emotion Regulation, and Overall College Adjustment* [dissertation]. Chicago, IL: Roosevelt University; 2021.

30. Olivas N. *Predicting College Adjustment and Retention: The Role of Protective Factors* [dissertation]. Fort Collins, CO; Colorado State University; 2020.

31. Friedlander LJ, Reid GJ, Shupak N, Cribbie R. Social support, self-esteem, and stress as predictors of adjustment to university among first-year undergraduates. *J Coll Stud Dev.* 2007;48:259-274. doi:10.1353/csd.2007.0024

32. Mettler J, Carsley D, Joly M, Heath NL. Dispositional mindfulness and adjustment to university. *J Coll Stud Ret.* 2017;21(1). doi:10.1177/1521025116688905

33. Chui R, Chan C-K. School adjustment, social support, and mental health of mainland Chinese college students in Hong Kong. *J Coll Stud Dev.* 2017;58(1):88-100. doi:10.1353/csd.2017.0005

34. Akanni AA, Oduaran C. Perceived social support and life satisfaction among freshmen: Mediating roles of academic self-efficacy and academic adjustment. *J Psychol Afr.* 2018;28(2):89-93. doi:10.1080/14330237.2018.1454582

35. Mason HD. Factors that enhance academic learning and study behaviours: A qualitative study. *J Psychol Afr.* 2019;29(1):67-72. doi:10.1080/14330237.2019.1568087

36. Awang MM, Kutty FM, Ahmad AR. Perceived social support and well being: First-year student experience in university. *Int Educ Stud.* 2014;7:261-270. doi:10.5539/ies.v7n13p261

37. Christoffersen MN, Møhl B, DePanfilis D, Vammen KS. Non-suicidal self-injury - Does social support make a difference? An epidemiological investigation of a Danish national sample. *Child Abuse Negl.* 2015;44:106-116. doi:10.1016/j.chiabu.2014.10.023

38. Nock MK. Self-injury. *Annu Rev Clin Psychol.* 2010;6:339-363. doi:10.1146/annurev.clinpsy.121208.131258

39. Turner BJ, Cobb RJ, Gratz KL, Chapman AL. The role of interpersonal conflict and perceived social support in nonsuicidal self-injury in daily life. *J Abnorm Psychol.* 2016;125(4):588-598. doi:10.1037/abn0000141

40. Katz S, Somers CL. Individual and environmental predictors of college adjustment: Prevention and intervention. *Curr Psychol.* 2017;36:56-65. doi:10.1007/s12144-015-9384-0

41. Baker RW, Siryk B. *Manual for student adaptation to college questionnaire*. Western Psychological Services; 1989.

42. Arbuthnott AE, Lewis SP, Bailey HN. Rumination and emotions in nonsuicidal self-injury and eating disorder behaviors: A preliminary test of the emotional cascade model. *J Clin Psychol.* 2015;71(1):62-71. doi:10.1002/jclp.22115

43. Muehlenkamp JJ, Peat CM, Claes L, Smits D. Self-injury and disordered eating: Expressing emotion dysregulation through the body. *Suicide Life Threat Behav.* 2012;42:416-425. doi:10.1111/j.1943-278X.2012.00100.x

44. Ennis CR, Short NA, Moltisanti AJ, Smith CE, Joiner TE, Taylor J. Nightmares and nonsuicidal self-injury: The mediating role of emotional dysregulation. *Compr Psychiatry.* 2017;76:104-112. doi:10.1016/j.comppsych.2017.04.003

45. Gandhi A, Luyckx K, Goossens L, Maitra S, Claes L. Association between non-suicidal self-injury, parents and peers related loneliness, and attitude towards aloneness in Flemish adolescents: An empirical note. *Psychol Belg.* 2018;58:3-12. doi:10.5334/pb.385

46. Turner BJ, Wakefield MA, Gratz KL, Chapman AL. Characterizing interpersonal difficulties among young adults who engage in nonsuicidal self-injury using a daily diary. *Behav Ther.* 2017;48:366-379. doi:10.1016/j.beth.2016.07.001

47. Garisch JA, Wilson MS. Prevalence, correlates, and prospective predictors of non-suicidal self-injury among New Zealand adolescents: Cross-sectional and longitudinal survey data. *Child Adolesc Psychiatry Ment Health.* 2015;9:1-11. doi:10/1186/s13034-015-0055-6

