Coping behaviors, abuse history, and counseling: Differentiating college students who self-injure.

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Abstract:

Nonsuicidal self-injury is an important concern that has received limited attention. In this study, the authors explored several factors differentiating three student groups: never self-injured, self-injured in the past, and currently self-injure. Among the factors investigated, results showed that currently self-injuring students were younger, less likely to use problem-focused coping behaviors, and substantially more likely to be in counseling. College counseling implications, effect sizes, and limitations are discussed.

Keywords: counseling | coping behaviors | abuse | college students | self-injury | self-harm

Article:

Nonsuicidal self-injury (NSSI) is an increasingly important topic for mental health professionals, especially those working on college and university campuses. In fact, Walsh (2006) reported that the prevalence of NSSIs has increased by at least 150% in recent decades (1970-1990). Although the prevalence among college-age populations seems to be lower than that of clinical populations, it is higher than that of the U.S. general population (Briere & Gil, 1998; Clarkin, Widiger, Frances, Hurt, & Gilmore, 1983; Gratz, 2001; Murray, Wester, & Paladino, 2008). More specifically, various researchers have reported that at least 7% of college and university students currently were self-injuring (Murray et al., 2008), with up to 35% of students currently self-injuring or having a history of self-injury (Gratz, 2001). Some of these students matriculate with these behaviors already established (Jacobs Brumberg, 2006), whereas others begin self-injuring after arriving at college. Furthermore, although a few self-injuring students may be asked to leave their institutions as a result of the seriousness of their behaviors, most students who self-injure stay in college and persist through graduation (Jacobs Brumberg, 2006).

Therefore, we believe in the importance of college counselors and other student services professionals having a strong working knowledge of NSSI behaviors to guide their interventions and responses to student needs. Unfortunately, only limited information is available in the extant college counseling literature concerning NSSIs and their correlates among campus populations. We begin to fill this gap by examining the relationship between NSSI behaviors, abuse history, coping behaviors, life satisfaction, and use of counseling services.

NSSI Behaviors

According to Simeon and Favazza's (2001) widely accepted definition, the term NSSI refers to an intentional physical act, against oneself, which causes immediate tissue damage, with no intention to die from the self-harming behavior. Some examples of NSSIs possibly existing within the college population are cutting one's skin, scratching oneself, burning one's skin, pulling out one's hair (i.e., trichotillomania), or hitting oneself.

NSSI behaviors tend to have an onset in the early teens to the mid-20s (Favazza & Conterio, 1988; Walsh, 2006), thus, around traditional college age. Although not much is known concerning the trajectory of self-injury, Whitlock, Powers, and Eckenrode (2006) indicated that 40% of their college sample stopped self-injuring within 1 year, whereas a total of 71% stopped self-injuring within 5 years. However, approximately 30% are continuing to use self-injury as a method of self-expression or coping after 5 years. This is concerning because approximately 30% will continue to self-injure throughout their college life, and an additional 30% will continue NSSI behavior after college. The concern relates to these individuals experiencing comorbid mental health disorders (e.g., Jacobson & Gould, 2007) and various difficulties they may experience when attending college (Bean, 1985; Eisenberg, Golberstein, & Gollust, 2007; Kelly, 2007).

When considering mental health concerns of students who self-injure, no formal mental health diagnosis exists for NSSI. However, researchers have identified many correlates, including the presence of diagnosable mental disorders such as depressive disorders, eating disorders, and borderline personality disorder (e.g., Favazza, DeRosear, & Conterio, 1989; Jacobson & Gould, 2007; Trepal & Wester, 2007), and situational and environmental concerns such as family conflict, neglect, loss, divorce, childhood abuse, and dating violence (e.g., Grossman & Siever, 2001; Levenkron, 1998; Murray et al., 2008). Whitlock et al. (2006) also found that emotional and sexual abuse in childhood--but not physical abuse--were related to NSSI behaviors in a college population. According to Gratz (2006), an interaction between the inability to express emotion, feeling intense affect, and experiencing childhood maltreatment seemed to differentiate college students who self-injure from those who do not.

