Non-suicidal Self-injury in the Over 40s: Results from a Large National Epidemiological Survey

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Abstract

Using data drawn from a national community study of Non-suicidal Self-injury (NSSI) in 12,006 Australians aged 10-100 years, we focused on 78 subjects aged ≥ 40 years (53 females, 25 males) reporting NSSI in the previous 12 months. Mean onset was 25.4 years (SD 14.66, range 5-60, mode 15 years), 60.3% beginning before 25 years. Seventeen people began self-injury after 40 (13 females (9.9%); 4 males (6%)). For the month prior, 19 older females claimed 1-50 episodes (mean 10.5), 9 males 1-28 episodes (mean 7.4).

Compared to younger self-injurers, older self-injurers more likely had a psychiatric diagnosis (OR21.22, 95% CI [3.90, 115.52]), higher psychological distress (OR9.41, CI [1.73, 51.24]), and lifetime suicide attempts (38.2% to 28.0%, NS). However, younger self-injurers were more likely to report feeling suicidal in the previous four weeks (OR3.66, 95% CI [1.18, 8.45]) with 80.0% (versus 55.8% of ≥ 40 years) scoring high on a brief suicidal ideation scale. Most common motivation for NSSI was ‘emotion regulation’, with self-injurers ≥ 40 years (68.6%) more likely to endorse this than <25 years (54.5%) (NS). Compared to those ceased for over two years, current older self-injurers reported higher psychological distress (OR2.39, 95% CI [1.06, 5.40]) and self-blame (OR3.79, CI [1.75, 8.21]).

Respondents ≥ 40 years with no NSSI for two years (n=239) reported they had ‘grown up’ or ‘gotten over it’ (33.9%), ‘talked to a mental health professional’ (26.8%), ‘learned better ways to cope with stress’ (25.5%) and ‘received support from other people’ (25.1%). Only 25.7% asked for professional help. Barriers to help-seeking were feeling as if their NSSI problem was not severe enough (29.7%), ‘feeling ashamed or embarrassed’ (24.3%), ‘feeling no-one would be able to help’ (21.6%) and ‘not wanting or needing help’ (21.6%). It appears NSSI in the over 40s reflects a hidden and very troubled group. The potential seriousness of self-injury in this group has implications for families, general practitioners, mental health clinicians, emergency departments, and community services.

Keywords: Non-suicidal self-injury; Self-harm; Older adults; Demographics; Epidemiology

Introduction

Non-suicidal self-injury (NSSI) is reported by patients in mental health units [1,2] and people in the community [3,4]. Media reports often suggest an ‘epidemic’ with ever increasing numbers [5,6]. However, recent meta-analyses [7,8] have shown this to be unfounded, apparent increases resulting from increasing construct specificity in research reports, and more comprehensive, focused questionnaires. A large Australian epidemiological study [9] found overall lifetime community prevalence across all ages of 8.1%, with 1.1% claiming deliberate self-injury without suicidal intent in the month prior to survey. NSSI was carefully defined based on international best practice [10,11]. A large proportion of self-injurers also reported episodes of suicidality (thoughts and suicide attempts) confirming overlap between NSSI and ‘deliberate self-harm’, a term referring to self-harm irrespective of suicidal intent [12]. The implication NSSI may be a marker or risk factor for later suicide is of major public health concern given increasing international focus on prevention [13].

NSSI predominantly has an onset in early adolescence [14,15], peaks in young adulthood [4,9] and thereafter declines. International researchers have focused on adolescents in school-based studies [16-19] and young adults attending college or university [20-22]. In an extensive search, we could find little research into NSSI focused specifically on older people. Yet this group raises important questions. Does NSSI ever begin in adulthood rather than in adolescence or young adulthood? If so, what factors precipitate this behavior, and are underlying dynamics the same as for younger initiators? Does NSSI in adults who continue to self-injure from adolescence into adulthood, serve the same purposes as in younger people? Can we discern what factors perpetuate the problem and, conversely, what factors might assist adults to cease NSSI? Finally, are older self-injurers different to younger self-injurers on psychiatric history, suicidality, treatment seeking or help-seeking?

