Comparison of non-suicidal self-injurious behavior and suicide attempts in patients admitted to a psychiatric crisis unit

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A B S T R A C T

The aim of the current study was to examine differences in personality, coping skills, and select psychopathology symptoms in psychiatric patients with and without non-suicidal self-injury and/or suicide attempts. We collected data in a sample of 128 psychiatric patients by means of self-report questionnaires measuring self-harm, psychological symptoms, personality and coping skills. Results support a continuum of self-harm such that patients with both non-suicidal self-injury and suicide attempts exhibit significantly greater levels of psychopathology and lower levels of adaptive personality traits and coping skills. The findings point to the clinical importance of making a distinction between non-suicidal self-injury and suicide attempts, and offers additional variables to consider outside of intent when appraising suicide risk.

1. Introduction

Non-suicidal self-injury (NSSI) is any socially unaccepted behavior involving deliberate and direct injury to one’s own body surface without suicidal intent (Claes & Vandereycken, 2007a). It is estimated that 4.3–20% of adult psychiatric inpatients engage in NSSI and these percentages increase to 40% for adolescent psychiatric inpatients (Klonsky & Muehlenkamp, 2007). Suicide attempts are defined as self-injurious behaviors with intent to die and it has been estimated that approximately 4.6% of individuals have made at least one suicide attempt (Nock & Kessler, 2006). Researchers have noted a high co-occurrence between NSSI and suicide attempts (Jacobson & Gould, 2007) leading some to question the need to differentiate the behaviors. Many argue that self-injuring patients with suicidal intent clearly differ from those without such intent (Nock & Kessler, 2006), with the former being more likely to have potentially lethal injuries and greater psychopathology (Joiner, 2005).

Important differences have been identified between persons reporting NSSI and/or suicide attempts in regards to depressed mood, hopelessness, psychological distress, reasons for living, aggressive symptoms, and functions served by the behavior (Brown, Comtois, & Linehan, 2002; Klonsky, 2007; Muehlenkamp & Gutierrez, 2004, 2007; Nock & Kazdin, 2002, 2006; Whitlock & Knox, 2007; Whitlock, Muehlenkamp, & Eckenrode, 2008). Significant limitations to these studies are that many used non-clinical populations of adolescents and they failed to examine whether there are clinically meaningful differences in actual coping skills and personality characteristics.

Both suicide attempts and NSSI have been associated with impulsiveness and borderline personality disorder (Andover, Pepper, Ryabchenko, Orrico, & Gibb, 2005; Brown et al., 2002; Nock, Joiner, Gordon, Lloyd-Richardson, & Prinstein, 2006). Persons with suicide attempts have also scored significantly higher than controls on personality characteristics of neuroticism, harm avoidance, and lower on extraversion (Brezo, Paris, & Turecki, 2006; Calati et al., 2008). Similarly, within a sample of eating disordered patients with(out) NSSI, Claes et al. (2004) found higher levels of neuroticism and lower levels of extraversion among patients with NSSI. While these are valuable results, the studies indicating differences between NSSI and suicide attempt groups are based on predominantly higher functioning, non-clinical, adolescent populations and those with adults are largely restricted to examining BPD features.

The same is true in regards to coping skills. While there is a larger body of literature documenting that persons with suicide attempts have less adaptive problem-solving skills (Speckens &
Hawton, 2005), there is only one known study examining specific coping skills in NSSI (Andover, Pepper, & Gibb, 2007) and the sample included relatively high functioning college students. It is important for research to identify whether meaningful differences in core personality traits and coping strategies exist between these self-harming groups within psychiatric adult populations to further inform clinical practice.

The purpose of the current study was to compare four groups of psychiatric patients with(out) NSSI and suicide attempts (SA) on personality traits, coping strategies, and clinical symptoms. It was hypothesized that patients without NSSI or SA would show less psychopathology, more adaptive and active coping strategies, and higher levels of extraversion and conscientiousness than the other groups. Furthermore, we expected that patients with both NSSI and SA would show the highest levels of psychopathology and neuroticism, less adaptive coping strategies, and the lowest levels of extraversion and conscientiousness among the self-harm groups.