Knowing that approximately 7% of students on college campuses may be currently self-injuring and that they might be experiencing multiple correlates such as a history of abuse and the presence of additional diagnosable mental disorders, we believe a salient question becomes

"How does a student cope or handle these simultaneous difficulties?" Unfortunately, limited information is currently available to help answer this question. Researchers have suggested that students who self-injure are attempting to cope and heal through using the behavior as a coping mechanism (e.g., Wester & Trepal, 2005); however, the relationship between self-injury and coping has never been empirically explored. What has been examined is the general coping methods and mental health of college students, indicating that students are increasingly entering college with greater mental health risks and more symptomology than ever before (Cook, 2007), and these symptoms have been linked to negative social outcomes, lack of academic success, and attrition (Bean, 1985; Eisenberg et al., 2007; Kelly, 2007)

As has been well-established, many students simultaneously confront a combination of mental health problems, the expected heightened stress of college adjustment, and common young adult identity development issues (e.g., Cook, 2007; Gerdes & Mallinckrodt, 1994). To be successful, college students with this combination of challenges must have problem-solving abilities and coping skills. However, researchers have found that college students actually tend to use negauve coping methods, such as substance abuse (Cook, 2007) or methods of distraction or avoidance (Thome & Espelage, 2004). Knowing that college students generally tend to use poor coping skills, we believe that specifically examining the coping behaviors of students who self-injure, a group of students who seem to have multiple problems and mental health disorders combined, is especially imperative.

One resource available to students coping with this combination of factors and stressors is on-campus counseling and mental health services. However, most college students decline to seek mental health services, even when such services are free or are offered at a reduced fee (Cooke, Bewick, Barkham, Bradley, & Audin, 2006; Eells, 2006; Eisenberg et al., 2007). Eisenberg et al. found that students did not seek services because of the perception that stress was typical in college, that the problem would disappear on its own, or that no one would be able to understand or help. Specific to self-injury, Eells reported that only 25% of the students who self-injured were likely to seek counseling or if engaged in counseling, actually reported their self-injurious behaviors to their counselors. In other words, three quarters of those students who self-injure do not seek mental health treatment or do not tell their counselors about the behavior. Ultimately, the majority of the college student population does not seek counseling services when experiencing high levels of stress or mental health problems. Taken together, experiencing mental health problems, dealing with high stress levels, declining to seek counseling, and engaging in self-injurious behaviors can lead to increasing and continuing negative coping behaviors or eventual attrition from college (e.g., Bean, 1985; Cook, 2007; Gerdes & Mallinckrodt, 1994; Kelly, 2007).

Thus, given the potential seriousness of college and university student mental health problems, including NSSI behaviors, college counselors must better understand the connection between self-injury and coping behaviors. We examined the relationships between NSSI behaviors and previous abuse experiences, coping behaviors, and life satisfaction. Through these relationships,

we explored the differences between self-injuring and non-self-injuring students. We also took into consideration students' counseling experiences. Specifically, we asked two research questions:

1. What are the factors that predict NSSI among college students? For this study, the factors examined were abuse history, coping behaviors, life satisfaction, and use of counseling services.

2. What are the differences in coping behaviors used by college students who never self-injured, self-injured in the past only, or currently self-injure?

Method

Participants

We invited a random sample of 6,000 students to participate from the entire undergraduate and graduate student population (N= 16,060) from one moderate-sized graduate university in the southeast United States. Of the invited students, 974 voluntarily participated in the study, representing a 16.2% response rate. Female students constituted the majority of the final sample (70.3%), and 25.8% were male students; 3.9% did not respond to this question. The average age of students was 23.94 years (SD = 7.62; range 18 to 65). The majority of students self-identified as Caucasian (65.7%), with the remainder of students self-identifying as African American (9.9%), Asian American/Asian (3.0%), Hispanic (0.9%), American/ Native Indian (0.2%), and mixed-race or other (4.4%); some students did not respond to this question (15.9%). The majority of students were undergraduates (72.8%; mean age = 21.97; SD = 6.07), whereas 21.1% were graduate students (mean age = 29.96) and 2.7% reported "other" (e.g., postbaccalaureate degree); 3.4% did not respond to this question.

Procedure

We conducted the study online via e-mail and a web-based survey. Students in the randomly selected sample (n = 6,000) received invitations to participate in a study on college student behavior via their university e-mail accounts. Those students who did not respond to the initial e-mail invitations received follow-up e-mails 1 week later. As an incentive, students were told that their participation would enter them into a raffle for one person to receive $100. Data were collected in February and March of the students' spring semester.

Instruments

The web-based survey included a demographics form, along with the Adapted Deliberate Self-Harm Inventory (ADSHI), Brief COPE (Coping Orientations to Problems Experienced) Inventory (Carver, 1997), and the Satisfaction With Life Scale (SWLS; Diener, Emmons, Larsen, & Griffin, 1985).

