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5 **Title:** Using photo-elicitation to understand reasons for repeated self-harm: a qualitative study

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Abstract

Background: Reasons for self-harm are not well understood. One of the reasons for this is that first-hand accounts are usually elicited using traditional interview and questionnaire methods. This study aims to explore the acceptability of using an approach (photo-elicitation) that does not rely on solely verbal or written techniques, and to make a preliminary assessment of whether people can usefully employ images to support a discussion about the reasons why they self-harm.

Method: Interviews with eight participants using photo elicitation, a method in which photographs produced by the participant are used as a stimulus and guide within the interview.

Results: Participants responded positively to using images to support a discussion about their self-harm and readily incorporated images in the interview. Four main themes were identified representing negative and positive or adaptive purposes of self-harm: self-harm as a response to distress, self-harm to achieve mastery, self-harm as protective and self-harm as a language or form of communication.

Conclusions: Employing this novel approach was useful in broadening our understanding of self-harm.

57 **Background**

58 Self-harm is a major public health concern which incurs large costs to healthcare systems [1]. One of
59 its most intractable features is the high prevalence of repeated self-harm, especially in younger
60 people - 15-25% present to the same hospital following a repeat episode within a year [2]. There is
61 also an increased risk of eventual suicide for people who repeatedly self-harm [3].

62 Most explanations for repeated self-harm focus on deficits such as disordered affect regulation or
63 interpersonal relationship problems (for reviews see Suyemoto [4] Klonsky [5], Edmondson et al [6]).

64 Current therapeutic approaches typically treat self-harm as a symptom of such underlying pathology
65 and have faced criticism from service users as tending to primarily problematize rather than
66 understand [7]. Focussing on solutions to the problem, mainly through development of interventions
67 with problem solving elements, is a research priority [8]. Yet the evidence so far that such
68 interventions are effective in reducing repetition has not been overwhelming.[9-11]. For example, a
69 Cochrane review of Interventions for self-harm in children and adolescents concluded that there is a
70 lack of evidence of effective interventions. Of the relatively few trials of interventions (n=11), most
71 were of low quality [12]. Similar findings were also reported in a Cochrane review of psychosocial
72 interventions for self-harm in adults [13]. Although the number of trials of interventions was greater
73 (n=55) the evidence was reported as “inconclusive” due to the moderate to low quality of the trials,
74 and of those interventions that showed some effectiveness in reducing repetition of self-harm (e.g.
75 cognitive behavioural - based psychotherapy and dialectical behaviour therapy), further trials were
76 needed. It is conceivable therefore that to develop effective interventions which are likely to meet the
77 needs of people who self-harm, a better understanding of why individuals repeatedly self-harm is still
78 required.

79 A challenge for research in this area is the difficulty experienced by people in verbalising reasons for
80 their self-harm [14-18]. For example, when asked why they have self-harmed people often report
81 feeling unable to put it into words [17]. The act itself has been described as their ‘primary language’
82 [19].

83 Despite suggestions that affect can be indescribable and sometimes unknown to the person
84 experiencing it [20], and evidence which shows an association between the trait Alexythymia ‘lacking

85 words for emotion' and self-harm [21], there is still an assumption that we can articulate our distress
86 effectively [14]. This may explain why first person (verbal) accounts of self-harm often focus on
87 precipitating events ("*I had an argument*") rather than a more nuanced exploration of its function in
88 the context of these events [22, 23], consequently restricting our understanding.

89 It has been suggested therefore that future research in self-harm may benefit from an approach that
90 does not rely on purely verbal or written accounts [17]. The value of adopting a visual approach with
91 people who find it difficult to express themselves verbally has been well documented [24-29]. Using
92 participant generated photographs during an interview for example is said to promote expression and
93 communication [30-32]. The visual information evokes a deeper level of consciousness which elicits
94 more of an emotional response than verbal questioning alone, and highlight issues of significance
95 [33]. The benefits of adopting a visual approach when researching sensitive subject areas are also
96 well documented [29, 31-33]. For example, photographs are helpful in introducing difficult subject
97 matter [34]. The photograph(s) can create a sense of distance between the participant and their
98 experience [35] enabling them to opt in/out of direct personal association and talk about an issue
99 more broadly [33].

100 In this study we therefore undertook an initial exploration using photo elicitation, a method in which
101 photographs or pictures are used as a stimulus or guide in interviews [36]. We aimed to explore the
102 acceptability of using an approach (photo-elicitation) that does not rely on solely verbal or written
103 techniques, and to make a preliminary assessment of whether people can usefully employ images to
104 support a discussion about the reasons why they self-harm.

