Journal of Affective Disorders 191 (2016) 109–117

Contents lists available at ScienceDirect

Journal of Affective Disorders

journal homepage: www.elsevier.com/locate/jad

Review article

Non-suicidal reasons for self-harm: A systematic review of self-reported accounts

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ARTICLE INFO

Article history:
Received 11 August 2015
Received in revised form
17 November 2015
Accepted 23 November 2015
Available online 28 November 2015

Keywords:
Self-harm
Non suicidal
Systematic review
Function

ABSTRACT

Background: Self-harm is a major public health problem yet current healthcare provision is widely regarded as inadequate. One of the barriers to effective healthcare is the lack of a clear understanding of the functions self-harm may serve for the individual. The aim of this review is to identify first-hand accounts of the reasons for self-harm from the individual's perspective.
Method: A systematic review of the literature reporting first-hand accounts of the reasons for self-harm other than intent to die. A thematic analysis and 'best fit' framework synthesis was undertaken to classify the responses.
Results: The most widely researched non-suicidal reasons for self-harm were dealing with distress and exerting interpersonal influence. However, many first-hand accounts included reasons such as self-validation, and self-harm to achieve a personal sense of mastery, which suggests individuals thought there were positive or adaptive functions of the act not based only on its social effects.
Limitations: Associations with different sub-population characteristics or with the method of harm were not available from most studies included in the analysis.
Conclusions: Our review identified a number of themes that are relatively neglected in discussions about self-harm, which we summarised as *self-harm as a positive experience* and *defining the self*. These self-reported "positive" reasons may be important in understanding and responding especially to repeated acts of self-harm.

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http://dx.doi.org/10.1016/j.jad.2015.11.043

1. Introduction

Research into the reasons for self-harm is complicated by lack of agreement about terminology – especially by differences in practice between clinicians and researchers in the US and those in the UK and Western Europe. Practice in the US is increasingly to regard the terms self-harm or deliberate self-harm as synonymous with self-injury (eg Klonsky et al., 2014) while in the UK self-harm refers to both self-injury and self-poisoning (eg Hawton et al., 2007). Another difference is in the degree to which definitions include an attribution of suicidal intent and intent is then associated with method. In the US especially, self-injury is regarded as almost invariably associated with non-suicidal motives and non-suicidal self-injury is contrasted with suicidal behaviour (attempted suicide)-widely cited reviews by Suyemoto (1998) Klonsky (2007) and Nock and Prinstein (2004, 2005) provide some of the more frequently reported non-suicidal motives for self-injury. By contrast there is a long tradition in the UK of recognizing non-suicidal motives associated with self-poisoning (Stengel and Cook, 1958, Kreitman, 1977), some concern that the distinction between suicidal and non-suicidal behaviours is not always possible to make reliably (Kapur et al., 2013) and more recently an understanding that while some people who repeatedly harm themselves will use the same method every time, a sizeable proportion will change method in consecutive episodes (Lilley et al., 2008, Owens et al., 2015).

It is important to overcome the challenges in researching reasons for self-poisoning and self-injury because self-harm however defined is common, with lifetime prevalence estimates of at least 5–6% in the UK and USA (Klonsky, 2011; Meltzer et al., 2002). Some episodes are isolated occurrences but many people give histories of repeated, sometimes very frequent, acts. For example, in the UK 25% or more of those attending hospital after self-harm give a history of previous episodes (Lilley et al., 2008) while some 15–25% are likely to repeat within 12 months (Owens et al., 2002). Community-based studies give a similar picture of a sizable minority of people for whom self-harm is a recurrent act (Kidger et al., 2012; Mars et al., 2014). This presents a public health challenge in its own right and also because both a history of repetition and self-injury are risk factors for eventual suicide.

There is a large academic literature on factors that might explain the contemporary phenomenon of self-harm, including both empirical and theoretical studies. There are numerous publications that cite individual explanations for self-harm, usually quoted for illustrative purposes, but we have been unable to identify a systematic review of published research studies that report personal accounts of the non-suicidal reasons for self-harm offered by individuals who have harmed themselves. Such a review is worthwhile because it may increase our understanding in two areas: first, we know relatively little about the *positive personal* (rather than social) functions that might be served by self-harm, and such functions might help to explain the persistence of such behaviour in the individual's life, and second we need to develop new interventions, especially those that depend upon finding alternative less damaging means to meet the same needs currently met by self-harm (Bentley et al., 2014).

The primary aim of this review was therefore to identify and summarise published first-hand accounts of the reasons for self-harm, expressed by individuals who had harmed themselves and were reporting their own reasons for doing so.