Demographics. The demographic form included questions regarding sex, age, class standing, ethnicity, experience of physical or sexual abuse or neglect, and experience of receiving counseling.

Self-injurious behavior. The ADSHI is a self-report instrument that we adapted from Gratz's (2001) Deliberate Self-Harm Inventory to measure current and past self-injurious behavior. The ADSHI asks whether participants have ever "intentionally (or on purpose) hurt yourself?" Those answering affirmatively respond to 12 items assessing which specific methods they used to self-injure (e.g., cut, burn, pull hair). For each method they had used, participants then indicate whether they had used that specific method in the past 90 days, and if so, how many times they have used it. The ADSHI therefore separates participants into three categories: (a) never self-injured (responded negatively to general self-injury question or responded positively to general self-injury question but did not indicate using any of the specific methods to self-injure), (b) self-injured in the past only (responded positively to general self-injury question and indicated using one or more methods to self-injure but did not indicate using any methods within the past 90 days), and (c) currently self-injure (responded positively to general self-injury question, indicated using one or more methods to self-injure, and indicated using one or more methods in the past 90 days). For those in the third category (i.e., currently self-injure), the ADSHI calculates the frequency of self-injury occurring in the past 90 days.

Coping behaviors. The Brief COPE Inventory (Carver, 1997) is a 28-item self-report instrument that assesses cognitive and behavior coping strategies. It is a shortened version of the COPE Inventory (Carver, Scheier, & Kumari Wein

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****** traub, 1989). The Brief COPE Inventory produces distinct scores for each of 14 coping strategics: Active Coping, Planning, Positive Reframing, Acceptance, Humor, Religion, Use of Emotional Support, Use of Instrumental Support, Self-Distraction, Denial, Venting, Substance Abuse, Behavioral Disengagement, and Self-Blame. Participants respond to items using a 4-point Likert-type scale ranging from 0 (I haven't been doing this at all) to 3 (I've been doing this a lot) to express the frequency of use for each of the coping strategies. Scores are obtained by summing responses (after reverse scoring relevant items) and range from 0 to 84. Higher scores on the Brief COPE Inventory indicate greater use of the coping strategy. Cronbach's alphas on the Brief COPE Inventory were found to range from .50 (Venting) to .90 (Substance Abuse), with all but three strategies achieving alphas greater than .60. In the current study, alphas ranged from .43 (Acceptance) to .95 (Substance Abuse), with all but three strategies achieving alphas

greater than .60 and nine achieving alphas greater than .70. For this study, we also combined strategies into three overarching scales for some analyses: (a) Problem-Focused Coping Behaviors (Cronbach's [alpha] =.71; consists of Active Coping, Planning, and Use of Instrumental Support), (b) Emotion-Focused Coping Behaviors (Cronbach's [alpha] = .68; consists of Positive Reframing, Acceptance, Humor, Religion, Using Emotional Support, and Denial), and (c) Avoidant Coping Behaviors (Cronbach's [alpha] = .73; consists of Self-Distraction, Venting, Substance Abuse, Behavioral Disengagement, and Self-Blame). Problem-focused coping is aimed at an individual doing something to alter the source of stress, whereas emotion-focused coping is aimed at reducing or managing emotion related to the problem (Carver et al., 1989).

Table 2 can be found at the end of the document.

Life satisfaction. The SWLS (Diener et al., 1985) is a five-item self-report instrument that assesses global life satisfaction without tapping into related constructs such as positive affect or loneliness. Participants respond to items using a 7-point Likert-type scale ranging from i (strongly disagree) to 7 (strongly agree) to express their perceptions of overall satisfaction with life. An overall score is obtained by averaging responses. Higher scores on the SWLS indicate greater levels of life satisfaction. Diener et al. reported a moderate to high internal consistency of.87. In the current study, Cronbach's alpha was .89.

Data Analysis

To explore the relationships between abuse history, coping behaviors, life satisfaction, and use of counseling services across the three groups of self-injurers, we used three separate linear probability models. Linear probability models are multiple regressions using a dependent variable that is dichotomized (e.g., 0 = never self-injured; 1 = self-injured). The results provide the probability in which the independent variable (e.g., life satisfaction) explains one category of the dependent variable over the other category (e.g., a student who self-injures compares with a student who does not self-injure). As a post hoc follow-up to the linear probability models, we used a multivariate analysis of variance (MANOVA) to examine the specific coping behaviors (i.e., 14 Brief COPE Inventory scales and three overarching scales) that significantly differed across the three groups of self-injurers. The three groups of self-injurers are those who never self-injured, self-injured in the past only, and currently self-injure.

