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Research

Personality Style and Cessation of Deliberate Self-Harm among Students of Color: A Natural History

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Abstract

The current study investigated the role of personality traits, motivations, and cessation methods of deliberate self-harm (DSH) among students of color who had ceased self-harm for at least one year. Survey data was collected from 27 undergraduate students. While the majority of respondents (60%) did not seek professional interventions, among those who did seek professional help, DSH had persisted far longer. Extraversion was significantly associated with motivational/transformational cessation methods; and low Conscientiousness was associated with reporting success using behavioral interventions. Notably, the majority of respondents endorsed Affect Regulation and Self-Punishment as the motivating forces of their DSH, suggesting variations and complexity in DSH related to this African-American/Caribbean/Biracial sample.

Self-injury, referred to as deliberate self-harm (DSH), is particularly common among adolescents and young adults. A substantial body of research gives insight into the personal characteristics and motivating factors associated with DSH, although far less is known about how cessation is achieved. Women, generally, are reported to be more likely to self-injure than men. Hawton et al. (2012) [1] sampled 5,205 individuals (three-quarters were female, 88.5% white) to investigate population-based rates of self-harm in children and adolescents. They found that self-harm was more common among females and the incidence increased throughout adolescence, beginning at age 12. Also, periods of cessation were common among those hospitalized, as reflected by reoccurring hospital admissions.

Lundh, Karim, and Quilisch (2007) [2] investigated the rate of DSH in 15-year-old Swedish adolescents and found that girls reported significantly more cutting of the wrists, arms, and other body areas than boys. High rates of DSH were associated with low self-esteem and low mindfulness. Hawton et al. (2003) [3] found that boys who engaged in DSH tended to have problems with studies or employment, housing, finances, alcohol and drugs. However, relational problems and eating disorders were more frequent in females. Specifically, there was an association between DSH and family problems in younger women; while DSH was related to partner problems in older women. Certain types of behaviors were common in repeaters, namely difficulties with family members, housing, social isolation, and alcohol and drug misuse.

Bifulco and colleagues (2014) [4] examined young community adults in North London and found DHS was highly related to stressful family circumstances such as single-mother upbringing, high family discord, parental violence, and parental maltreatment. In this study, DHS was unrelated to abuse in childhood. Pluck et al. (2013) [5] confirmed that youth who engaged in repeated self-harm had more complex family and personal histories, including mental illness, substance abuse and in this study, child abuse.

A number of studies have found a specific association between high-risk populations and deliberate self-harm. For example, Morgan and Hawton (2004) [6] reported a lifetime prevalence of DSH among juvenile offenders in the UK almost double the rate found in community samples. In addition, problems with peer relationships, previous sexual abuse, and higher depression scores appeared to be related to DSH in this high-risk population. Similarly, youth with ADHD also are at increased risk, with incidence of DSH in this population doubling to 8% of boys and 9% of girls [7].

Adolescents and young adult self-injurers are often plagued by a variety of psychiatric diagnoses. Nock et al. (2006) [8] found that more than half of their sample of self-injurers met DSM-IV criteria for an internalizing disorder, an externalizing disorder, and/or a

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substance-related disorder. The overall rate of diagnosable mental disorders among these self-injurers was 87.6%. Furthermore, the results indicated that approximately two-thirds of the females in the sample met DSM-IV criteria for a personality disorder. Almost half met the criteria for borderline personality disorder, one-third for avoidant personality disorder, and one-fifth for paranoid personality disorder. This study found no gender difference in the frequency, duration, or number of methods of DSH [8].

Hawton, Houston, and Townsend (2001) [9] also explored the nature and prevalence of psychiatric and personality disorders in DSH patients. Their results indicated a high prevalence of both psychiatric (92%) and personality (45.9%) disorders. The most common psychiatric disorder was depression, with almost half of the reported depressive episodes reaching ICD-10 criteria for severe or psychotic. The second most common psychiatric disorder was alcohol dependence and harmful use, followed by anxiety disorders and then eating disorders. Anxious, obsessive/compulsive, and paranoid disorders were more common than emotionally unstable personality disorders, such as borderline personality disorder.