Three research studies on NSSI reference older people. In an often cited epidemiological paper, Briere et al. (1998) [23] reported three studies of self-injurers (a national community study, a clinical sample, and a specific sample of self-injurers). The community study, a US survey of the Trauma Symptom Inventory (TSI), included responses to a single question specific to NSSI ‘over the last six months’, with three...
and matched control groups.

Unfortunately, the tiny numbers of self-injurers over 30, and the young adults aged 60 years and above, presenting with DSH to six general hospitals were invited to take part in a computer assisted telephone interview (CATI). Within time and budget constraints 12,006 interviews were completed (overall response rate 38.5%), taking an average 13.6 minutes. The project was carried out according to the National Statement on Ethical Conduct in Research Involving Humans [39], and approved by the Behavioural and Social Sciences Ethical Review Committee of the University of Queensland. Telephone numbers of relevant support services were offered to participants on interview completion. Data were weighted by age, sex and state to reflect the structure of the Australian population 10 years and over [40]. Our sample compared well for Indigenous status, 183 (1.9%) respondents underrepresented (χ² =133.08, p<0.001), the sample was better educated (χ² =1086.80, p<0.001, aged 25-64 years only), and there were fewer married/defacto individuals and more single individuals (χ² =42.07, p<0.001). The percentage aged 16-85 years with anxiety disorders (15.1%, including general anxiety, social anxiety, post-traumatic stress disorder, obsessive compulsive disorder, panic disorder, panic attacks, agoraphobia) was not statistically different to the 2007 National Survey of Mental Health and Wellbeing [41]. The percentage claiming a mood disorder (19.2%; including depression, post-natal depression, dysthymia, mood disorder not otherwise specified, seasonal affective disorder and bipolar disorder) was higher than the National Survey (6.2%, χ² =5.96, p<0.02). The current study focuses on adults aged ≥ 40 years (N=8,544, 61.9% female), mean age 59.98 years (SD=11.98, range 41-100). Socio-demographic characteristics of this sample are in Table 1.
or slapping themselves; overdosing; and "anything else?). Additional

not object to continuing, they were asked: "Over the past four weeks,

about self-injury. Self-injury means deliberately hurting yourself or any

responses were used to calculate measures of socioeconomic status,

were drawn from previous surveys [42,43]. Geographical location

Socioeconomic Disadvantage [44].

ANESSI interview questions

questions on motivations, pain perception, frequency, age of onset,

recency, and reasons for stopping. Although overdose is a common

method of suicide attempt, it is also used as a form of NSSI and was

included because they are commonly associated with NSSI [50]. Attention
deficit hyperactivity disorder was included due to interest in

the potential connection between NSSI and attention deficit hyperactivity disorder. The first three disorders were included due to

NSSI module was followed by questions about suicidality, prefaced by: "Now I'm going to ask you some questions about when life

may not be worth living". Four questions from the 28-item version of

the General Health Questionnaire [47] measuring suicidal ideation

were: "Over the past few weeks. (1) have you felt that life isn't worth

living, (2) thought of the possibility that you might do away with

yourself, (3) found yourself wishing you were dead and away from it

all, and (4) found the idea of taking your own life kept coming into

your mind?". Respondents were then asked: "Have you ever tried to kill

yourself?". Additional information about any suicide attempts was

requested, including number, age at attempts, degree of suicidal intent,

feelings about having survived, method, whether an ambulance was

called, attendance at an emergency department, and time spent in

hospital (details not reported in this paper).

Psychological distress was measured with the 12-item version of

the General Health Questionnaire, a screening device for mental health

disorders, used worldwide in epidemiological studies [49]. 'Psychiatric
diagnosis' was measured by one question: "Have you ever been told

that you have: anxiety, depression, post-traumatic stress disorder or

attention deficit hyperactivity disorder".

The NSSI module was followed by questions about suicidality,
emotion regulation, impulsivity, dissociation, child maltreatment and substance use. With telephone interview time constraints this was not feasible, and our variables were selected from widely used scales and measures with demonstrated reliability and validity. Items were chosen by consensus on the basis of face validity and strong correlations between single items and the overall scales.