2. Method

2.1. Participants and procedures

Participants were recruited from 200 admissions to an inpatient psychiatric crisis unit in Belgium between September 2006 and June 2007. The crisis unit is part of a university general hospital and admits patients who are referred by psychiatrists working in the first aid unit of the hospital or, by psychiatrists treating psychiatric outpatients. Patients admitted to the crisis unit suffer from severe psychopathology and are a danger to themselves or others, and/or are unable to remain at home due to severe crisis in the family situation (e.g., partner violence, child–parent problems). All patients admitted to the inpatient psychiatric crisis unit (maximum duration of stay is 14 days) were invited to participate in the study shortly after the crisis situation was alleviated (approximately 5–6 days). All patients were provided with an envelope holding informed consent documents and questionnaires. Patients willing to participate provided written informed consent and completed the questionnaires individually within their hospital rooms. The documents were returned to the researcher in a sealed envelope via their individual therapist who had no access to participant responses. In total 128 patients (64% of all presenting patients) with a mean age of 35.62 (SD = 13.04) completed the study, of whom 25% (N = 32) were male. De-identified DSM-IV Axis I diagnoses (APA, 1994), as listed in the patients’ charts, were provided to the researcher by a staff psychologist (see Table 1). Participants were not provided any direct compensation but were given a short report of the results prepared by the researcher and given to the treating therapist. The study procedures were approved by the ethical committee of the University of the first author.

2.2. Instruments

To assess the presence/absence of NSSI and SA two YES/NO questions were used: (1) have you ever injured yourself without the intent to die? and (2) have you ever injured yourself with the intent to die? Both questions were cross-validated by means of a related questionnaire (e.g., SIQ-TR, SIS; see below). Participants completed official Dutch reliable/valid translations of all English based instruments and the internal consistency estimates for the Dutch translated scales are included in the scale descriptions.

To assess NSSI we used the Self-Injury Questionnaire-Treatment Related (SIQ-TR; Dutch version: Claes & Vandereycken, 2007b), which consists of five items asking participants to indicate whether they had engaged in one or more behaviors: severe scratching, bruising, cutting, burning, or biting. For each behavior endorsed, participants were asked to report the recency and frequency of their self-injury. Patients who mentioned at least one type of NSSI were assigned to the NSSI group, whereas patients reporting no form of NSSI were assigned to the noNSSI group. Data supporting the validity and reliability of this scale are available (Claes & Vandereycken, 2007b).

The 10 item (x = 0.93) Suicidal Ideation Scale (SIS; Rudd, 1989) was used to assess the severity of suicidal ideation and cross-validate reports of suicide attempts (item 4). Each item is scored from

Table 1

Number and percentage of the DSM-IV primary Axis I diagnoses (N = 128) of total and the four patient groups.