48. Kiekens G, Claes L, Demyttenaere K, Auerbach RP, Green JG, Kessler RC, et al. Lifetime and 12-month nonsuicidal self-injury and academic performance in college freshmen. *Suicide Life Threat Behav.* 2016;46:563-576. doi:10.1111/sltb.12237

49. Manjareeka M, Yadav S. Predictors of high achievers in Indian medical undergraduates: Association with emotional intelligence and perceived stress. *J Educ Health Promot.* 2020;9:202. doi:10.4103/jehp.jehp_263_20

50. Maunder RE. Students' peer relationships and their contribution to university adjustment: The need to belong in the university community. *J Further Higher Educ.* 2018;42:756-768. doi:10.1080/0309877X.2017.1311996

51. Kidger J, Heron J, Leon DA, Tilling K, Lewis G, Gunnell D. Self-reported school experience as a predictor of self-harm during adolescence: A prospective cohort study in the South West of England. *J Affect Disord*. 2015;173:163-169. doi:10.1016/j.jad.2014.11.003

52. Young R, Sweeting H, Ellaway A. Do schools differ in suicide risk? The influence of school and neighbourhood on attempted suicide, suicidal ideation and self-harm among secondary school pupils. *BMC Public Health.* 2011;11:874. doi:10.1186/1471-2458-11-874

53. Lee C, Dickson DA, Conley CS, Holmbeck GN. A closer look at self-esteem, perceived social support, and coping strategy: A prospective study of depressive symptomatology across the transition to college. *J Soc Clin Psychol.* 2014;33:560-585. doi:10.1521/jscp.2014.33.6.560

54. Graunke SS, Woosley SA. An exploration of the factors that affect the academic success of college sophomores. *Coll Stud J.* 2005;39:367-377. doi:10.1353/csd.0.0109

55. Schaller MA. Wandering and wondering: Traversing the uneven terrain of the second college year. *About Campus.* 2005;10:17-24. doi:10.1002/abc.131

56. Stewart M, Darwent S. (2014). Psychological orientations to learning in the second year of university. In: Milsom C, Stewart M, Yorke M, Elena Z, eds. *Stepping Up to the Second Year at University*. London, UK: Routledge; 2014:39-53.

57. Stewart M, Stott T, Nuttall AM. Study goals and procrastination tendencies at different stages of the undergraduate degree. *Stud Higher Educ.* 2016;41:2028-2043. doi:10.1080/03075079.2015.1005590

58. Sterling AJ. Student experiences in the second year: Advancing strategies for success beyond the first year of college. *Strategic Enrollment Management Quarterly*. 2018;5:136-149. doi:10.1002/sem3.20113

59. Boivin MJ, Fountain G, Baylis B. Meeting the challenges of the sophomore year. In: Schreiner LA, Pattengale J, eds. *Visible Solutions for Invisible Students: Helping Sophomores Succeed*. Columbia, SC: University of South Carolina; 2000:118.

60. Hamza CA, Willoughby T. A longitudinal person-centered examination of nonsuicidal self-injury among university students. *J Youth Adolesc.* 2014;43:671-685. doi:10.1007/s10964-013-9991-8

61. Klonsky ED, Glenn CR. Assessing the functions of non-suicidal self-injury: Psychometric properties of the Inventory of Statements About Self-injury (ISAS). *J Psychopathol Behav Assess.* 2009;31:215-219. doi:10.1007/s10862-008-9107-z

62. Cohen S, Kamarck T, Mermelstein R. A global measure of perceived stress. *J Health Soc Behav.* 1983;24:385-396. doi:10.2307/2136404

63. Zimet GD, Dahlem NW, Zimet SG, Farley GK. The multidimensional scale of perceived social support. *J Pers Assess.* 1988;52:30-41. doi:10.1207/s15327752jpa5201_2

64. Hamza CA, Willoughby T. Nonsuicidal self-injury and suicidal risk among emerging adults. *J Adolesc Health.* 2016;59:411-415. doi:10.1016/j.jadohealth.2016.05.019

65. Gahagan J, Hunter MS. The second-year experience: Turning attention to the academy's middle children. *About Campus.* 2006;11:17-22. doi:10.1002/abc.168

66. Secuban MJ. The social readiness of first-and second-year college students: Variables supporting success. *e-Journal of Organizational Learning and Leadership.* 2012;10(1). https://www.leadingtoday.org/weleadinlearning/Spring2012/Article%202%20-%20Secuban.pdf.