Interestingly, DSH is not always a symptom of serious emotional disturbance. Croyle and Waltz (2007) [10] viewed subclinical self-harm on a continuum with clinical self-harm. Participants in the study were 290 (52% female, 48% male) introductory psychology students from a northwestern university. The authors labeled some behaviors as mildly injurious self-harm behaviors, such as biting fingernails, scratching, or picking severe enough to cause bleeding or scarring. Moderately injurious self-harm behaviors included items such as strangling or hitting self or banging a part of the body hard enough to cause a bruise, sticking self with pins or needles hard enough to draw blood, cutting self without intent to die, and breaking bones on purpose. Results indicated that subclinical self-harm was common among this sample of college students. Although it was not typically associated with serious distress, it was related to other maladaptive behaviors, including other impulsive behaviors, somatic symptoms, and some obsessive-compulsive characteristics. In this sample, 68% reported having engaged in some sort of mildly injurious self-harm over their lifetimes. There were no significant gender differences found at the mild or moderate self-harm level, suggesting that subclinical self-harm is equally common among young men and women.

Hilt, Cha, & Nolen-Hoeksema (2008) [11] reported one of the few studies that examined DSH in a predominantly African American and Hispanic sample. While the sample was young (10-14 years old), over half of the girls (56%) reported engaging in DSH, with more than one-third (36%) reporting they had engaged in DSH within the last year. While these high rates are likely due to lower level forms of self-injury being included, racial disparities may also be influencing the incidence rates. This study also found interpersonal distress (peer victimization) was associated with engaging in DSH for attention, and the quality of peer communication moderated this relationship.

The relevant literature indicates that there are also ethnic differences in the meanings and motivations for self-harm. Abrams and Gordon (2003) [12] studied socio-cultural variations in "at-risk" adolescent girls' expressions of distress. Responses indicated that suburban young women (77% White from a school located in an upper-income area) tended to use the language of "pain" and attributed their behavior to an overarching despondency or distress; whereas, urban respondents (87% identifying as either African American, Latina, or Asian/Pacific Islander, located in working-class neighborhoods with mixed ethnic compositions) conceived their self-harm as a response to pent up anger towards family members or romantic partners. Analysis also suggested that these behaviors functioned as a release of difficult feelings and emotions for all participants; however, suburban girls described that the emotional catharsis resided in the actual injury itself, while urban girls' functional "release" centered more on the consequences of the act--mainly getting "noticed" or getting help.

Given the prevalence and potential seriousness of DSH, it is surprising that virtually no attention has been paid to the efficacy and efficiency of treatments. Huband and Tantam (2004) [13] explored the value of different interventions, and found women tended to favor treatments that involved interpersonal contact with staff, being encouraged to talk about past feelings with an interactive therapist, and having a long-term relationship with a worker.

Birch, Cole, Hunt, Edwards, & Reaney (2011) [14] examined a sample of 45 European women between the ages 20-58, living in a women's service facility. The sample of women all had diagnosed borderline personality disorder and related histories of physical, sexual and/or emotional abuse. The employed cognitive treatment encouraged the women to consider the risks/consequences of harming themselves before actually giving into the urge to do so. Utilizing this approach was effective in significantly reducing reported DSH from the time of admission to discharge. While it appears that professional treatment helps reduce DSH, the high prevalence of the behavior in the United States and abroad suggests that many self-injurers must cease self-harming without professional interventions. Therefore, clinicians and researchers alike could benefit from gaining further understanding about both the naturally occurring cessation methods employed by former self-injurers as well as effective professional interventions.

Long, Manktelow, and Tracy (2013) [15] conducted an extensive literature review and concluded that self-harm is pervasive and exists across cultures. It is a behavior that occurs in clinical populations and the general community, although the motivations that sustain

the behavior and the methods of cessation may be culturally-specific. In an effort to start constructing a clinical model of DSH cessation success, the present study builds on the theoretical and empirical work of Klonsky and Olino (2008) [16] who developed a method of measuring the different motivations for DSH, including (a) affect regulation, (b) self-punishment, (c) anti-dissociation, (d) anti-suicide, (e) interpersonal influence, (f) peer bonding, (g) sensation seeking, and (h) interpersonal boundaries. The aim of the present study is to utilize this methodology to investigate the relationship between DSH motivations, personality variables, and DSH cessation method among students of color.

Research Questions

The current study seeks to explore three different questions: A) What proportion of individuals stop harming themselves without professional intervention? B) What cessation methods are most often employed? C) Are there any personality styles that predict sustaining motivations and/or cessation strategies of DSH?

Methods

Participants

The sample consisted of 27 ethnically diverse adults, ages 18 to 23, recruited from an HBCU in the mid-Atlantic region. All individuals in the sample met these two criteria: 1) history of DSH, and 2) no current DSH. The mean age for males (N=4) was 22 years old, SD=7.60, and for females (N=23) 20 years old, SD=1.26. The vast majority of the sample were "Black /African American" (N=20), along with a smaller number of "Caribbean Americans" (N=4), and "Biracial" (N=3) students.