<table>
<thead>
<tr>
<th>Axis I code</th>
<th>Axis I diagnosis</th>
<th>Group 1 noNSSI/noSA, N = 58</th>
<th>Group 2 NSSI only, N = 26</th>
<th>Group 3 SA only, N = 23</th>
<th>Group 4 NSSI + SA, N = 21</th>
<th>Total group, N = 128</th>
</tr>
</thead>
<tbody>
<tr>
<td>292.9</td>
<td>Substance-related disorder NOS</td>
<td>1</td>
<td>3.8</td>
<td>1</td>
<td>0.8</td>
<td></td>
</tr>
<tr>
<td>293.81</td>
<td>Psychotic disorder due to general medical condition, with delusions</td>
<td>1</td>
<td>3.8</td>
<td>1</td>
<td>0.8</td>
<td></td>
</tr>
<tr>
<td>296.2x</td>
<td>Major depressive disorder, single episode</td>
<td>6</td>
<td>10.3</td>
<td>2</td>
<td>7.7</td>
<td></td>
</tr>
<tr>
<td>296.3x</td>
<td>Major depressive disorder, recurrent</td>
<td>10</td>
<td>17.1</td>
<td>1</td>
<td>3.8</td>
<td>9</td>
</tr>
<tr>
<td>296.80</td>
<td>Bipolar disorder NOS</td>
<td>6</td>
<td>10.3</td>
<td>1</td>
<td>3.8</td>
<td>1</td>
</tr>
<tr>
<td>298.80</td>
<td>Psychotic disorder NOS</td>
<td>1</td>
<td>1.7</td>
<td>2</td>
<td>7.7</td>
<td>3</td>
</tr>
<tr>
<td>300.00</td>
<td>Anxiety disorder NOS</td>
<td>1</td>
<td>1.7</td>
<td>1</td>
<td>3.8</td>
<td>1</td>
</tr>
<tr>
<td>300.02</td>
<td>Generalized anxiety disorder</td>
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<td>1.7</td>
<td>1</td>
<td>0.8</td>
<td></td>
</tr>
<tr>
<td>300.22</td>
<td>Agoraphobia without history of panic disorder</td>
<td>1</td>
<td>1.7</td>
<td>1</td>
<td>0.8</td>
<td></td>
</tr>
<tr>
<td>300.3</td>
<td>Obsessive–Compulsive disorder</td>
<td>1</td>
<td>1.7</td>
<td>1</td>
<td>0.8</td>
<td></td>
</tr>
<tr>
<td>300.4</td>
<td>Dysthmic disorder</td>
<td>1</td>
<td>4.3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>305.00</td>
<td>Alcohol abuse</td>
<td>1</td>
<td>1.7</td>
<td>1</td>
<td>3.8</td>
<td>2</td>
</tr>
<tr>
<td>305.40</td>
<td>Sedative, hypnotic or anxiolytic abuse</td>
<td>1</td>
<td>1.7</td>
<td>1</td>
<td>0.8</td>
<td></td>
</tr>
<tr>
<td>307.50</td>
<td>Eating disorder NOS</td>
<td>1</td>
<td>1.7</td>
<td>2</td>
<td>7.7</td>
<td>3</td>
</tr>
<tr>
<td>309.0</td>
<td>Adjustment disorder with depressed mood</td>
<td>12</td>
<td>20.7</td>
<td>8</td>
<td>30.8</td>
<td>8</td>
</tr>
<tr>
<td>309.24</td>
<td>Adjustment disorder with anxiety</td>
<td>3</td>
<td>5.2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>309.28</td>
<td>Adjustment Disorder With mixed anxiety and depressed mood</td>
<td>5</td>
<td>8.6</td>
<td>2</td>
<td>7.7</td>
<td>1</td>
</tr>
<tr>
<td>309.3</td>
<td>Adjustment disorder with disturbance of conduct</td>
<td>1</td>
<td>3.8</td>
<td>1</td>
<td>0.8</td>
<td></td>
</tr>
<tr>
<td>309.4</td>
<td>Adjustment disorder with mixed disturbance of emotions and conduct</td>
<td>1</td>
<td>3.8</td>
<td>2</td>
<td>8.7</td>
<td>1</td>
</tr>
<tr>
<td>309.81</td>
<td>Posttraumatic stress disorder</td>
<td>1</td>
<td>1.7</td>
<td>1</td>
<td>4.8</td>
<td>2</td>
</tr>
<tr>
<td>309.9</td>
<td>Adjustment disorder unspecified</td>
<td>2</td>
<td>3.4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>311</td>
<td>Depressive disorder NOS</td>
<td>1</td>
<td>1.7</td>
<td>2</td>
<td>9.5</td>
<td>3</td>
</tr>
<tr>
<td>799.9</td>
<td>Diagnosis or condition deferred on Axis I or on Axis II</td>
<td>3</td>
<td>5.2</td>
<td>1</td>
<td>3.8</td>
<td>1</td>
</tr>
<tr>
<td>V61.1</td>
<td>Partner relational problem</td>
<td>2</td>
<td>3.4</td>
<td>1</td>
<td>3.8</td>
<td></td>
</tr>
</tbody>
</table>

N.S.
1 (never or none of the time) to 5 (always or a great many times) rating how often the subject has felt or behaved during the past year. Scores are obtained by summing the ten items, and higher scores indicate a higher level of suicidality. The SI-S has evidence of strong reliability and validity (Rudd, 1989).

The Beck Depression Inventory (BDI-II; Beck, Steer, & Brown, 1996; Dutch version: Van der Does, 2002) is a widely used, and well validated 21-item (α = 0.92) inventory measuring the severity of depression. Scores are obtained by summing response values. Higher total scores indicate more severe depressive symptoms.