In undertaking this review we have adopted a broad approach to the definition of self-harm as a behaviour-any intentional act of self-poisoning or self-injury, (NICE, 2004) excluding only indirectly self-harming behaviour such as harmful alcohol or drug use, and regardless of the method of self-harm used.

2. Method

2.1. Included studies

We sought primary research studies that elicited a self-reported account of reasons of self-harm from individuals with a history single or multiple previous episodes of self-harm regardless of method (poisoning or self-injury), who answered questions about their personal experience. We excluded studies that reported reasons attributable solely to psychotic symptoms or those that reported suicidal intentions only, although we included studies whose participants were described as having attempted suicide if they also described non-suicidal motives for their behaviour.

We included studies using any research design – analysing questionnaire and survey-based studies as well as interview studies. Self-reported reasons of self-harm were included for questionnaire studies if it was clear that items were worded to elicit personal motives from respondents-rather than (say) their attitudes to self-harm in general or the motives of others. Results from interview (qualitative) studies were included only if there was a clear specific account attributed to an individual respondent or illustrated by an example or a direct quotation.

We included studies regardless of the age, gender or ethnicity of the participants and placed no restrictions on diagnostic groups or other personal or social characteristics of the participants.

2.2. Search strategy

Medline, Psychinfo, Embase, Cinahl, Web of Science, Cambridge Scientific Abstracts, Cochrane Library, UK Index to Theses and Proquest were searched up to February 2015 using a combination of key words to describe self-harm behaviour including self-injury, self-poisoning, self-cutting, deliberate self-harm, self-destructive behaviour and overdose. These terms were combined with terms describing motivations, intention, incentive, reason, drive, cause, purpose, function and explanation. Reference lists of included studies were scanned and key authors were contacted for additional citations.

Detailed search strategies are available in Supplementary materials (Table 1).

2.3. Paper selection and data extraction

One author (AE) reviewed all the initial titles and abstracts to exclude obvious misfits and establish a long list of potential studies. Before full text articles of included studies were requested CB+AH co-reviewed a 10% sample of titles and abstracts to ensure consistency and all uncertain cases were agreed at 3-way consensus meetings. Full texts were then requested and evaluated.

Data regarding population, research setting, age range, number of participants, method of harm, method used to elicit reasons of self-harm were extracted using a standardised form.

From quantitative (questionnaire) studies, reasons for self-harm were directly related to individual questionnaire items and were extracted by AE. For qualitative studies, reasons for self-harm were identified from direct quotations given by the authors, which either offered individual reasons or occasionally provided more than one reason in a single quotation. All reasons for self-harm identified in qualitative studies were reviewed by all authors.

2.4. Data synthesis

We undertook a thematic analysis of all the identified reasons for self-harm, using a 'best fit" framework synthesis (Carroll et al., 2011, 2013). For the *a priori* framework we started with two highly-cited reviews in this field-by Suyemoto (1998) and Klonsky (2007). Our initial framework included eight themes**:** *managing distress or affect regulation; interpersonal influence; punishment; managing dissociation; sensation-seeking; averting suicide; expressing and coping with sexuality; maintaining or exploring boundaries.* We decided that the main reasons for self-harm outlined in Nock's (2009) Four Functions Model are captured by our *a priori* framework, without the need to adopt Nock's organising principle that there is an underlying immediate personal (emotional) or social regulatory function.

Initially we extracted data from structured (questionnaire) studies and allocated reasons for self-harm to the themes in the *a priori* framework and then repeated the process for qualitative studies. If reasons were identified that did not fit the framework then we generated additional themes during synthesis to capture reasons in the studies that could not be classified in the original framework. Initial allocation of reasons derived from quantitative studies into themes was relatively unproblematic because the items were usually pre-specified as linking to a theme and "translation" into new themes was not required (see eg France et al., 2014): after an initial consensus meeting, allocating reasons to themes was undertaken by AE for the quantitative studies, aided by discussion with AH and CB in uncertain cases. All new reasons identified in the qualitative literature that were allocated to themes beyond the initial framework, were agreed at consensus meetings between the three authors. We undertook this work manually rather than using one of the standard computerised programmes for qualitative data analysis. Our final descriptive framework and the themes contained in it were reviewed by two senior academic psychiatrists with research and clinical interests in self-harm.

There was great heterogeneity in the studies we identified – in the populations studied and the methods used to elicit reasons for self-harm – which meant that a data pooling meta-analysis of the quantitative studies was not appropriate, either to estimate prevalence of each reason for self-harm or to look for associations between reasons and population characteristics. To quantify to some extent the coverage of each topic, we noted the proportion of studies in which a particular reason for self-harm was reported – a measure therefore of salience in the research literature rather than prevalence in the study populations.