Results

Slightly more than half of the students indicated they had not self-injured at any time in their lives (57.6%), whereas 21.2% reported they had self-injured at some time in their lives but were not currently self-injuring (i.e., had not self-injured in the past 90 days) and 5.2% reported they had self-injured in the past and were currently self-injuring (i.e., had self-injured in the past 90 days); 16.0% did not respond to this question. Students in the currently self-injure group reported

self-injuring an average of 12.41 times (SD = 22.23; range 1 to 100 times; median 3.0; mode 1.0) in the past 90 days.

Less than one quarter of the students reported experiencing physical or sexual abuse (12.5% and 14.2%, respectively), whereas even fewer reported experiencing neglect (6.0%). Regarding counseling experience, 39.0% of the students reported they had been in counseling at some point in their lives, and 7.7% reported they were currently in counseling at the time of the survey. Of those students currently in counseling, the majority had never self-injured (56.0%), whereas 29.3% self-injured in the past only and 14.7% currently self-injure. Among those students who never self-injured, 7.5% were currently in counseling; among those students who self-injured in the past only, 10.7% were currently in counseling; and among those students who currently self-injure, 21.6% were currently in counseling.

Relationships With NSSI Behaviors

To explore relationships with NSSI behaviors, we examined specific factors across the three groups of self-injurers (i.e., those who never self-injured, self-injured in the past only, and currently self-injure), using three linear probability models (see Table 1). For each model, we examined the probability of abuse history, coping behaviors, life satisfaction, and use of counseling services explaining self-injurious behavior when controlling for age and sex. For the first model, we compared students who never self-injured to those who currently self-injure. The probability model was significant (F = 8.20, p < .000) and explained 12.8% of the variance between the never self-injured and currently self-injure groups (adjusted [R.sup.2] =. 128). The variables that we found to be significant in explaining differences between the two groups were age ([beta] = -.15, t = -2.99, p < .01), Problem-Focused Coping Behaviors ([beta] = -.19, t = -3.84, p < .000), SWLS ([beta] = -.20, t = -2.65, p < .01), and currently in counseling ([beta] = -.10, t = -2.24, p < .05). More specifically, those students who were older, used more problem-focused coping behaviors, and had greater life satisfaction had a higher probability of never engaging in self-injury. In addition, those who never self-injured were less likely to currently be in counseling than were those who currently self-injure.

For the second probability model, we compared students who never self-injured with students who self-injured in the past only. This model was significant (F = 6.68, p < .000) and explained 8.4% of the variance between the never self-injured and self-injured in the past only groups (adjusted [R.sup.2] = .084). Those who never self-injured were more likely to have been physically abused ([beta] = -. 10, t = -2.33, p < .05), more likely to use Avoidant Coping Behaviors ([beta] = .14, t = 3.50, p < .000), and less likely to have been in counseling at some point in their lives ([beta] = -.11, t = -2.71, p < .01) than were those who self-injured in the past only. However, current use of counseling was not found to significantly differ between the two groups. Students who never self-injured were also more likely to use Problem-Focused Coping Behaviors ([beta] = -.09, t = -2.18, p < .05) than were those who self-injured in the past only.

For the third probability model, we compared students who self-injured in the past only with those who currently self-injure. This model was significant (F = 2.78, p < .01), but only explained 7.7% of the variance between the two self-injuring groups (adjusted [R.sup.2] = .077). The three significant factors in explaining the differences between students who self-injured in the past only and those who currently self-injure were age ([beta] = .15, t = 2.23, p < .05), Problem-Focused Coping Behaviors ([beta] = .16, t = 2.20, p < .05), and currently in counseling ([beta] =. 18, t = 2.60, p < .05). More specifically, students who were older, used more problem-focused coping, and were not currently in counseling were less likely to be currently engaging in NSSIs.