Procedures

Participants completed paper and pencil, self-report measures of (1) history and motivations for DSH, (2) methods of cessation of DSH, and (3) personality style. All data was gathered in one session lasting approximately 30 minutes.

Measures

History of Deliberate Self-Harm

History of deliberate self-harm was assessed using the Self-Harm Intake Summary: a survey developed for the present study. Thesurvey asked about age of onset of DSH, frequency of self-harm and specific self-harm behaviors including, cutting, biting, severe scratching, burning, carving, pinching, pulling hair, banging or hitting self, interfering with wound healing, rubbing skin against rough surface, sticking self with needles, and swallowing dangerous substances (Available upon request).

Motivations for Deliberate Self-Harm

Motivations for self-harm behaviors were assessed using the Inventory of Statements about Self-Injury [17], which assesses lifetime frequency of 12 DSH behaviors, as well as motivators of DSH.

Deliberate Self-Harm Cessation Method

The method used to stop self-harm was assessed using the Survey of Cessation of Deliberate Self-Harm: a 39-item survey developed for present study. The survey includes a clinically-relevant list of bio-psycho-socio-spiritual reasons to cease self-injury; as well as 14 supported behavioral change strategies cited in Norcross and Goldfried (2005) [18]. The 39 items clustered into the following categories: self-concept reasons, emotional reasons, support circles, medical/professional interventions, behavioral interventions, spiritual strategies, and maturational/transformational strategies. Specific examples of each category are found in the results (Questionnaire available upon request).

Personality Style

The 10-Item Personality Inventory [TIPI;19] measures the Big-Five personality dimensions of Extraversion, Agreeableness, Conscientiousness, Emotional Stability, and Openness to Experience. Each of the items on the scale is rated on a 7-point scale ranging from 1 (disagree strongly) to 7 (agree strongly). Since the 10-Item Personality Scale has only 2 items for each of the 5 scales (Extraversion, Agreeableness, Conscientiousness, Emotional Stability and Openness), it suffers from low internal consistency, however, its convergent validity with the Big-Five Inventory is excellent.

Results

Descriptive Statistics

There were more females (N=23) than males (N=4) in the sample. Due to the low number of males, results could not be analyzed by gender and the results reported are based on the entire sample. In terms of the range of different DSH behaviors reported, nine participants (32%) endorsed engagement in only one type of DSH behavior; 8 participants (29%) endorsed two types; 4 participants (14%) endorsed three types and 6 participants (25%) endorsed engaging in 4 or more types of DSH behaviors. The top DSH behaviors were "cutting" (N=16), followed by "banging or hitting self" (N=9), "interfering with wound healing" (N=6), and "Other" (N=7). Respondents who endorsed "Other" behaviors listed the following: "rubber band snapping," "starving myself," "overdosing on pills," "overdosing on prescription pills," "frostbite/salt and ice," and "choking/holding breath."

None of the participants responded that peer bonding was a relevant motivation of their DSH. Similarly, most participants did not endorse anti-suicide and anti-dissociation motivations. Interpersonal Boundaries and Interpersonal Influence were cited as motivators of self-harm by only a minority of participants. Only 21% were motivated to create a boundary between themselves and

others; 17% to demonstrate that they were separate from other people and 8% to establish a barrier between themselves and others.

In contrast, most participants endorsed Affect Regulation (referred to as "Emotional Reasons" on the survey) as a "Somewhat relevant" or a "Very relevant" motivation for their DSH. The items which comprise this factor included: "Calming myself down" (N=12/19; 63%); "Releasing emotional pressure that has built up inside of me" (N=16/19; 84%); and "Reducing anxiety, frustration, anger, or other overwhelming emotions" (N=22/26; 85%). There was also a relatively strong endorsement of self-punishment as a motivator of DSH. Respondents endorsed the following items that contributed to the Self-Punishment factor score as "Somewhat relevant" or "Very relevant" motivators of their DSH: "Punishing myself" (N=10/19 participants; 53%); "Expressing anger towards myself for being worthless or stupid" (N=13/19 participants; 69%); and "Reacting to feeling unhappy with myself or disgusted with myself" (N=20/26 participants; 77%).

Most individuals (81%) reported trying four or more different cessation methods. The most endorsed cessation methods were: Self-Concept Reframes (N=25/26, 89%) (e.g. "I tried thinking of myself in a more positive light;" "I tried to be more optimistic about my life;" "I tried not to take life so seriously"); Maturational/ Transformational (N=23/26, 82%) (e.g. "I outgrew it;" "I realized it was immature;" "I saw a movie that changed how I looked at life"); Support Circle Help (N=17/26, 61%) (e.g. "I made new friends;" "My relationship with parents/relatives improved;" "My peers/ friends disapproved"); and Spiritual Help (N=17/26, 61%) (e.g. "I tried prayer to stop").