The Beck Hopelessness Scale (BHS; Beck & Steer, 1988) is a 20-item scale (yes/no) (α = 0.89) for assessing negative attitudes about the future that is also well validated. Scores are obtained by summing the number of items marked in the direction keyed for hopelessness. Higher scores indicate greater hopelessness.

The Neuroticism, Extraversion, Openness–Five Factor Inventory (NEO-FFI; Costa & McCrae, 1985, 1992; Dutch version: Hoekstra, Ormel, & de Fruyt, 1996) is a 60-item measure of the five major personality traits: Neuroticism (N; α = 0.60; after removal of item 21: α = 0.77), Extraversion (E; α = 0.82), Openness to Experience (O; α = 0.68), Agreeableness (A; α = 0.71), and Conscientiousness (C; α = 0.81). Items are answered on a five-point scale ranging from “strongly agree” to “strongly disagree”. Scores are obtained by summing response values and higher scores indicate greater trait characteristics. There is considerable evidence for the reliability and construct validity of the Dutch NEO-FFI (Hoekstra et al., 1996).

The Utrecht Coping List (UCL; Dutch version: Schreurs, van de Willige, Brosschot, Tellegen, & Graus, 1993) consists of 47 items divided over seven scales that measure a variety of different coping strategies and techniques: Active Problem Solving (α = 0.83), Paliative Reactions (α = 0.77), Passive/Depressive Reactions (α = 0.71), Avoidance (α = 0.74), Social Support Seeking (α = 0.87), Expression of Emotions (α = 0.59), and Self-Soothing Thoughts (α = 0.80).

The Anger Expression Scale (AX; Spielberger, Krasner, & Solomon, 1988) consists of 24 items rated on a four-point Likert scale designed to assess how people cope when they feel angry. Two subscales discriminate between the tendency to express anger against other people or objects (AX/Out; α = 0.77) and feelings of anger which are suppressed (AX/In; α = 0.79). The third subscale, AX/Control, measures control over feelings of anger (α = 0.87).

### 2.3. Analyses

MANCOVAs with gender as the covariate were used to assess group differences (noNSSI/noSA, only NSSI, only SA, NSSI + SA) on all interval-level dependent variables, and Scheffé’s post hoc tests were performed to determine which patient groups significantly differed when the omnibus test was significant. Chi-square tests were used to evaluate differences in nominal variables. All analyses were performed using SPSS 16.0.

### 3. Results

#### 3.1. NSSI and SA

Of the total sample, 36.7% (n = 47) reported at least one type of NSSI. There were no significant gender differences with respect to the presence/absence of NSSI (χ2(1) = 0.10, ns); 34.4% (N = 11) of the male patients and 37.5% (N = 36) of the female patients reported at least one type of NSSI. A total of 45 patients endorsed at least one suicide attempt, and there were no significant gender differences in the proportion of males and females reporting suicide attempts: 28.1% (N = 9) of the male patients and 37.1% (N = 36) of the female patients, χ2(1) = 0.85, ns. A positive association between the presence/absence of NSSI and SA, χ2(1) = 3.49, < 0.05, was found such that patients who endorsed NSSI had a higher probability of also reporting a suicide attempt than patients without NSSI.

To test the primary study hypotheses participants were divided into four groups based on the absence/presence of NSSI and SA. Forty five percent (n = 58) of the patients belonged to the noNSSI/noSA group, 20.3% (n = 26) to the Only NSSI group, 18.0% (n = 23) to the Only SA group, and 16.4% (n = 21) to the NSSI + SA group. No significant group differences were found on demographic characteristics; however, a significant difference in age emerged, F(3, 123) = 3.03, p < 0.05, with the noNSSI/noSA group being the youngest and the only SA group being the oldest (see Table 2).

#### 3.2. NSSI/SA and psychopathology and personality

Patients with a suicide attempt (only SA; NSSI + SA) scored significantly higher on depression, hopelessness, and suicidal ideation than patients without a suicide attempt (noNSSI/noSA; Only NSSI; see Table 2). Significant group differences were found on each of the big-five personality traits with the NSSI + SA group scoring significantly higher on neuroticism than the other three groups. Participants with either NSSI or SA scored significantly lower on extraversion than noNSSI/noSA controls. Those with any NSSI had lower scores on conscientiousness than participants without NSSI (see Table 2).