67. Hanchon TA. The relations between perfectionism and achievement goals. *Pers Individ Dif.* 2010;49:885-890. doi:10.1016/j.paid.2010.07.023

68. Hershner SD, Chervin RD. Causes and consequences of sleepiness among college students. *Nat Sci Sleep.* 2014;6:73-84. doi:10.2147/NSS.S62907

69. Pattengale J, Schreiner LA. What is the sophomore slump and why should we care? In: Schreiner LA, Pattengale J, eds. *Visible Solutions for Invisible Students: Helping Sophomores Succeed*. Columbia, SC: University of South Carolina; 2000.

70. Andover MS, Morris BW. Expanding and clarifying the role of emotion regulation in nonsuicidal self-injury. *Can J Psychiatry*. 2014;59:569-575. doi:10.1177/070674371405901102

71. Hasking P, Momeni R, Swannell S, Chia S. The nature and extent of non-suicidal self-injury in a non-clinical sample of young adults. *Arch Suicide Res.* 2008;12:208-218. doi:10.1080/13811110802100957

72. Nock MK, Mendes WB. Physiological arousal, distress tolerance, and social problem-solving deficits among adolescent self-injurers. *J Consult Clin Psychol.* 2008;76:28-38. doi:10.1037/0022-006X.76.1.28

73. Perera HN, DiGiacomo M. The role of trait emotional intelligence in academic performance during the university transition: an integrative model of mediation via social support,

coping, and adjustment. *Pers Individ Dif.* 2015;83:208-213. doi:10.1016/j.paid.2015.04.001

74. Kim JH, Choi I. Choosing the level of significance: A decision-theoretic approach. *Abacus.* 2019;57(1):27-71. doi:10.1111/abac.12172

75. Meyers LS, Gamst G, Guarino AJ. *Applied Multivariate Research: Design and Interpretation.* 3rd ed. Thousand Oaks, CA: SAGE Publications Inc.; 2016.

76. Pituch KA, Stevens JP. *Applied Statistics for the Social Sciences*. 6th ed. England, UK: Routledge; 2016.

77. Lee C. Student mental health services at McGill transformed by new Rossy Student Wellness Hub. *McGill Newsroom*. https://www.mcgill.ca/newsroom/channels/news/student-mental-health-services-mcgill-transformed-new-rossy-student-wellness-hub-293744. Updated January 28, 2019. Accessed February 5, 2019.

78. Burke TA, Hamilton JL, Abramson LY, Alloy LB. Non-suicidal self-injury prospectively predicts interpersonal stressful life events and depressive symptoms among adolescent girls. *Psychiatry Res.* 2015;228:416-424. doi:10.1016/j.psychres.2015.06.021

79. Burke TA, Hamilton JL, Ammerman BA, Stange JP, Alloy LB. Suicide risk characteristics among aborted, interrupted, and actual suicide attempters. *Psychiatry Res.* 2016;242:357-364. doi:10.1016/j.psychres.2016.05.051

80. Baetens I, Claes L, Muehlenkamp J, Grietens H, Onghena P. Differences in psychological symptoms and self-competencies in non-suicidal self-injurious Flemish adolescents. *J Adolesc.* 2012;35:753-759. doi:10.1016/j.adolescence.2011.11.001

**Table 1**

*Means and Standard Deviations for SACQ Dimensions by Group and Time Point*

| | NSSI | Comparison | Total Sample |
|---|---|---|---|
| Year 1 | | | |
| Personal-emotional | 62.09 (17.77) | 76.33 (19.87) | 69.08 (20.06) |
| Social | 104.83 (26.30) | 107.67 (26.42) | 106.23 (26.27) |
| Academic | 123.93 (27.50) | 133.81 (27.57) | 128.77 (27.85) |
| Institutional attachment | 94.02 (22.09) | 97.63 (18.94) | 95.79 (20.59) |
| Year 2 | | | |
| Personal-emotional | 62.76 (20.62) | 80.02 (17.94) | 71.23 (21.12) |
| Social | 99.98 (28.14) | 112.37 (24.43) | 106.06 (26.98) |
| Academic | 125.02 (26.13) | 140.06 (28.36) | 132.40 (28.15) |
| Institutional attachment | 87.67 (21.55) | 98.21 (17.46) | 92.84 (20.26) |

*Note*. Standard deviations are in parentheses. Higher scores indicate greater university adjustment. SACQ = Student Adjustment to College Questionnaire.