Seventy-four percent of the participants reported never being hospitalized for DSH (N=20/27). Additionally, the majority of respondents (60 %) reported that they did not see a therapist to help with their DSH (N=15/25). Fifty percent of participants who reported having seen a therapist reported that therapy helped them stop DSH.

All the participants but one ceased DSH before going to college, between 15 and 17 years old. Eight participants (N=8 out of 20 participants; 40%) spent 1 year or less engaged in DSH and 4 respondents (N=4 out of 20 participants; 20%) spent 1 to 2 years engaged in DSH, demonstrating that 60% of respondents engaged in DSH for 2 years or less.

Statistical Analyses

A series of independent samples t-tests were used to assess significant differences in cessation strategy between respondents who reported being hospitalized and those participants who reported that they were not hospitalized. The non-hospitalized group was significantly more likely to endorse Self-Concept Reasons (M= 30.80, SD = 6.46) as helpful for cessation of DSH than the hospitalized group (M=11.00, SD=9.90)($t(15)=-3.806$, $p < .002$, 95% CI [-30.888,-8.712). Self-Concept Reasons included some the following statements: "I tried thinking of myself in a more positive light;" "I tried to be more optimistic about my life;" "I tried not to take life so seriously;" and "I told myself that the most important things in life were within my grasp."Participants who reported hospitalization due to DSH were less likely to endorse that Medical/Professional Interventions were helpful to them (M=4.00, SD=2.82) than participants who reported that they had never been hospitalized (14.07, SD=1.33). A significant difference was also found between participants who had seen a therapist (M =5.40, SD=3.534) and those respondents who had not (M =.77, SD=1.536) with regards to endorsement of Medical/Professional Interventions being helpful for cessation of DSH $t(11.621)=3.872$, $p < .002$, 95% CI [2.016, 7.246]). That is, individuals who saw a therapist were significantly more appreciative of medical/ professional interventions than those who had no therapy (See

Table 1: Difference between Participants Who Reported Having Been Hospitalized due to DSH and Those Who Reported no Hospitalizations with Regards to Cessation Method

	Previous Experience With Hospitalization							95% CI	
	Hospitalization			No Hospitalization					
Variable	*n*	*M*	*SD*	*n*	*M*	*SD*	*t*(df)	*LL*	*UL*
Self Con	2	11.00	9.899	15	30.80	6.646	-3.806(15)*	-30.888	-8.712
Emotional	2	8.00	5.657	15	22.33	2.469	-3.539(1.051)	-60.219	-31.533
Suppt Cir	7	31.29	13.073	18	35.89	8.380	-1.052(23)	-13.654	4.448
Med/Pr Int	2	4.00	2.828	15	14.07	1.335	-9.025(15)*	-12.444	-7.689
Behav Int	2	14.50	19.092	15	31.53	4.121	--1.258(1.012)	-184.175	150.109
Spiritual	2	4.00	4.243	15	8.33	1.676	-1.430(1.042)	-39.363	30.679
Mot/Trans	7	18.86	8.174	18	20.00	5.258	-.417(23)	-6.813	4.527

Note. *$p < .01$

Table 2: Difference between Participants Who Reported Seeing a Therapist and Those Who Did Not with Regards to Cessation Method

	Previous Experience With Therapy							
	Therapy			No Therapy			95% CI	
Variable	*n*	*M*	*SD*	*n*	*M*	*SD*	*t*(df)	*LL*	*UL*
Self Con	10	12.30	5.926	13	10.62	7.089	.605 (21)	-4.103	7.472
Emotional	8	4.88	3.227	10	4.40	5.758	.208 (16)	-4.369	5.319
Suppt Cir	10	6.80	5.453	13	4.77	4.764	.952 (21)	-2.405	6.466
Med/Pr Int	10	5.40	3.534	13	.77	1.536	3.872 (11.621)*	2.367	6.895
Behav Int	8	6.13	3.091	10	3.00	4.243	1.742 (16)	-.678	6.928
Spiritual	10	3.30	2.214	13	3.69	3.966	-.301 (19.437)	-3.117	2.333
Mot/Trans	10	4.70	2.983	13	6.15	3.955	-.968 (21)	-4.578	1.670

Note. *$p < .01$

Tables 1 and Table 2). While this result seems logical, when asked whether it was helpful in a yes/no format, only 50% of those who saw a therapist reported that they found it helpful for cessation of DSH. Thus, it appears that among those who found it helpful, they rated it as very helpful.