3. Results

The search yielded 5833 citations from which 152 eligible studies were identified (Fig. 1). Of these 152 studies, 113 were questionnaire

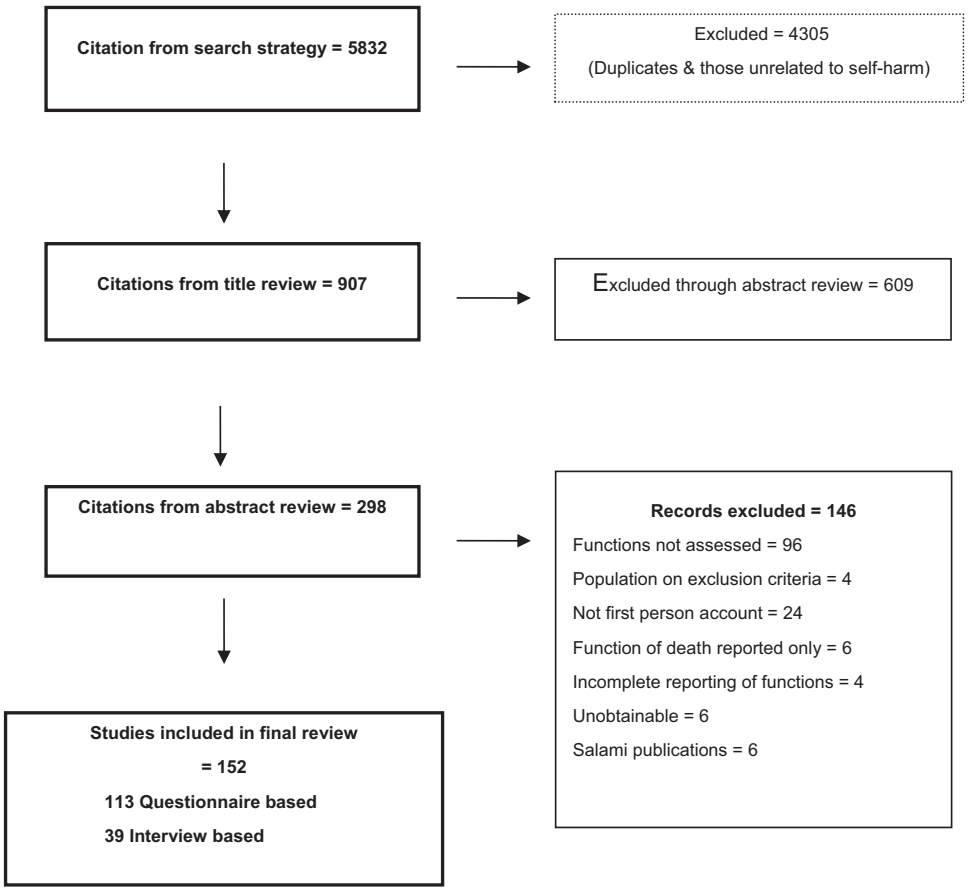

Fig. 1. Flow chart of included and excluded studies.

based and 39 were interview based. The final review included accounts of 29,350 participants with a history of self-harm.

Participants' ages ranged from 10 years to 92 years. Most of the studies were carried out with adult populations (70/152, 46%), followed by student/youth populations (62/152, 40%), studies including both children and adult participants (19/152, 12%) and the elderly (1/152).

Of the interview-based studies sample size ranged from 6 to 154, and for questionnaire-based studies from 16 to 14,848 who endorsed a history of self-harm.

We identified 19 different standardised instruments used in the questionnaire studies, as well as a number of non-standardised checklists.

Studies included participants selected because they were psychiatric hospital patients ($N=36$), school children or students ($N=36$), from community samples ($N=26$) general hospital patients ($N=14$), prisoners ($N=11$), diagnosed with borderline personality disorder ($N=7$) recruited through self-harm web sites ($N=6$), from mixed clinical and community samples, not otherwise specified ($N=5$) diagnosed with eating disorders ($N=3$), people with lesbian or bi-sexual identity ($N=2$), people with learning disabilities ($N=2$), soldiers ($N=1$), young Asian women ($N=1$) people attending a gender identity clinic ($N=1$), people addicted to opiates ($N=1$).

Full details of the articles included in this review are available; please see Supplementary materials (Table 2).

3.1. Reasons for self-harm

Throughout we have presented results by theme rather than by person-most quantitative and qualitative studies reported that individual respondents endorsed multiple reasons for self-harm as applying to them. Less than 20% of the studies we reviewed offered respondents the option of a "don't know" or "can't remember" response although in clinical practice these are not uncommon responses, especially when alcohol or drug use precedes or is part of the act. For those that did, it was typically endorsed by 15–20% of respondents.