Differences Among Self-Injuring Groups on Specific Coping Behaviors

We used MANOVAs to examine the differences between the three groups on coping behaviors (see Table 2). Eleven of 14 coping strategies (i.e., Brief COPE Inventory scales) significantly differed across the three groups. The three that did not significantly differ were Acceptance (F= 2.13, p > .05), Self-Distraction (F = 2.15, p > .05), and Denial (F = 3.90, p > .05). For the other 13 coping behaviors (i.e., 11 remaining Brief COPE Inventory scales and three overarching scales), we used post hoc Scheffe analyses to examine whether differences existed. Students who currently self-injure used significantly less Problem-Focused and Emotion-Focused Coping Behaviors than did those who self-injured in the past only or never self-injured, including the Active Coping, Planning, and Positive Reframing variables. Students who currently self-injure were also significantly less likely to use Religion and reported significantly less Use of Instrumental Support in comparison with those students who never self-injured. Those who self-injured in the past only were not significantly different from students who never self-injured on these coping behaviors.

Students who self-injured in the past only reported using significantly higher levels of Humor and Venting to cope than did students who never self-injured or currently self-injure (see Table 2). Students who currently self-injure reported higher levels of Behavioral Disengagement than did the other two student groups. Students who never self-injured reported significantly less Substance Use and Self-Blame than did the other two student groups.

Discussion

In this study, we explored factors that relate to and differentiate students across three groups: those who never self-injured, those who self-injured in the past only, and those who currently self-injure. Participation in counseling played a large role distinguishing among these groups, followed by coping behaviors, life satisfaction, and age, with those who currently self-injure being less likely to use problem-focused coping behaviors and being younger, but also being more likely to currently be engaged in counseling than the other two groups.

Implications for Practice

In the current study, the majority of students had never self-injured (57.6%). One of the most important findings is that students who currently self-injure had a greater likelihood of being in counseling than did the other two groups. Of all students in the sample, 5.2% currently self-injure, and 21.6% of those who currently self-injure were currently in counseling.

Although it is a seemingly positive finding that students who currently self-injure were more likely than the other two groups to be in counseling, some concerns still exist. One substantial concern is that although these students were participating in counseling, they still reported using maladaptive coping strategies and experiencing lower life satisfaction than did the other two groups. More specifically, students who currently self-injure seemed less likely to use active coping, planning, and positive reframing, and more likely to use behavioral disengagement. For example, students who currently self-injure did not actively try to devise strategies to solve their problems, concentrate their efforts on generating actions to improve their situations, or attempt to view problems in a different light; instead, they tended to give up trying to address their problems or cope with their situations. Therefore, those who currently self-injure typically did not experience or visualize a light at the end of the tunnel, nor were they focusing on a way to improve their life situations or circumstances.

In addition, students who currently self-injure were less likely to use religion or instrumental support as coping methods when compared with students who never self-injured. This indicates that those who currently self-injure were less likely to seek the advice or support of others when attempting to solve problems in comparison with students who never self-injured, potentially resulting in isolation. Students who currently self-injure and those who self-injured in the past only were more likely to engage in alcohol and drug use to feel better and criticize or blame themselves for problems when compared with students who never self-injured. Although it may seem commonsensical that students who currently self-injure tend to use more maladaptive methods of coping rather than use strategies that alleviate overwhelming emotions or focus on solving the problem, this relationship has never been empirically examined.

An important aspect of these findings is that even though some self-injuring students are in counseling, they continue to report using maladaptive coping strategies. Although Eells (2006) reported that counseling, in general, works in eliminating NSSIs, he also indicated that few students who self-injure actually tell their counselors. Therefore, even though these students may be in counseling, they may not be sharing important information with their counselors.

Assessment

An important first step in working with students who self-injure is assessment. It may be that self-injury is serving a psychologically instrumental purpose for

****** those students who currently self-injure (e.g., avoidance, cessation of intruding thoughts), whereas for students who self-injured in the past only, the need filled by their earlier self-injury may no longer be present or may no longer be unaddressed by better coping.

Therefore, college counselors should inquire about the reasons and purpose of self-injury, along with other coping methods used by the student (see Wester & Trepal, 2005). This may help counselors gain a better understanding of why students choose to engage in self-injury and the degree to which they are motivated to stop the behavior, leading to treatment plans and therapeutic directions for counseling. For example, if the purpose of self-injury is to stop intruding thoughts and memories of past abuse, then assisting the student in working through the abuse in a safe therapeutic environment might be helpful. By comparison, if the reason for self-injury is related to dealing with an overwhelming sense of emotion, including the inability to identify the feeling, then identifying the emotion and learning how to adaptively express the emotion might eliminate or minimize the use of NSSI. Thus, assessing the purpose of self-injury is important (Wester & Trepal, 2005).