Independent samples t-tests revealed a significant difference in length of time engaged in DSH for participants who had been hospitalized (M= 4.75 years, SD = 1.26) versus participants who had not (M =1.40 years, SD = 1.30) ($t(17) = 4.610$, $p < .001$, 95% CI [1.817, 4.883]).Independent samples t-tests also yielded a significant difference in time engaged in DSH between participants who reported that they had seen a therapist (M =3.14 years, SD = 2.11) and participants who had not (M=1.18, SD = 1.08) ($t(16) = 2.615$, $p = .019$, 95% CI [.371, 3.551]). Both of these results indicate that the longer DSH persists, the more likely one is to get professional treatment.

Affect Regulation had a significant correlation with Medical/Professional Interventions (r=0.469, p=.05). The Medical/Professional Intervention items included: "I took prescribed medications;" "I participated in individual therapy/counseling;" and "I participated in group therapy/counseling." Similar to Affect Regulation, Self-Punishment had a strong positive correlation with Medical/Professional Interventions (r=0.535, p=.05, N=18), indicating that those who engaged in DSH as a form of self-punishment were more likely to seek out formal mental health interventions than those who were not motivated by self-punishment.

There was no association found between personality style and frequency of DSH. However, Extraversion had a significant positive correlation with the number of different cessation methods endorsed (r=-0.476, p=.046, N=18) (r =.476*, p<.05). In addition, Conscientiousness was negatively associated with successfully utilizing Behavioral Interventions (r=-0.614, p=.007, N=18), which included endorsement of the following statements: "I used recreational drugs;" "I gave myself gifts/rewards for not harming myself;" "Someone else punished/deprived me of something I liked every time I hurt myself;" "I used alcohol;" and "I found something else to do when I felt the urge." (See Table 3).

Table 3: Correlations between Conscientiousness and Cessation Methods

Measures	Conscientiousness
SelfConcept	.069
Emotional	-.079
Support Circle	.010
Med/Profess Interventions	-.117
Behavioral Interventions	-.614*
Spiritual	.177
Motivational/Transformational	-.208

Note. $p < .01$

Discussion

This study is the first to examine the natural history of deliberate self-harm in a group of adolescents and young adults and one of the very few to study this phenomenon within an ethnically diverse sample. It provides data on the proportion of adolescents currently attending an HBCU who stopped DSH without the help of psychotherapy. The study examined what other methods are used to stop DSH and if cessation methods were logically related to the underlying motivations propelling the DSH. And finally, this study looked for specific personality differences in DSH motivations and cessation strategies that would be helpful in understanding the natural course of DSH.

There were more females with a history of DSH than males in the current sample. Since the data was gathered at an HBCU where 65% of the undergraduates are female, and 35% male, one would expect nearly twice as many females to volunteer for the study as males. However, we had more than 4.5 times as many females volunteer, suggesting that females on campus were far more likely

to have a history of DSH than males. Yet, because a large group came from the College of Arts and Sciences, where the ratios are even more skewed, future research needs to systematically recruit proportionately from the male and female groups to accurately assess gender disparities.

The current study found most participants (76%) had told their parents and friends about their behavior. Rowe et al. (2014) [20] found similar results through their literature review of help-seeking behavior of adolescents engaged in DSH. In the current study, 40% of participants did seek out professional help for DSH and half reported that therapy was helpful in stopping the behavior(s). This result is extremely important since those that entered treatment had been engaged in the DSH for a much longer period than those who did not seek professional treatment. The majority of participants (60%) had no formal psychotherapeutic interventions, but reported that they used a variety of self-help methods to successfully overcome the DSH. There are no other published studies that have examined the proportion of youth who deal with DSH without psychotherapeutic intervention, so it remains to be seen how robust this finding will be in other samples. However, for those for whom psychotherapy is unappealing and/or too expensive, not available, or not possible for other reasons, it is important to educate the public that other types of cessation methods have been found to be effective. If the current results hold true, it may be possible to identify a window of time where the likelihood of non-psychotherapeutic strategies is no longer effective and there is an increased need for professional interventions.

A most interesting finding was that hospitalization was generally not perceived as helpful, as the non-hospitalized group found Medical/Professional Interventions much more helpful than the hospitalized group. Perhaps, hospitalization for students of color is more traumatic than for others, or they experience more stigma and shame about hospitalization. It is possible that these students were hospitalized at a time of crisis and placed in facilities that did not specialize in DSH or were not culturally sensitive to the needs of these students. Because data does show that effective in-patient treatments for DSH do exist, it is important to tease out why these students reported that they did not experience any benefit.