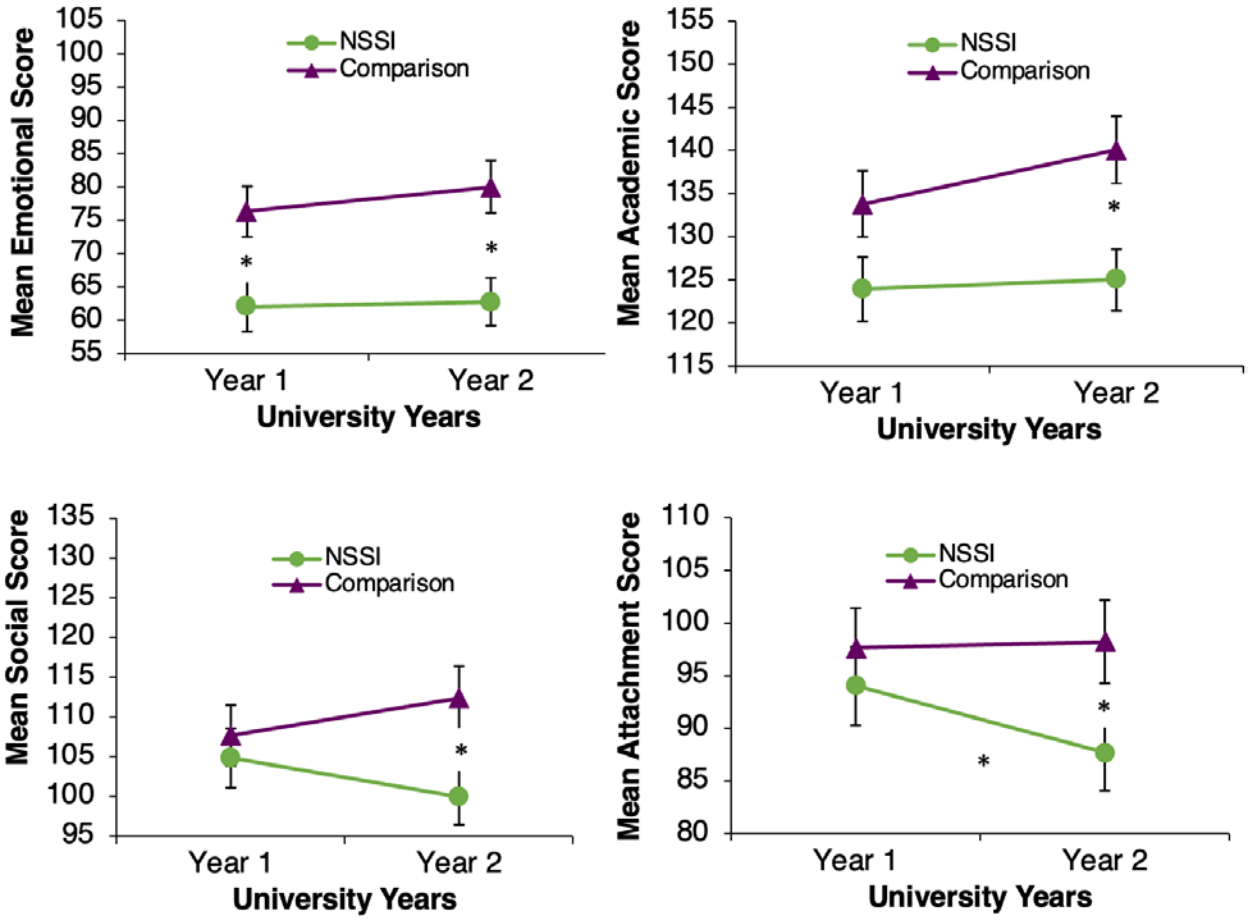


**Figure 1.** Mean subscale scores for SACQ dimensions in the first and second year of university among students in the NSSI and comparison groups. Error bars display the standard error of the mean. *$p < .05$

**Table 2**

*Predictors of University Adjustment at Time 1*

| | Variables | *B* | *SE B* | *β* |
|---|---|---|---|---|
| Model 1 | Stress | -4.81 | 1.41 | -.22* |
| | Coping self-efficacy | 0.51 | 0.13 | .27** |
| | Social support from friends | 2.80 | 0.71 | .25** |
| | Social support from family | 0.69 | 0.65 | .07 |
| Model 2 | Stress | -4.89 | 1.41 | -.22* |
| | Coping self-efficacy | 0.53 | 0.13 | .28** |
| | Social support from friends | 2.82 | 0.72 | .26** |
| | Social support from family | 0.79 | 0.67 | .08 |
| | Lifetime NSSI history | 5.80 | 8.24 | .05 |

**$p < .001$, *$p < .05$