Intervention Strategies

Regardless of whether students have informed their counselors about self-injury, the results of this study suggest that these students tend to still be engaged in maladaptive and avoidant coping strategies, even when they are current counseling clients. Thus, we believe in the importance of college counselors not only assessing for NSSIs, but also collaborating with these clients to provide more adaptive alternatives to use as coping methods, for managing stress, and for working through their presenting concerns. Some of these coping methods may include alternatives specific to self-injury (see Wester & Trepal, 2005), exercise, or relaxation techniques. On the one hand, it may be helpful to teach students stress inoculation and relaxation techniques to facilitate the ability to manage their emotions to be able to problem solve. However, in the present study, the three groups (never self-injured, self-injured in the past only, and currently self-injure) were not found to differ on their likelihood to use emotion-focused coping or coping behaviors that help to alleviate or manage emotions related to an event. This may potentially indicate that emotion-focused coping may not help students who self-injure alleviate problems or difficulties. More specifically, researchers have found that individuals who self-injure may experience alexithymia, or the inability to express or identify an emotion (Paivio & McCulloch, 2004). Therefore, to use a coping behavior that is aimed at reducing or managing emotions may not be realistic for these individuals. Thus, it may be more helpful for college counselors to focus on problem-focused coping strategies--behaviors found in the current study to be related to those who never self-injured and those who self-injured in the past only--to help students who currently self-injure cope with stress.

On the basis of the findings in the current study, counselors may want to help their self-injuring clients gain problem-focused coping behaviors by working with them in session to create step-by-step strategies to use in resolving problems. This may show students that using problem-solving skills such as planning and actively working through the situation can alleviate the influence on the students. Other ways to help students cope more actively is to get them to relate socially with others. If the students do not have friends or a social group, this may be done in group therapy in which students can meet other clients who can model for them how to talk

about their stress and how to handle a difficult situation more adaptively by reaching out for advice from others.

The use of problem-focused coping may also be the reason that students who had stopped self-injuring were less likely than were those who currently self-injure to be in counseling. It may be that through counseling experiences, students who used self-injury in the past may have learned adaptive or problem-focused coping strategies to work through their presenting concerns or self-injurious behaviors, resulting in a lack of a need to use self-injury as a coping method to alleviate overwhelming emotions.

Outreach

Although we found that students who currently self-injure had a greater likelihood of seeking counseling services, only 21.6% of these students--and 7.7% of all students in the sample--were currently in counseling. This leaves approximately 92% of all college students in the current sample and, of greater concern, approximately 78% of those who currently self-injure, not seeking counseling services. These results are similar to those suggested by others regarding college students being less likely to seek mental health services (Cooke et al., 2006; Eisenberg et al., 2007), specifically those who self-injure (Eells, 2006).

Given these results, we believe that counselors need to not only determine how to work with students who self-injure, but also provide outreach to college students in general, and more specifically to students who self-injure. Counselors might do this by talking about self-injury; however, they can also provide outreach on other topics such as dating violence, abuse, substance abuse, or grief and loss, all factors that have been found to be related to poor mental health as well as to NSSI behaviors among college students. These types of outreach programs might actually attract students to seek counseling services without the stigma of self-injury attached. Outreach should also normalize typical stressors and experiences on campus, because the majority of students do not seek counseling because they fear the stigma attached to counseling from others or have an expectation that problems will dissipate on their own (Eisenberg et al., 2007).

One goal in outreach related to NSSI behaviors is to normalize self-injury--not in a way that will increase the behavior and cause a contagion effect, but in a manner that indicates counselors understand the behavior and are willing to assist. Counselors could work with administrators on campus to respond in a helpful manner, regardless of whether the NSSIs are a private act of one student or among a group. This type of collaboration can result in mandated counseling referrals from administrators in areas such as student affairs (e.g., judicial, residence life) or the dean of students, in which students with NSSIs or other serious mental health concerns are required to attend a specified amount of sessions. As others have found, counseling works in decreasing or minimizing NSSIs (e.g., Eells, 2006); thus, getting students to come through the door is the first step.