Unlike previous research, for the majority of participants in this study, interpersonal boundaries, interpersonal influence, anti-suicide, anti-dissociation, and sensation-seeking were not highly motivating factors for DSH. A desire to be accepted by peers was not endorsed by anyone. This result is in contrast to [11], who found that problems with peers were a big motivator for 10-14 year-old African-Americans and Hispanics. It is unclear why the results of the present study are not in accord with previous findings. Perhaps the present sample was not motivated by peer issues because they were engaging in DSH in the later teen years or perhaps the [11] sample was of a different social class than the HBCU sample. It is possible that peer acceptance actually does have a different degree of importance across cultural groups. Even during adolescence, the role of family and social institutions are more prominent in some cultures that peer groups.

Most of the participants stated they engaged in self-harm in order to regulate their affect or for self-punishment. This finding is in support of previous research by [12] who reported those African American youth used DSH to release pent up anger. Thus, the cultural motivations for DSH among students of color seem to be highly focused and less varied than that found among predominantly white students. If this finding is replicated it may provide valuable insights into more effective interventions.

Emotional Reasons/Affect Regulation had a significant positive association with Medical/Professional Interventions. The Medical/Professional Intervention items in the Survey of Cessation of Deliberate Self-Harm included the following statements: "I took prescribed medications;" "I participated in individual therapy/counseling;" and "I participated in group therapy/counseling." While other factors could also be referral reasons for entering therapy, affect regulation appears to be the primary purpose of psychotherapy among this group. Those who used medication and utilized professional psychotherapy services reported it helped them to control feelings of despair and the roller coaster of emotions. This result is not surprising, since it is the primary goal of most psychotropic medications and psychotherapy interventions.

Next to affect regulation, there was a relatively strong endorsement of self-punishment as a motivator of DSH. Respondents endorsed the following items that contributed to the Self-Punishment factor score as somewhat relevant or very relevant motivators of their DSH: "Punishing myself;""Expressing anger towards myself for being worthless or stupid;" and "Reacting to feeling unhappy with myself or disgusted with myself." Similar to Affect Regulation, DSH which served the function of Self-Punishment had a strong positive correlation with Medical/Professional Interventions. And, like affect regulation, remediation opportunities to cease self-punishment were perceived as primarily available via medications or psychotherapy. Thus, it appears that if someone is engaging in DSH to regulate their affect and/or to punish themselves, psychotherapy is likely to be beneficial. It is interesting to note, that when asked to respond in a "yes" or "no" format, only 50% of those who had psychotherapy stated it had been useful.

Not only were motivational factors related to cessation strategies, but personality styles were also significantly related to cessation strategy. Extraversion had a significant positive correlation with the number of different types of DSH cessation methods endorsed. Extraverts tend to enjoy human interactions and be enthusiastic, talkative, assertive, and gregarious. They tend to be greater

sensation seekers and this trait may account for their willingness to try many different strategies. It could also be that because they tend to be more social, they are more likely to discuss their thoughts and feelings with others, which may result in opportunities to hear about more strategies for coping, in general, and to gain social support or motivation for their self-harming cessation strategies.

Furthermore, results from the present study demonstrated that individuals with a more Conscientiousness personality style found Behavioral Interventions to be less helpful in their cessation of DSH. Conscientiousness is another of the five traits of the Five Factor Model of personality, typified by people who are hard-working, reliable, and believe they are efficacious in directing their behavior and changing their behavior. It is reasonable that those individuals high in Conscientiousness may be less likely to rely on external manipulations, such as reinforcement schemas, to control their DSH. Future studies, with much larger samples, are needed to more fully examine this most interesting issue.

The current study provides information that has implications for clinical practice. First, most participants reported that they began DSH in upper elementary school or early middle school. It might be beneficial for school systems to discuss healthy coping strategies for managing stress, peer relationships, puberty, and other issues related to pre-adolescent/adolescent students. Health classes are often available in these grades, and including healthy coping strategies could provide them with alternatives to DSH, thereby preventing the behavior from beginning. It is important to offer youth a range of cessation strategies since there are many that can be effective, without participating in formal psychotherapy

Furthermore, 60 % of participants in the present study spent less than 2 years engaged in DSH. It is likely that, for some subset of youth, DSH is a rite of passage; a way of dealing with the angst of an unformed identity that may or may not have lasting psychological effects. This study does document that for an unknown, but probably significant subset of pre-teens and adolescents, DSH can "run its course" without professional or medical interventions. DSH that lasts more than two years and/or is motivated by a need for affect regulation and self-punishment may be most in need of professional intervention.