#### 3.3. NSSI/SA and coping

Significant group differences were also found for coping (see Table 3). Patients of the noNSSI/noSA group reported more Active Problem Solving and more Self-Soothing Thoughts than patients of the NSSI + SA group. Patients with SA endorsed significantly lower scores on conscientiousness than noNSSI/noSA controls, while patients of the NSSI + SA group scored significantly lower on neuroticism than noNSSI/noSA controls.

### Table 2

Means and standard deviations of the psychopathology and personality scales for the four patient groups.

<table>
<thead>
<tr>
<th></th>
<th>Group 1 No NSSI/No SA</th>
<th>Group 2 NSSI only</th>
<th>Group 3 SA only</th>
<th>Group 4 NSSI + SA</th>
<th>F</th>
<th>Post-hoc comparisons</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>M (SD)</strong></td>
<td><strong>M (SD)</strong></td>
<td><strong>M (SD)</strong></td>
<td><strong>M (SD)</strong></td>
<td><strong>M (SD)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td>38.01 (12.65)</td>
<td>31.38 (13.94)</td>
<td>38.77 (12.30)</td>
<td>30.95 (11.81)</td>
<td>3.03*</td>
<td>1 &lt; 4</td>
</tr>
<tr>
<td>BDI-TOT</td>
<td>27.77 (12.61)</td>
<td>25.20 (11.54)</td>
<td>36.41 (12.95)</td>
<td>36.38 (12.10)</td>
<td>5.30**</td>
<td>1 &lt; 3; 1 &lt; 4; 2 &lt; 3; 2 &lt; 4</td>
</tr>
<tr>
<td>BHS-TOT</td>
<td>9.56 (4.70)</td>
<td>10.24 (5.26)</td>
<td>13.17 (5.74)</td>
<td>14.00 (4.19)</td>
<td>6.10**</td>
<td>1 &lt; 3; 1 &lt; 4; 2 &lt; 3; 2 &lt; 4</td>
</tr>
<tr>
<td>SIS-TOT</td>
<td>19.17 (7.60)</td>
<td>21.00 (6.15)</td>
<td>30.07 (7.49)</td>
<td>32.52 (5.16)</td>
<td>26.00**</td>
<td>1 &lt; 3; 1 &lt; 4; 2 &lt; 3; 2 &lt; 4</td>
</tr>
<tr>
<td>Neuroticism</td>
<td>38.75 (8.64)</td>
<td>41.32 (5.47)</td>
<td>37.90 (14.16)</td>
<td>45.45 (5.63)</td>
<td>34.24**</td>
<td>1 &lt; 4; 2 &lt; 4; 3 &lt; 4</td>
</tr>
<tr>
<td>Extraversion</td>
<td>39.94 (7.60)</td>
<td>35.32 (8.90)</td>
<td>35.90 (8.33)</td>
<td>32.38 (6.56)</td>
<td>9.56**</td>
<td>2 &lt; 1; 3 &lt; 1; 4 &lt; 1</td>
</tr>
<tr>
<td>Openness</td>
<td>37.61 (6.26)</td>
<td>40.72 (6.41)</td>
<td>37.71 (6.67)</td>
<td>38.33 (6.26)</td>
<td>1.38</td>
<td></td>
</tr>
<tr>
<td>Agreeable</td>
<td>42.31 (5.59)</td>
<td>41.28 (6.24)</td>
<td>42.23 (7.08)</td>
<td>40.57 (7.29)</td>
<td>0.64</td>
<td></td>
</tr>
<tr>
<td>Conscientious</td>
<td>42.71 (8.12)</td>
<td>38.28 (6.02)</td>
<td>43.80 (8.56)</td>
<td>35.50 (7.81)</td>
<td>6.10**</td>
<td>4 &lt; 1; 4 &lt; 3; 2 &lt; 1; 2 &lt; 3</td>
</tr>
</tbody>
</table>

BDI-TOT = Beck Depression Inventory–Total Score; BHS = Beck Hopelessness Scale–Total Score; SIS = Suicidal Ideation Scale (excluding item 4 referring to a suicide attempt).

* p < 0.05.