Another consideration for college counselors engaged in outreach is the age of the students. ALS noted in this study, students who were older either never self-injured or self-injured in the past only, with younger students more likely to engage in self-injury. This result may speak to the trajectory self-injury may take, beginning in the early teens and dissipating in the early 20s, or that approximately 40% of students stop self-injuring after approximately 1 year (Whitlock et al., 2006), of those who currently self-injure may be part of the 60% of students who continue to do so for 5 years or beyond (Whitlock et al., 2006). However, it may be that impressionable younger students are growing up in a time when self-injury is frequently talked about in the media and when celebrities are coming forward with their own self-injury stories. This result also may be because students who are older than 24 years are less likely to disclose their NSSIs in comparison with younger students (Whitlock et al., 2006), possibly indicating that the prevalence among older students may be underreported. Regardless, this speaks to the need for college counselors to conduct outreach on campuses because the younger students currently entering college are more aware of, and more likely to engage in, NSSIs.

Limitations and Conclusion

This study begins to fill a gap in the understanding of NSSI behaviors among college students, specifically in relation to coping behaviors and counseling experiences. The results of this study indicate that it is important for college counselors to provide outreach services for students in general, and more specifically to students who currently self-injure because these students are experiencing more mental health concerns and having less adaptive coping methods. Whereas these results are important, and action should be taken by college counselors, it is important to note that abuse history, coping behaviors, life satisfaction, and use of counseling services explain only 7% to 12% of the variance among the three categories of self-injurers (never self-injured, self-injured in the past only, and currently self-injure). This means that other factors and characteristics exist that explain the other 88% of the variance and that need to be explored in combination with coping behaviors. These characteristics could include the inability to express emotion and intensity of affect (e.g., Whitlock et al., 2006), other mental health concerns, dissociation, interpersonal relationships or dating violence (e.g., Murray et al., 2008), or general stress from higher education (e.g., Cooke et al., 2006). Therefore, future research needs to explore the combination of these factors relative to coping behaviors and self-injury.

Some limitations exist in the current study and should be noted when making sense of and applying our findings. First, although the sample size was large ($N > 900$), the response rate was only 16.2%. This response rate is typical for an online survey among college students (e.g., Kaplowitz, Hadlock, & Levine, 2004; Kwak & Radler, 2002); however, although this sample could be representative of the population, it is unclear why these students volunteered to respond when other students in the selected sample declined to participate. One reason may have been the monetary incentive provided. Other possibilities may be that some students were under such duress that they may not have been able to respond because of scheduling or mental health concerns, whereas other students may have been functioning at a high level and involved in

many extracurricular or academic activities that limited their ability to respond. In addition, although abuse history, coping behaviors, life satisfaction, counseling experience, and age all significantly differentiated between the three NSSI groups, this study was cross-sectional in nature, limiting the ability to provide predictive relationships. Future studies should explore these relationships longitudinally to determine whether specific coping behaviors predict the engagement in NSSIs, and if seeking counseling services ultimately minimizes NSSIs.

Fortunately, additional research on NSSIs among college students is currently underway; the results of new research will hopefully help college counselors to better understand and respond to these problematic behaviors. The more college counseling professionals know regarding NSSI and its correlates, the more effective they can be in working with students to decrease or minimize the influence of self-injury and, in turn, to help them lead increasingly satisfying lives on their campuses.

We believe it is helpful for college counselors to recognize that students who self-injure can be distinguished, in part, by their reliance on avoidant coping behaviors, specifically those such as substance abuse, humor, venting, and self-blame, and by levels of life satisfaction that are lower that those of their non-self-injuring peers. In addition, college counselors need to be aware that students who self-injure are more likely than other students to be engaged in counseling and, correspondingly, college counselors should be especially cognizant about asking students whether they self-injure and recognizing some of the warning signs of self-injury. Related to outreach, we believe in the importance of recognizing, on the basis of the findings in this study and on extant research, that 78% of the self-injuring student population is not seeking services and therefore might benefit from specialized programming or outreach efforts. Although follow-up research certainly is needed, the current study contributes potential new insights into factors distinguishing students who self-injure on college campuses.

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TABLE 1
Probability Models Exploring Factors That Differentiate Between Students Who Never Self-Injured, Self-Injured in the Past Only, and Currently Self-Injure

	Model 1	
Factor	[beta]	t
Sex	-.07	-1.62
Age	-.15	-2.99 **

Factor	[beta]	t
Physically abused (reference: yes)	-.05	-1.13
Sexually abused (reference: yes)	-.08	-1.68
Neglected (reference: yes)	-.03	-.60
Problem-Focused Coping Behaviors	-.19	-3.84 ***
Emotion-Focused Coping Behaviors	-.02	-.37
Avoidant Coping Behaviors	.06	1.43
Satisfaction With Life Scale	-.20	-2.65 **
Been in counseling (reference: yes)	-.08	-1.78
Currently in counseling (reference: yes)	-.10	-2.24 *