While not assessed in this study, previous research demonstrates that involvement in the school community can be another source of successful cessation strategies. Stallard et al. (2013) [21], using a large sample of nearly four thousand English children, twelve to sixteen, found that while insecure peer attachments increased the likelihood of boys and girls developing self-harming behaviors, all children were less likely to develop or persist in self-harming thoughts and/or behaviors if they were involved and committed to their school. Indeed, the reason we may not have found peer issues related to DSH is that the church was serving the same protective role that Stallard et al. (2013) [21] found the schools providing to some children. Similar to the current study, these researchers also found that few of the adolescents sought help for DSH. With the majority of students either hesitant or unable to seek outside professional help for DSH, it is important for schools and other social/religious institutions to develop inclusion policies for these at-risk students.

There are a number of limitations in the current study. The most significant limitation is the small sample size. The small sample size limited the types and amount of statistical analysis that could be conducted. Deliberate self-harm is a phenomenon that is highly stigmatizing and, while research repeatedly confirms that a large number of undergraduates have a history of DSH, it was very challenging to recruit even the small sample of Black young adult participants. Furthermore, this study required not only that the individuals had a history of DSH, but that they had ceased the behavior(s). Individuals may be less likely to disclose DSH once it has been successfully battled, since it is often a dark area that one wants to put in the past and keep there. There were many individuals who were unable to be included in the sample because they reported that they were currently engaged in DSH at the time of data collection. In addition, a few participants did not respond to all of the items, thereby offering incomplete information from an already small sample.

Appendix

Cessation Survey

Directions

(1) **For each method listed**, put an **X** in the bracket if you have EVER tried that method as a means to stop hurting or injuring yourself. Leave the bracket BLANK if you have not used that method.

(2) Then, indicate how much **each** method helped you to achieve your goal of refraining from self-harm by circling the most accurate response.

Self-Concept Reasons

I Tried Using will Power to Stop ( )

a. Not at All Helpful
b. A Little Helpful
c. Moderately Helpful
d. Very Essential (I couldn't have stopped without it)

I Tried Thinking of Myself in a More Positive Light ( )

a. Not at All Helpful
c. Moderately Helpful

b. A Little Helpful
d. Very Essential (I couldn't have stopped without it)

I Tried to Be More Optimistic about My Life ( )

a. Not at All Helpful
c. Moderately Helpful
b. A Little Helpful
d. Very Essential (I couldn't have stopped without it)

I Tried Not to Take Life So Seriously ( )

a. Not at All Helpful
c. Moderately Helpful
b. A Little Helpful
d. Very Essential (I couldn't have stopped without it)

I Told Myself that the Most Important Things in Life Were Within my Grasp ( )

a. Not at All Helpful
c. Moderately Helpful
b. A Little Helpful
d. Very Essential (I couldn't have stopped without it)

I Tried to Develop an Identity as a Non-Cutter ( )

a. Not at All Helpful
c. Moderately Helpful
b. A Little Helpful
d. Very Essential (I couldn't have stopped without it)

I Realized that I had Hurt Myself Worse than I Intended ( )

a. Not at All Helpful
c. Moderately Helpful
b. A Little Helpful
d. Very Essential (I couldn't have stopped without it)

I Wanted to get a Job ( )

a. Not at All Helpful
c. Moderately Helpful
b. A Little Helpful
d. Very Essential (I couldn't have stopped without it)

Emotional Reasons

I Tried to Forgive Myself ( )

a. Not at All Helpful
c. Moderately Helpful
b. A Little Helpful
d. Very Essential (I couldn't have stopped without it)

I No Longer Felt Relief from Cutting ( )

a. Not at All Helpful
c. Moderately Helpful
b. A Little Helpful
d. Very Essential (I couldn't have stopped without it)

I Became Disgusted with/Loathed Myself ( )

a. Not at All Helpful
c. Moderately Helpful
b. A Little Helpful
d. Very Essential (I couldn't have stopped without it)

I Did Not Like the Scars ( )

a. Not at All Helpful
c. Moderately Helpful
b. A Little Helpful
d. Very Essential (I couldn't have stopped without it)

I Felt Discriminated Against because of the Cutting ( )

a. Not at All Helpful
c. Moderately Helpful
b. A Little Helpful
d. Very Essential (I couldn't have stopped without it)

Support Circle Reasons

I Made New Friends ( )

a. Not at All Helpful
c. Moderately Helpful
b. A Little Helpful
d. Very Essential (I couldn't have stopped without it)