For emotion regulation we selected from three separate scales. From the Emotion Regulation Scale [52] we chose two items ("Are you able to change the way you feel about something by trying to change the way you think about it?" and "Do you control your emotions by keeping them to yourself?"). From the Toronto Alexithymia Scale [53] we used one core item ("Do you find it difficult to find the right words for your feelings?"). From the Brief COPE [54], we used three items ("When you are very stressed, how often do you blame yourself for things that happened?" “When you are very stressed how often do you do other things to take your mind off things?” and “When you are very stressed, how often do you turn to your family for support?”).

Impulsivity was measured with two items from the Plutchik Impulsivity Scale [55] (“In everyday life are you impulsive?” and “In everyday life do you lose your temper?”). From the Dissociative Experiences Scale [56] two types of dissociation were measured - depersonalisation (“Sometimes people feel that other people, objects, and the world around them are not real. How often does this happen to you?”) and derealisation (“Sometimes people feel that their body does not belong to them. How often does this happen to you?”).

Questions on child maltreatment (neglect, physical abuse, sexual abuse) were based on items from the Child Trauma Questionnaire [57], and were prefaced by the statement: “Now I would like to ask you about stressful or upsetting events that sometimes happen to people. Remember that if you feel uncomfortable you can decline to answer these questions.” Questions were: “As a child, did you ever experience neglect from one or more parents?” , “During your childhood, were you ever physically abused, attacked or assaulted?” and “During your childhood, were you ever sexually abused or assaulted?” Respondents reporting maltreatment were asked further details.

Questions on substance use were adapted from the 2004 National Drug Strategy Household Survey [58] and included: “How often do you usually drink alcohol?”, “On a day or night when you drink, how many standard drinks, on average, would you have?”, “How often do you drink specifically to get drunk?”, “Do you smoke?”, “On average how many cigarettes do you smoke per day or each week?”, “Have you ever used marijuana?, amphetamines?, ecstasy?, inhalants?, heroin?, cocaine?, LSD?, anything else?”.

Analyses

The focus of this paper is specifically on characteristics of older self-injurers (≥ 40 years), especially factors involved in initiation and perpetuation of NSSI. We were also interested in ways that older self-injurers might differ from younger self-injurers. A series of chi-square analyses were conducted:

(1) Between respondents aged ≥ 40 years self-injuring in the prior 12 months (n=78), with those aged ≥ 40 years who had never self-injured (n=8.065);

(2) Between respondents aged ≥ 40 years self-injuring in the prior 12 months (n=78), with those aged ≥ 40 years with a life-time history of NSSI but no NSSI episodes in at least two years (n=239);

(3) Between respondents aged ≥ 40 years self-injuring in the prior 12 months, with age of NSSI onset <25 years (n=41) compared to those with age of onset ≥ 25 years (n=27), and

(4) Between respondents aged ≥ 40 years self-injuring in the prior 12 months and those aged <25 years self-injuring in the 12 months before interview (n=85).

Variables analysed were demographics (gender, relationship status, socioeconomic status, and education level), psychological variables (psychiatric history, psychological distress, self-blame), and suicidality and characteristics of NSSI (motivations, reasons for stopping, and help-seeking). Some interview questions were only asked of respondents who had self-injured in the four weeks prior to the interview.

Results

Across all ages, 219 respondents reported NSSI within the 12 months prior to interview (141 females, 78 males). Of these, 78 were aged ≥ 40 years (53 females, 25 males) (Table 2).