** p < 0.01.

*** p < 0.001.
more Depressive Reactions than patients without SA (noNSSI/noSA; only NSSI). Patients with NSSI showed significantly more Avoidance Behavior and less Social Support Seeking than patients without NSSI. Furthermore, NSSI + SA patients had significantly higher scores on the Anger-In subscales of the Anger Expression Scale (AX) than patients without NSSI/SA. Two gender differences emerged: males scored significantly lower on Social Support Seeking, F(1, 120) = 4.40, p < 0.05, and higher on Anger Control, F(1, 108) = 4.67, p < 0.05, than females.

4. Discussion

In general the major differences between the four patient groups are congruent with the hypotheses, and consistent with a continuum of severity within self-harm behaviors. Patients without NSSI and SA are at one end of the spectrum showing less psychopathology, less pronounced “pathological” personality traits and more adequate coping strategies. At the opposite end are NSSI + SA patients, who showed the highest levels of psychopathology and relied more on depressive reaction patterns when confronted with stressful events. Overall, patients with NSSI showed less conscientiousness, more avoidance behavior and internalized anger than patients without NSSI. An association between NSSI and lack of conscientiousness has been previously described (Claes & Vandereycken, 2007a), so the current findings offer further evidence supporting the need to consider impulsivity in understanding and treating NSSI. Higher levels of avoidance behavior have been described in NSSI, referring to the negative reinforcement function of NSSI by avoiding negative feelings or images (Nock & Prinsteın, 2004). The link with anger-in as a coping mechanism seems similar to the inner directed anger and self-criticism found in NSSI patients (Claes, Vandereycken, & Vertommen, 2003; Claes et al., 2004; Glassman, Weierich, Hooley, Deliberto, & Nock, 2007; Klonsky, 2007), and is consistent with emotion regulation models of NSSI (Chapman, Gratz, & Brown, 2006; Muehlenkamp et al., 2009). There appears to be a growing body of literature suggesting anger is an important emotion to NSSI and it warrants attention in research and in treatments targeting emotion regulation with patients who self-injure.

The findings that SA patients (onlySA, NSSI + SA) scored higher on depression, hopelessness, suicidal ideation, neuroticism, and lower on extraversion replicate earlier findings (e.g., Brezo et al., 2006). SA patients reported more passive or depressive reaction patterns when confronted with stressful events compared to patients without SA. Again, these findings are consistent with prior reports that individuals with SA have poorer coping skills and fewer reasons for living/hopelessness (Muehlenkamp & Gutierrez, 2007; Nock & Kessler, 2006), which suggests that attitudes towards life and future may be important clinical markers to identifying suicide risk within those who also self-injure.

The importance of delineating NSSI from SA is corroborated by the current findings, as is the importance of assessing suicidal ideation. There remains a grey zone where it may be difficult to distinguish NSSI acts from suicide attempts as it may be a matter of interpretation whether someone really wished to die or wanted to escape from an aversive situation (e.g., Linehan, 2000). The current findings offer additional personality and coping-based markers that can inform risk outside of intent. Specifically, individuals who self-injure and are not suicidal tend to be more active, albeit avoidant, in their coping and they tend to have less severe symptoms of depression, hopelessness, and neuroticism compared to those who are suicidal. As these features increase in the direction of pathology, the greater the likelihood of a suicide attempt; thus, monitoring these variables in treatment may provide insight into risk for suicide among self-injuring patients.

The current findings offer additional insights into clinically meaningful differences among self-harming groups of patients, but they are not without limitation. The data were collected in a crisis unit consisting of patients diagnosed with heterogeneous Axis I disorders. Future studies should also focus on differences between patients with and without NSSI and suicide attempts in more homogeneous groups. Further, only 64% of the patients approached for the study participated, and no data was available concerning the non-participants. All cross-sectional data were based on self-report although efforts were made to cross-validate reports of the target variables by using multiple scales. Axis I diagnoses of the patients were based on clinical interviews by experienced psychiatrists, but no detailed information was available concerning Axis II pathology. There were no normal controls with which to compare results and this prevents some comparison with other studies that utilize non-clinical samples. The relationship between NSSI and SA needs to be studied more systematically and include diverse assessments of the variables of interest. With respect to prevention and treatment longitudinal studies are required to determine which factors have a determining influence on the development of suicidal behavior along the continuum of self-harm.
References