3.2. The initial framework

a) Managing distress/affect regulation
The majority (106/113, 93%) of the studies using questionnaires endorsed items such as *'to get relief from a terrible state of mind'* (*Boergers et al., 1998*), *'calming myself down'* (*Klonsky and Glenn, 2009*). The majority (36/39, 92%) of qualitative also endorsed this reason, described as *'doing this relieved the emotional pain'* (*Holm and Seveinsson, 2010*), *'I've done it out of stress, anxiety to calm myself when I'm incredibly emotional/upset'* (Chandler, 2014). Very commonly related to this theme was the idea of preferring to deal with physical pain over emotional pain '*knowledge that it will get better, I know the timelines of physical pain, not emotional pain*' (Ettinger, 1992), '*I wanted to take the pain away from my heart and put it elsewhere*' (Laye-Gindhu and Schonert-Reichl, 2005). We included here the idea of blood flow as cleansing or letting out badness-"to cleanse the body"; "cutting is a way of making myself cleaner" (Brooke and Horn, 2010); "All the bad escapes in the blood and it's like you can physically watch everything just wash away" (Abrams and Gordon, 2003)
One very common reason was distraction '*to forget about something*' (Young et al., 2007), '*to take my mind off my problems, to have something else to think about*'(*Rodham et al., 2004*), '*to keep bad memories away*' (Osuch et al., 2014; Shearer, 1994), '*to stop flashbacks*'(*Briere and Gill, 1998*), '*after I cut myself … it starts to hurt a little bit… and then I focus on that because it hurts. It's like, oh God, I've got this to focus on now. Thank goodness. So it also kind of gives me something else to focus on rather than everything else, something surface*'(*Himber, 1994*).

b) Exerting interpersonal influence
Many (99/113, 87%) questionnaire studies found evidence of interpersonal influence including '*to seek help from someone*' (*Hawton et al., 1982*), *'to show how much you loved someone'* (*Boergers et al., 1998*), *'letting others know the extent of my physical pain'*(*Klonsky and Glenn, 2009*). Over half (22/39, 56%) of the qualitative studies also found such evidence: *'[after self-harm] they were, like, oh my god – how did this happen? and then I thought ooh – I get attention like this and I was allowed nice things'* (Brooke and Horn, 2010), *'Doing this [self-harm] I found… I received the warmth, love and attention I had been looking for'* (Harris, 2000).

c) Punishment
Over half (72/113, 63%) of quantitative studies found evidence to support the idea of self-harm as punishment, usually described in items such as *'I wanted to punish myself'*, *'to punish myself for positive feelings'*, but occasionally as a way of punishing others (look what you made me do) or inviting criticism or punishment from others (*Kumar et al., 2004*; *Osuch et al., 2014*; *Samuda, 2003*). Just over half (20/39, 51%) of the qualitative described such reasons: *'to punish myself, I have to be punished'*(*Parfitt, 2005*), '*I kind of like wanted to punish myself … I thought that the burning would hurt a lot more and be a bit more disfiguring probably, and kind of like yeah that's how ugly you are*' (Alexander and Clare, 2004).

d) Dissociation
Almost half of the quantitative studies (55/113, 48%) supported a link between self-harm and dissociative experiences. This included inducing a dissociative state in statements such as '*I wanted to stop myself from feeling and be numb*' (Laye-Gindhu and Schonert-Reichl, 2005), '*produce a feeling of numbness when my feelings are too strong*' (*Swannell et al., 2008*). We allocated these reasons here rather than to affect regulation because they entailed an active pursuit of numbness rather than a containment of other unpleasant emotions. In this theme we also included acts aimed at terminating a dissociative state in statements such as *'termination of depersonalisation'* (Herpertz, 1995) and *'feeling generation'* (Brown et al., 2002). Similarly qualitative studies (15/39, 38%) described inducing a dissociative state, for example '*physically lowers my heartbeat, it puts me into a bit of a dissociated state …* (Himber, 1994), *'you feel a lot but then you don't feel anything'* (Rosenthal et al., 1972). In this theme we also included acts aimed at terminating a dissociative state in statements such as *'it's a way of getting myself awake again, it's a wakening experience'* (*Himber, 1994*), *'I feel numb—physically and emotionally. I can't feel my own skin. [after self-harming] I can physically feel again. My senses come back. I get a surge of energy and regain sensation* (*Horne and Csipke, 2009*).