<table>
<thead>
<tr>
<th>Age group</th>
<th>Female</th>
<th></th>
<th>Male</th>
<th></th>
<th>Combined</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>15-24</td>
<td>58</td>
<td>41.1</td>
<td>27</td>
<td>34.6</td>
<td>85</td>
<td>38.8</td>
</tr>
<tr>
<td>25-39</td>
<td>30</td>
<td>21.3</td>
<td>26</td>
<td>33.3</td>
<td>56</td>
<td>25.6</td>
</tr>
<tr>
<td>40-49</td>
<td>26</td>
<td>18.4</td>
<td>14</td>
<td>17.9</td>
<td>40</td>
<td>18.3</td>
</tr>
<tr>
<td>50-59</td>
<td>16</td>
<td>11.3</td>
<td>7</td>
<td>9</td>
<td>23</td>
<td>10.5</td>
</tr>
<tr>
<td>60-69</td>
<td>7</td>
<td>5</td>
<td>2</td>
<td>2.6</td>
<td>9</td>
<td>4.1</td>
</tr>
<tr>
<td>70-79</td>
<td>2</td>
<td>1.4</td>
<td>1</td>
<td>1.3</td>
<td>3</td>
<td>1.4</td>
</tr>
<tr>
<td>≥ 80</td>
<td>2</td>
<td>1.4</td>
<td>1</td>
<td>1.3</td>
<td>3</td>
<td>1.4</td>
</tr>
<tr>
<td>Total</td>
<td>141</td>
<td>100</td>
<td>78</td>
<td>100</td>
<td>219</td>
<td>100</td>
</tr>
</tbody>
</table>

Table 2: Twelve Month Non-suicidal Self-injury (total community sample 12,006).
Overall, mean age of onset was 18.85 years (SD=10.92, range 5–60), with most (80.3%) beginning before age 25 years and fewer (19.7%) beginning ≥ 25 years. For the ≥ 40 group, mean age of onset was 25.4 years (SD=14.66, range 5–60) with 60.3% beginning <25 years and 39.7% beginning ≥ 25 years. Seventeen people acknowledged beginning self-injury after age 40; 13 females (9.9%) and 4 males (6%). Despite this, the modal age of onset for both over and under than 40s was 15 years.

There were no discernible differences in demographic variables between respondents aged ≥ 40 years who had never self-injured and respondents aged ≥ 40 years reporting 12-month NSSI with age of onset ≥ 25 years (n=78).

<table>
<thead>
<tr>
<th>Reason</th>
<th>N</th>
<th>% responses</th>
<th>% cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grew up/got over it</td>
<td>81</td>
<td>15.2</td>
<td>33.9</td>
</tr>
<tr>
<td>Talked to a mental health professional</td>
<td>64</td>
<td>12</td>
<td>26.8</td>
</tr>
<tr>
<td>Better coping</td>
<td>61</td>
<td>11.4</td>
<td>25.5</td>
</tr>
<tr>
<td>Support</td>
<td>60</td>
<td>11.2</td>
<td>25.1</td>
</tr>
<tr>
<td>Problem solving</td>
<td>47</td>
<td>8.8</td>
<td>19.7</td>
</tr>
<tr>
<td>Medication</td>
<td>27</td>
<td>5.1</td>
<td>11.3</td>
</tr>
<tr>
<td>Distraction/hobby</td>
<td>26</td>
<td>4.9</td>
<td>10.9</td>
</tr>
<tr>
<td>Talk to General Practitioner</td>
<td>22</td>
<td>4.1</td>
<td>9.2</td>
</tr>
<tr>
<td>Other</td>
<td>19</td>
<td>3.6</td>
<td>7.9</td>
</tr>
<tr>
<td>Don’t know/refused/inappropriate answer</td>
<td>17</td>
<td>3.2</td>
<td>7.1</td>
</tr>
<tr>
<td>Hospital</td>
<td>16</td>
<td>3</td>
<td>6.7</td>
</tr>
<tr>
<td>Expressive therapy</td>
<td>14</td>
<td>2.6</td>
<td>5.9</td>
</tr>
<tr>
<td>Change</td>
<td>11</td>
<td>2.1</td>
<td>4.6</td>
</tr>
<tr>
<td>For family</td>
<td>10</td>
<td>1.9</td>
<td>4.2</td>
</tr>
<tr>
<td>Single episode</td>
<td>8</td>
<td>1.5</td>
<td>3.3</td>
</tr>
<tr>
<td>Religion/spirituality</td>
<td>8</td>
<td>1.5</td>
<td>3.3</td>
</tr>
<tr>
<td>Pain</td>
<td>6</td>
<td>1.1</td>
<td>2.5</td>
</tr>
<tr>
<td>Self-awareness</td>
<td>6</td>
<td>1.1</td>
<td>2.5</td>
</tr>
<tr>
<td>Change perception of situation</td>
<td>5</td>
<td>0.9</td>
<td>2.1</td>
</tr>
<tr>
<td>Other mental health intervention</td>
<td>4</td>
<td>0.7</td>
<td>1.7</td>
</tr>
<tr>
<td>Remove person</td>
<td>4</td>
<td>0.7</td>
<td>1.7</td>
</tr>
<tr>
<td>Silly pointless</td>
<td>4</td>
<td>0.7</td>
<td>1.7</td>
</tr>
<tr>
<td>Exercise</td>
<td>3</td>
<td>0.6</td>
<td>1.3</td>
</tr>
<tr>
<td>Control/willpower</td>
<td>3</td>
<td>0.6</td>
<td>1.3</td>
</tr>
<tr>
<td>Meditation/yoga/relaxation/breathing</td>
<td>2</td>
<td>0.4</td>
<td>0.8</td>
</tr>
<tr>
<td>Stopped drinking/using drugs</td>
<td>2</td>
<td>0.4</td>
<td>0.8</td>
</tr>
<tr>
<td>Fear of serious harm</td>
<td>2</td>
<td>0.4</td>
<td>0.8</td>
</tr>
<tr>
<td>Embarrassment/shame</td>
<td>2</td>
<td>0.4</td>
<td>0.8</td>
</tr>
<tr>
<td></td>
<td>534</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