Model 2

Factor	[beta]	t
Sex	-.06	-1.70
Age	-.03	-.69
Physically abused (reference: yes)	-.10	-2.33 *
Sexually abused (reference: yes)	-.08	-1.78
Neglected (reference: yes)	-.03	-.78
Problem-Focused Coping Behaviors	-.09	-2.18 *
Emotion-Focused Coping Behaviors	.03	.68
Avoidant Coping Behaviors	.14	3.50 ***
Satisfaction With Life Scale	-.06	-1.49
Been in counseling (reference: yes)	-.11	-2.17 **
Currently in counseling (reference: yes)	.02	.61

Model 3

Factor	[beta]	t
Sex	.04	.55
Age	.15	2.23 *
Physically abused (reference: yes)	.03	.42
Sexually abused (reference: yes)	.01	.13
Neglected (reference: yes)	.01	.12
Problem-Focused Coping Behaviors	.16	2.20 *
Emotion-Focused Coping Behaviors	.10	1.47
Avoidant Coping Behaviors	.02	.29
Satisfaction With Life Scale	.09	1.15
Been in counseling (reference: yes)	-.07	-.51
Currently in counseling (reference: yes)	.18	2.60 *

Note. Adjusted [R.sup.2] = .128 for Model 1, .084 for Model 2, and .077 for Model 3. Model 1 = never self-injured (0) to currently self-injure (1); Model 2 = never self-injured (0) to self-injured in

the past only (1); Model 3 = currently self-injure (0) to self-injured in the past only (1); [beta] = standardized beta coefficient; Problem-Focused Coping Behaviors = overarching scale derived from Brief COPE (Coping Orientations to Problems Experienced) Inventory scales; Emotion-Focused Cop ing Behaviors = overarching scale derived from Brief COPE Inventory scales; Avoidant Coping Behaviors = overarching scale derived from Brief COPE Inventory scales.

* p < .05. ** p < .01. *** p < .000.

TABLE 2
Means of Coping Behaviors Across Students Who Never Self-Injured (NSI), Self-Injured in the Past Only (SIP), and Currently Self-Injure (CSI)

	NSI (n = 561)		SIP (n = 206)	
Coping Behavior	M	SD	M	SD
Active Coping	4.66 (a)	1.17	4.50	1.21
Planning	4.69 (a)	1.26	4.50 (a)	1.32
Positive Reframing	4.05 (a)	1.45	3.89 (a)	1.44
Acceptance	4.20	1.23	4.27	1.21
Humor	2.93 (a)	1.77	3.60 (b)	1.84
Religion	3.13 (b)	2.18	2.67 (a)	2.19
Use of Emotional Support	3.98 (b)	1.67	3.70 (a,b)	1.78
Use of Instrumental Support	3.97 (b)	1.60	3.62	1.75
Self-Distraction	3.70	1.44	3.87 (a)	1.52
Denial	0.81	1.29	0.77	1.20
Venting	2.50 (b)	1.47	2.81 (a)	1.37
Substance Use	0.64 (b)	1.26	1.39 (a)	1.85
Behavioral Disengagement	0.87 (b)	1.19	1.07 (b)	1.24
Self-Blame	2.53 (b)	1.61	3.17 (a)	1.74

	CSI (n = 51)		
Coping Behavior	M	SD	F
Active Coping	3.75 (b)	1.28	14.36 ***
Planning	3.86 (b)	1.51	10.46 ***
Positive Reframing	3.33 (b)	1.72	6.06 **
Acceptance	3.92	1.23	1.75
Humor	2.90 (a)	1.78	10.92 ***
Religion	2.35 (a)	2.02	5.54 **
Use of Emotional Support	3.32 (a)	1.86	4.78 **
Use of Instrumental Support	3.15 (a)	1.79	8.08 ***

Self-Distraction	3.98	1.36	1.62
Denial	1.26	1.56	3.27
Venting	2.37 (b)	1.37	4.11 *
Substance Use	1.59 (a)	2.06	25.32 ***
Behavioral Disengagement	1.73	1.30	12.83 ***
Self-Blame	3.73 (a)	1.50	21.19 ***

Note. Means in the same row that do not share subscripts were significantly different in post hoc Scheffe analyses. Coping behaviors = Brief COPE (Coping Orientations to Problems Experienced) Inventory scale.

* $p < .05$. ** $p < .01$. *** $p < .0001$.