e) Sensation-seeking
Self-harm as a way to generate excitement or exhilaration was endorsed in 23/113 (20%) of the quantitative studies: *'to feel more alive'* (Silverman, 2009), '*when I harm myself I am doing something to generate excitement or exhilaration*' (Klonsky and Glenn, 2009) and in 5/39 (12%) qualitative studies: *'it feels brilliant, I get an adrenaline rush off it and that feeling good lasts for about 3 days after self-harming'* (Taylor, 2003), *'It felt nice, I quite liked it, adrenaline and that. Since I've been on [the unit], I just do it for the adrenaline. You can get addicted to it'* (Bennett and Moss, 2013).

f) Averting suicide
Only in 17 (15%) of the quantitative studies did respondents report self-harm as a way of dealing with the risk of suicide: *'to stop myself from killing myself'* (Martin et al., 2010), *'it stopped me from killing myself' (Laye-Gindhu and Schonert-Reichl, 2005)* and in only 3/39 (7%) of the qualitative studies was this reason reported *"I am obsessed with suicide, but this is keeping me from doing it'* *(Polk and Liss, 2009)*,' *I wouldn't be here today if this hadn't happened [self-harm]'(Demming, 2008), 'if I don't cut for a long time I end up overdosing'* *(Himber, 1994).*

g) Maintaining or exploring boundaries
Nine (8%) studies reported evidence to support a boundary-defining function in statements such as '*to create a symbolic boundary between myself and others*'*(Silverman, 2009)*, (Klonsky and Glenn, 2009). Only two (5%) qualitative studies reported such reasons: *'When the emotions are too much it feels as though my body shuts down like I couldn't tell where the edges of my body were … self-harming kinda defined the edges of my body*' (Horne and Csipke, 2009) and '*seeing my insides*' *(Simpson, 1975) which was interpreted* as a boundary experience.

h) Expressing and coping with sexuality

Self-harm to serve a sexual function was the least endorsed function in the quantitative literature; seven (6%) studies found evidence to support this in statements such as *'to provide a sense of relief that feels much like sexual release*' (Shearer, 1994; Silverman, 2009). Not all accounts suggested pleasure: responding to sexual identity problems, '*coping with sexuality*' *(Haas and Popp, 2006)* and '*to express one's own sexuality*' (Oyefeso et al., 2008) seemed closer to affect regulation or communication. Only one qualitative study (2.5%) found self-harm to serve a sexual function. The study reported how patients likened cutting to sexual experiences and described a sense of release as blood flowed from the cut (Simpson, 1975).

3.3. Additional reasons for self-harm

Of the 152 studies included in the review over half-27 interview based studies (69%) and 60 questionnaire based studies (53%)- reported at least one reason that did not fit our initial framework. These could be encapsulated in two substantial groups related to *self-harm as a positive experience and self-harm as a means of defining self.*

a) *self-harm as a positive experience*

i. Reports of gratification that was not overtly sexual were surprisingly common (32, 21% studies). We felt that these were capturing something different to sensation-seeking as the sentiment was more comforting than excitement-inducing. Many questionnaires include response categories that capture a sense of pleasure from the act of self-harm such as '*.can be enjoyable or comforting*'*(Klonsky, 2009)*. Participant accounts also included discussion of the pleasurable feelings that can ensue: '*I love to cut*'*(Polk and Liss, 2009)*, '*comforting, it makes me feel warm and just nice*'*(Russell et al., 2010), 'I like the blood, the blood itself, the appearance of the blood was a lot of the satisfaction*'*(Ettinger, 1992)*.

ii. Particularly in those studies exploring reasons of self-harm for young people, self-harm was sometimes described as 'experimental' ((16, 10% studies): '*when I started secondary school, my puberty was beginning. At that time I cut myself for the first time. It was just an experiment*' *(Rissanen et al., 2008)*.

iii. Self-harm as protective of self or others was also evident (22, 14% studies). Statements like '*to make the body unattractive*' could be seen as punishment but it could also at times be protective, for example as a barrier against unwanted advances '*I've been cutting myself so that if someone does try anything they'll see my body and think what a freak, she's disgusting, she's ugly*' (Parfitt, 2005).