**Table 3:** Reasons for Cessation (respondents aged ≥ 40 years with a lifetime history of NSSI but no NSSI in the two years before the interview).
However, self-injurers were more likely to have received a psychiatric diagnosis (OR 21.22, 95% CI [3.90, 115.52]), more psychological distress (OR 9.41, CI [1.73, 51.24]), and blame themselves during times of stress (OR 8.23, CI [2.65, 25.50]). For the month prior to interview, nineteen females ≥ 40 years claimed between 1 and 50 episodes of self-injury (mean 10.5), and nine males aged ≥ 40 years claimed between 1 and 28 episodes (mean 7.4).

There were also no differences on any demographic variable between those aged ≥ 40 years reporting 12-month NSSI and those aged ≥ 40 years who had ceased. However, those reporting 12-month NSSI were more likely than those who had ceased to report high psychological distress (OR 2.39, 95% CI [1.06, 5.40]) and blame themselves in times of stress (OR 3.79, CI [1.75, 8.21]).

Age of onset (<25 years vs. ≥ 25 years), for those aged ≥ 40 years reporting NSSI in the previous 12 months appeared to make no difference to any psychological variable. However, there were differences between self-injurers over 40 years and those under 25 years. Over one third (38.2%) of those ≥ 40 years self-injuring in the 12 months before interview reported a lifetime suicide attempt, compared with 28.0% of under 25 years olds. This difference was not statistically significant. However, 80.0% of under 25 years olds and 55.8% of ≥ 40 year olds scored in the high suicidal ideation range, younger self-injurers more than three times as likely to report feeling suicidal in the four weeks before interview (OR 3.16, 95% CI [1.18, 8.45]).

Motivations for NSSI were compared between respondents under 25 years (n=37) and over 40 years (n=39) who had self-injured in the four weeks before the interview. For both groups, the most common motivation was emotion regulation, with self-injurers aged ≥ 40 years more likely to endorse this motivation (68.6%) than respondents aged under 25 years (54.5%), although the difference was not statistically significant (OR 1.82, 95% CI [0.45, 7.34]).

Reasons for ceasing NSSI were explored among respondents aged ≥ 40 years with a lifetime history of NSSI but with no NSSI episodes in at least two years (n=239). The most common stated reason was a feeling that the respondent had ‘grown up’ or ‘got over it’ (33.9%). This was followed by ‘talking to a mental health professional’ (26.8%), ‘learning better ways to cope with stress’ (25.5%) and ‘receiving support from other people’ (25.1%). Importantly, respondents were able to nominate more than one reason for stopping, but it is unclear how these reasons may interact to result in cessation of NSSI (Table 3).