My Relationship with My Parents/Relatives Improved ( )

a. Not at All Helpful
c. Moderately Helpful
b. A Little Helpful
d. Very Essential (I couldn't have stopped without it)

My Peers/Friends Disapproved ( )

a. Not at All Helpful
c. Moderately Helpful
b. A Little Helpful
d. Very Essential (I couldn't have stopped without it)

My Boyfriend/Girlfriend Helped Me ( )

a. Not at All Helpful
c. Moderately Helpful
b. A Little Helpful
d. Very Essential (I couldn't have stopped without it)

I Wanted to Fit in ( )

a. Not at All Helpful
c. Moderately Helpful
b. A Little Helpful
d. Very Essential (I couldn't have stopped without it)

I Received Support from School Staff ( )

a. Not at All Helpful
c. Moderately Helpful
b. A Little Helpful
d. Very Essential (I couldn't have stopped without it)

I Received Support from Peers Who had Stopped Hurting Themselves ( )

a. Not at All Helpful
c. Moderately Helpful
b. A Little Helpful
d. Very Essential (I couldn't have stopped without it)

I Received Support from My Religious Community ( )

a. Not at All Helpful
c. Moderately Helpful
b. A Little Helpful
d. Very Essential (I couldn't have stopped without it)

Medical/Professional Interventions

I Took Prescribed Medication(S) ( )

a. Not at All Helpful
c. Moderately Helpful
b. A Little Helpful
d. Very Essential (I couldn't have stopped without it)

I Participated in Individual Therapy/Counseling ( )

a. Not at All Helpful
b. A Little Helpful
c. Moderately Helpful
d. Very Essential (I couldn't have stopped without it)

I Participated in Group Therapy/Counseling ( )

a. Not at All Helpful
b. A Little Helpful
c. Moderately Helpful
d. Very Essential (I couldn't have stopped without it)

Behavioral Interventions

I Used Recreational Drugs ( )

a. Not at All Helpful
b. A Little Helpful
c. Moderately Helpful
d. Very Essential (I couldn't have stopped without it)

I Gave Myself Gifts/Rewards for not Harming Myself ( )

a. Not at All Helpful
b. A Little Helpful
c. Moderately Helpful
d. Very Essential (I couldn't have stopped without it)

Someone Else Gave Me Gifts/Rewards for Not Harming Myself ( )

a. Not at All Helpful
b. A Little Helpful
c. Moderately Helpful
d. Very Essential (I couldn't have stopped without it)

I Punished/Deprived Myself of Something I Liked Every Time I Hurt Myself ( )

a. Not at All Helpful
b. A Little Helpful
c. Moderately Helpful
d. Very Essential (I couldn't have stopped without it)

Someone Else Punished/Deprived Me of Something I Liked Every Time I Hurt Myself ( )

a. Not at All Helpful
b. A Little Helpful
c. Moderately Helpful
d. Very Essential (I couldn't have stopped without it)

I Used Alcohol ( )

a. Not at All Helpful
b. A Little Helpful
c. Moderately Helpful
d. Very Essential (I couldn't have stopped without it)

I Found Something Else to Do When I Felt the Urge ( )

a. Not at All Helpful
b. A Little Helpful
c. Moderately Helpful
d. Very Essential (I couldn't have stopped without it)

Spiritual Reasons

I Tried Using Prayer/God to Stop ( )

a. Not at All Helpful
b. A Little Helpful
c. Moderately Helpful
d. Very Essential (I couldn't have stopped without it)

I Wanted to Live ( )

a. Not at All Helpful
b. A Little Helpful
c. Moderately Helpful
d. Very Essential (I couldn't have stopped without it)

Motivational/Transformational

I Outgrew it ( )

a. Not at All Helpful
b. A Little Helpful
c. Moderately Helpful
d. Very Essential (I couldn't have stopped without it)

I Realized it was Immature ( )

a. Not at All Helpful
b. A Little Helpful
c. Moderately Helpful
d. Very Essential (I couldn't have stopped without it)

I Read A Book that Motivated Me to Stop Harming Myself ( )

a. Not at All Helpful
b. A Little Helpful
c. Moderately Helpful
d. Very Essential (I couldn't have stopped without it)

I Saw a Movie that Changed how I Looked at My Life ( )

a. Not at All Helpful
b. A Little Helpful
c. Moderately Helpful
d. Very Essential (I couldn't have stopped without it)

I Heard a Song that I Kept with Me ( )

a. Not at All Helpful
b. A Little Helpful
c. Moderately Helpful
d. Very Essential (I couldn't have stopped without it)

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