Self-harm as protection of others – typically to protect them from consequences of the respondents anger-was evident in statements such as *'It's like I can get angry at times, and when I do it [self-harm], it releases that anger a little bit. I'd rather do it to myself than hurting somebody else'* (Heslop and Macaulay, 2009), '*I banged my head and I'd scream …. I do it because I don't want to hurt somebody else and I have to get rid of it*' (Power et al., 2013). In relation to protecting others from anger or violence, the papers we found invariably described self-injury rather than self-poisoning as the method chosen.

b) *Self-harm as defining the self*

i. We identified a sub-theme of validation (33, 21% studies) in which self-harm could be a way of demonstrating strength or toughness, for example in statements such as'*I feel powerful that I am immune to being hurt by it [the cutting]*'*(Himber, 1994)*. A sense of self-validation was also evident in comparison with others-'You *know, other people are afraid of doing that… They can't imagine how or why you would do that, and … in an arrogant sense it puts me above them*'*(Himber, 1994), 'everyone's doing their arms, I've changed my looks, I've changed my …, my head, just to show people how it's done. If you're going to self-harm, do it properly man. (Bennett and Moss, 2013).*

ii. For some younger respondents an important effect of self-harm was to achieve a sense of belonging (20, 13% studies) *'to feel more part of a group*' *(Lloyd Richardson et al., 2007*, Young et al., 2014*), 'to not feel like an outsider*'*(Heath et al., 2009)*. We did not include this reason with other interpersonal items because it involved self-harm as an act designed to endorse self-statements about identity, rather than as part of real world interaction with others. By the same token we assigned non-psychotic Satan worship to this category, even if practised alone, because it involved adopting rituals sanctioned by a particular group even if no group was attended: *'I slit my veins and drink my blood, more often than not I self-mutilate because of practising Satan worship*'*(Rissanen et al., 2008)*.

iii. Self-harm as a personal language (20, 13% studies)-self-harm was sometimes described as a way '… of communicating the pain within'(Harris, 2000). We included such responses as examples of interpersonal influence. However, it was not always evident in the accounts that communication with others was a goal, rather self-harm could also be a private language, a means of self-expression (eg.McLane, 1996) 'That was how I was feeling, the things I was doing, it would describe my battles and all sorts of things. It was all very pictorially displayed on my body' (Reece, 2005). "I feel better when I see the cuts on my arms…they seem to make me feel like I guess someone gets it, gets why I do this to myself" (Gregory and Mustata, 2012).
Sometimes this writing on the skin was described as more specifically an act of remembrance (4, 3% studies) for particular events or experiences '*to create physical reminders of important events*'*(Klonsky, 2009)*. Remembrance also encompasses memorialising the scars themselves '*cherishing the carvings …how you might cherish significant memories*' (Leibenluft et al., 1987).

iv. Self-harm to achieve a sense of personal mastery (42, 27% studies). This theme encompasses discussion of how self-harm affords the individual a sense of being in control. The affect-regulation and anti-suicide models both describe self-harm similarly-as a way of mastering feelings through elimination of those feelings. The reasons described below however suggest something different in that they suggest self-harm is adding something more than reduction of unpleasant emotions-*'I self-*

injure for a feeling of control, I cut to make myself feel I still have the power to handle the situation'(Polk and Liss, 2009), *'I was able to control it by maybe doing five or six cuts, I precisionally set up a place on my bed and when I cut, I have a cloth or tissue there. I go and rinse them under the tap, damp it down and cut again, I make sure it's always clean when I'm cutting, even sterilise the razor before I use it, even though it's clean, I sterilise it I have to have control over it*' (Bennett and Moss, 2013).

This theme was related to that of validation, from which we distinguished it because in this theme the sense of control derived from the physical act and its immediate consequences, whereas in the validation sub-theme the aim was to achieve a sense of identity that was related to but extended beyond the act itself. We also distinguished this theme from interpersonal influence because the sense of mastery or control described by the individual was an internal feeling of increased agency rather than a description of acts of control exerted in the person's social world.

Fig. 2 offers a descriptive framework of self-reported reasons for self-harm that combines the eight themes derived from the reviews by Suyemoto (1998) and Klonsky (2007) and the additional reasons for self-harm identified in this review.

4. Discussion

Our review found many articles describing reasons for self-harm that fitted the eight themes outlined by Suyemoto (1998) and Klonsky (2007) and the related themes outlined by Nock and Prinstein (2004). Most widely researched were managing distress (affect regulation) and self-harm as a means of exerting interpersonal influence (including help-seeking), followed by punishment and managing dissociation. Less frequently described but nonetheless repeatedly endorsed were reasons to do with averting suicide, sensation-seeking, defining personal boundaries and expressing or coping with sexuality.