Two thirds (60.0%) of respondents aged ≥ 40 years self-injuring in the four weeks before interview had family members or friends who knew of their NSSI, but most (74.3%) did not ask for help. Of those who did, the most common source of help-seeking was ‘a counselor’ (42.9%), followed by ‘a general practitioner’, ‘other health professional’, and ‘relative other than partner/spouse’ (total 26.6%). The most common barrier to help-seeking was ‘feeling as if their NSSI problem was not severe enough’, with 29.7% of self-injurers aged ≥ 40 years feeling this way. Other commonly reported barriers to help-seeking were ‘feeling ashamed or embarrassed’ (24.3%), ‘feeling no-one would be able to help’ (21.6%) and ‘not wanting or needing help’ (21.6%).

Respondents reporting NSSI in the 12 months before interview aged ≥ 40 years (n=43) were not more likely to be currently receiving treatment than respondents aged less than 40 years (n = 85) (OR 1.52, 95% CI [0.57 - 4.02]).

Discussion

Given the international focus on NSSI in adolescents, and with only a handful of research studies referencing self-harm in older people, we believe it is important to have explored the group of over 40s from our large national community study. Our focus was on those self-injuring within the last 12 months, providing sufficient numbers to allow meaningful statistical analysis. Some may be surprised that 78 people 40 years old and over claimed to have self-injured, and perhaps even more surprised to find 60-80 year olds admitting to self-injury (even if numbers were tiny). Given the clear description provided to respondents during interview, and the high quality training and support of professional telephone interviewers, we are confident in this finding.

For many over 40s NSSI appears to have been a long-term way of managing emotion, with 60% of our over 40s having been motivated to self-injure from early on (mode 15 years, mean 25 years). Despite this, 40% began after age 25, and seventeen claimed to have begun after age 40. Our over 40s group were not particularly defined by demographic factors other than age. The claimed frequency of self-injury for some in the month prior to interview suggests a troubled group, and overall they did report high levels of distress and self-blame and a higher likelihood of having a psychiatric diagnosis. In addition, a high percentage scored into the high suicidal ideation range, and over one third claimed a lifetime suicide attempt.

As in previous studies of self-injury, those claiming to have ceased were significantly less troubled than those continuing. Many reasons for ceasing were given, but ‘getting over it’, ‘learning better ways to cope’, gaining ‘support from other people’ and ‘talking to a mental health professional’ reinforces what we know about the importance of ‘help-seeking’ [59]. Unfortunately, people are easily dissuaded from seeking help for NSSI, as evidenced by research conducted with adolescents. The majority of our older self-injurers did not ask for help, most commonly due to ‘feeling as if their NSSI problem was not severe enough’, with shame and embarrassment playing a strong role, and ‘feeling no-one would be able to help’.

Few specific therapies rated a mention, though medication was high on the list. Expressive Therapy was endorsed, as well as ‘learning to cope better’, or ‘changing the perception of a situation’. Overall, these reflect recent studies focused on cessation of self-injury [14,22,60-62]. Given its accepted use in borderline personality disorder, it was surprising that Dialectical Behavior Therapy was not mentioned, but recent high quality studies may change this [63].

In conclusion, it appears that older self-injurers are not very different to younger self-injurers on psychiatric history, method of self-injury, and the lack of social support, help-seeking and treatment seeking. More than a third reported a lifetime suicide attempt, and nearly two thirds of self-injurers over 40 scored in the high suicidal ideation range. This and the claimed frequency of NSSI in the month prior point to the importance of assessment, support and treatment in this rather hidden group.

There are acknowledged limitations in our national study, despite its large overall size. It was a community study, and may not have captured more serious self-injurers. The issues raised are sensitive, and may have been confronting for some of our subjects; we have discussed this elsewhere [64]. The limited time available for gaining responses to a lengthy and broad range of questions, did not allow for in-depth discussion of self-injury. We did address a large number of relevant
constructs, but used only one or two key questions to represent complex questionnaires.

Despite limitations, we believe the research goes some way toward answering important questions about NSSI among older adults not explored elsewhere, and alerts us to the potential seriousness of self-injury in the over 40s population. There are short and long-term implications for older self-injurers and their families, as well as mental health clinicians, emergency departments, and those in community services trying to understand NSSI and intervene.

References