In addition we identified a number of reasons for self-harm that are, by comparison, relatively neglected in theorising about its functions for the individual. What these reasons share is a foregrounding of motives for the act that are perceived as positive or adaptive at least by the self-report of respondents. Sensation-seeking from our *a priori* framework had this characteristic and although we found a milder equivalent in the idea of self-harm as gratification, the main content of these new themes was not pleasure but something more like self-affirmation or validation. Although these latter reasons appear initially to be analogous to those functions that Nock and co-authors have called the automatic-positive, as opposed to the social-positive (Bentley et al., 2014; Nock, 2009, 2010; Nock and Prinstein, 2004, 2005) we think there are key differences. First, the majority of reasons we have grouped under *defining the self* and *self-harm as a positive experience* do not appear to be responses to aversive emotional or social circumstances so much as attempts to achieve goals that might be affirmed by anybody; it is not the ends that suggest disorder but the means of achieving them. In that sense they are unlike the reasons grouped under *responding to distress*. Second, these stated

Responding to distress	Self-harm as a positive experience
• Managing distress (affect regulation) – managing painful unpleasant emotional states including: making emotional pain physical; blocking bad memories • Interpersonal influence – changing or responding to how others think or feel; help-seeking • Punishment – usually of self, occasionally of or by others • Managing dissociation – either switching off or bringing on feelings of numbness and unreality • Averting suicide – non-fatal self-harm to ward off suicidal acts or thoughts	• Gratification – self-harm as comforting or enjoyable • Sensation seeking – through a sense of non-sexual excitement or arousal • Experimenting – trying something new • Protection - of self or others • Developing a sense of personal mastery Defining the self • Defining boundaries – self-injury is a means of defining or exploring personal boundaries • Responding to sexuality – through self-harm as creating quasi-sexual feelings or expressing sexuality in a symbolic way. • Validation – demonstrating to self and occasionally to others one's strength or the degree of one's suffering. • Self as belonging or fitting in – to a group or subculture • Having a personal language – including one for remembrance: a means of conjuring up or acknowledging good past feelings or memories

Fig. 2. Table: commonly reported non-suicidal reasons for self-harm. Excluded are psychotic explanations and rarer motives such as self-harm as a political statement or sado-masochistic sexual practice.

reasons refer to underlying goals or values that are not immediately contingent upon (although achieving them may be disrupted by) immediate social or emotional experiences. These two characteristics have implications for understanding and responding to self-harm that we discuss below.

We think there are three reasons for these two groups of reasons for self-harm to have received less attention than they might have done, despite their being identifiable in the published literature.

The first relates to the use of measures in quantitative studies. For example, only the Functional Deliberate Self Harm Assessment, developed and used by Klonsky (2009) and later used by Silverman (2009) includes statements relating to all eight of our initial themes and unsurprisingly only those studies that use this measure found evidence even for our eight initial themes. Very few instruments examine reasons for self-harm beyond affect regulation, the interpersonal, dealing with dissociation and punishment. Qualitative studies that include an opportunity for participants to respond openly to the question of reasons are more likely to identify other potential functions but even here, constraining the analysis may prevent that. For example, Dear et al., (2000) found responses such as '*he self-harmed to punish himself for things he had done*' and *'he likes the sight of blood and playing with it*', but coded neither because they did not fit a pre-defined framework.

This takes us to our second explanation for what we see as an imbalance in the literature. Even when, as we and others have done, researchers take an approach to analysis that is largely oriented towards the literal content of individual accounts, the derivation of themes and allocation of utterances to them still requires a degree of judgement. For example, a participant in one study reported her use of disfiguring self-injury as *'to make myself ugly or disgusting, I've been cutting myself so that if someone does try anything they'll see my body and think what a freak, she's disgusting, she's ugly*' (Parfitt, 2005). The response indicates how self-harm was being used to ward off unwanted attention from others. However, this same behaviour has been interpreted in other research to indicate how people use self-injury as a way of disfiguring their body as punishment (Briere and Gill, 1998) or as self-destruction (Claes and Vandereycken, 2007). To give a second example-Suyemoto (1998) used an excerpt from Leibenluft's et al. (1987) study to exemplify how people use self-harm to reaffirm the boundaries between the self and others; Liebenluft et al. (1987) however, using the same excerpt, reported how this person used self-harm as a way to stop extreme emotional pain.

Our third explanation relates to the source of accounts and how this is likely to bias reported functions. It is possible for example that the predominance of affect regulation as a theory comes from recruiting from clinical practice which will over-represent people with certain problems and approaches to responding to them. In the same way, the lack of evidence for the sensation-seeking model may be due to the fact that most of the evidence is drawn from clinical samples, also noted by Klonsky (2007). This is changing however, and more research is being carried out with non-clinical populations. For example, this review found data drawn from 63 non-clinical populations.

The findings of our review should be considered in light of several limitations.

In our search we used broad search terms to maximise sensitivity rather than specificity (eventually including 0.25% of identified titles); by contrast for example the search terms < non-suicidal self-injury > or < NSSI > produced very specific but insensitive outputs. Nonetheless we may still have missed new themes reported in unidentified studies. In particular we note that reasons for self-harm as we have identified them are very much psychological and do not refer to self-reported accounts of the social context within which self-harm occurs. We only included published articles in English and did not analyse results according to the various populations that were assessed. Given how culturally-grounded self-harm is, we should be cautious about generalising. However, a number of included studies were carried out in non-English speaking European countries and one came from Sri Lanka (Hettiarachchi and Kodituwakku, 1989). We did not undertake a formal test of the repeatability of our data extraction or analysis although we undertook a great deal of informal cross-checking between the three authors and with other experts.

The studies included in the review reported on individuals who had used different methods of harm. Synthesising the data from all the studies, irrespective of the method of self-harm being referred to by participants, will have missed subtleties in the association between reasons and methods. Although some of our themes are manifestly related to self-injury – the infliction of pain, scarring or blood-letting that come from repeated self-cutting for example – many were not so obviously linked to method and few studies reported specifically on this association. We should be cautious about making too many assumptions about links between reasons and method, not least because so many people who repeat self-harm will use different methods in different episodes (Lilley et al., 2008, Owens et al. 2015).

This inability to associate reasons for self-harm with method (except in specific instances) is one consequence of the heterogeneity of the literature we reviewed, which prevented meaningful data-pooling meta-analysis. We therefore have little idea about the prevalence of many of the reasons for self-harm highlighted by this review or how they relate to individual characteristics like gender, age or assigned diagnosis.

5. Implications

It is increasingly recognized that we need a richer understanding of motives than the limited account captured by recent debates about whether a particular act is associated with suicidal intent or not (Kapur et al., 2013). Further research is needed both to determine the prevalence of the various reasons for self harm, including these self-reported positive reasons, and the prevalence of these reasons in different populations and different societies. The relation of reason to method is obvious in circumstances where the method is essential to the reason for it (such as some reasons for blood-letting) but in many cases the link is less clear, especially when an individual may change methods in consecutive acts. The role of stated reasons for self-harm as risk factors for future episodes of self-harm or eventual suicide remains unclear, especially in circumstances where repeated self-harm leads eventually to suicide (Cooper et al., 2005).

Such research faces methodological challenges. It is difficult to design a questionnaire that can elicit information on reasons that can be quite difficult to express in simple terms, that may exist in different admixtures over time since an episode, or vary from one episode to the next, without such an instrument becoming so burdensome that completion rates suffer. Standardised semi-structured interviews may be a better response to the need for flexibility but they are difficult to apply to large numbers of people.

Finally, our findings raise the possibility of new therapeutic approaches. Current interventions tend to operate from a deficit-centred approach that sees self-harm as a symptom of underlying problems in thinking or emotional control. Initial steps involve helping the individual to find short-term ways of alleviating distress or learning to tolerate it, and then longer-term therapy focuses on the contexts within which that distress arises. A complementary approach is to accept there may be positive (to the person that self-harms) functions of the act, and work with the

individual to identify alternative strategies to achieve the same positive goals, replacing self-harm as a way of achieving valued or positive functions with analogous but less harmful ones. Longer-term therapy would then be aimed at defining and planning for the achievement of values-based goals. There are few examples of such approaches in the self-harm literature. Online support forums can meet some of these needs – including remembrance and allowing group membership (Sternudd, 2012, Seko, 2013). Keeping photographs of old scars or buying temporary tattoos are alternative modes of self-expression (Burke et al., 2008). Taking on new and challenging activities – the UK mental health charity Rethink suggests for example trying "….writing, drawing or doing sport" (Rethink, 2013). Therapies based on planning to achieve valued goals, such as behavioural activation or acceptance and commitment therapy (Hayes et al., 2006) are candidates for modification to be used in self-harm. It has to be said that the development and evaluation of such approaches is very limited at the moment; our findings suggest that further work in the area is justified.

Role of funding source

The Economic and Social Research Council had no involvement in the design or writing of the report.

Contributors

AE undertook the review and drafted the manuscript. AH and CB participated in the design of the study, contributed to the data synthesis and helped to draft the manuscript. All authors read and approved the final manuscript.

Acknowledgements

AE was supported during this research by a doctoral studentship award from the UK's Education and Social Research Council: Grant no. ES/H012842/1. We would like to thanks Dr David Owens and Professor David Cottrell for their comments on our descriptions of reasons for self-harm, on our thematic framework and on a previous version of this manuscript.

Appendix A. Supplementary material

Supplementary data associated with this article can be found in the online version at http://dx.doi.org/10.1016/j.jad.2015.11.043.

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