105 **Method**

106 *Participants*

107 Working age adults (18yrs – 65yrs) admitted to the clinical decision unit or the medical assessment
108 unit following a self-harm injury were informed of the research following their self-harm assessment,
109 using information sheets handed out by self-harm team. Service users from a community organisation
110 supporting people who self-harm were also invited to participate through distribution of an information
111 sheet featuring details of the study and contact details of the researcher. Given only a small
112 proportion of people who self-harm attend hospital [37] it was anticipated that capturing experiences

113 from both groups would offer a broader discussion. After initial approaches by staff working in those
114 organisations, those who gave consent to be contacted / expressed an interest were followed up to
115 establish consent and arrange participation. Those people clearly expressing suicidal intent requiring
116 immediate clinical care, requiring translation, or lacking mental capacity were not approached. This
117 was assessed by the self-harm team, where possible.

118

119 *Data collection*

120 Participants were asked to take photographs over a two week period of anything that would help them
121 describe their experience of self-harm. Due to ethical concerns and principles of consent participants
122 were asked to avoid taking pictures of others. All participants were offered the use of a digital camera,
123 although some chose to use their own equipment.

124 Once the participants had taken their photographs, arrangements were made to meet and discuss the
125 images. Some participants chose to print their images prior to this meeting and brought them along,
126 others selected which images they wanted printing and images were printed by the researcher
127 immediately before the interview. All images were viewed and discussed in A4 colour printed format.

128 At interview the technique of auto-driving was employed. In this approach a prior topic guide is not
129 used by the researcher but the participant leads or 'drives' the interview by choosing which pictures to
130 discuss, in what order and how they talk about the pictures: the researcher adopts the role of 'active
131 listener' [38]. Prompts were used to explore thoughts and feelings about presented images and how
132 they represented the participants' experiences. An emergency topic guide was used with one
133 participant who presented without images; this included a discussion around images they might have
134 considered and possible difficulties they encountered. At the end of the interview each participant was
135 informed that the researcher may invite them for a second interview to discuss their experiences
136 further. This was to enable further exploration of any themes following preliminary analyses.

137 Additional consent was obtained from all participants. However, although no further interviews were
138 requested by the researcher, three participants expressed a wish for a further interview. Two of the
139 participants had additional images and issues they wished to discuss, including homosexuality. One
140 participant expressed how after the first interview she had "figured it out"; the uniqueness of the

141 research task appeared to create some initial anxiety. By the end of the first interview she seem
142 reassured and expressed a wish to take more photographs and discuss her experience further.
143 Further interviews were arranged with all three participants two weeks following the first interview
144 though due to varying circumstances (cancellations, intoxication) some interviews took up to six
145 weeks to complete. Interviews were audio-recorded and transcribed verbatim and a copy of the
146 pictures was retained, with the consent of the participants, to be used in the analysis.

147 To assess the acceptability of using images, the interviewer kept field notes about the tone and
148 conduct of sessions and the use to which images were put during discussions, and reviewed audio
149 recordings for what they said about the use of images as well as what was said about self-harm. Each
150 participant was also asked how they felt about using the method at the end of each interview.

151 *Analysis*

152 There is currently little guidance on how to analyse combined visual and textual data [39, 40]. Instead,
153 studies reporting visual methods typically employ methods of analysis designed to manage textual
154 data only [30, 41]. In this study however, the aim of the analysis was to capture both the verbal and
155 the visual data. A polytextual thematic analysis developed by Gleeson [39] was therefore undertaken.
156 This method allows the exploration of more than one type of data set whilst working with the
157 assumption that these data sets are linked; meaning is explored by moving back and forward between
158 the data sets rather than seeing them as separate.

159 Each participant's transcript and set of images was scrutinised for themes in an iterative process that
160 involved moving back and forward from text to images. Initially, textual excerpts and individual images
161 were scrutinised and extracts of text that were felt to say something were highlighted and qualities
162 within the pictures were noted. The next stage was the creation of explanatory codes (a basic unit of
163 meaning) that could be applied to the textual excerpts and individual images that conveyed the
164 interpreted meaning. Following this stage the data were managed as one source (a list of codes with
165 their associated images and text from an individual); separating the analysis by method of collection
166 was avoided [42]. All coded textual data and images were then reviewed for fittingness by reviewing
167 the text and visual data associated with each code to ensure all the data shared the same meaning. If
168 different extracts of data or images differed in meaning then codes were expanded (or collapsed if

169 different codes had a shared meaning). Deleting codes was avoided in case they became pertinent
170 further down the process of analysis. Codes with similar properties were grouped into tentative
171 themes which were then refined and their boundaries demarcated by further scrutiny of the images
172 and text that had informed the themes. Finally, each theme was defined and named.

173 This process was repeated for each participant individually and then the themes across the whole
174 data corpus were explored. A framework of tentative master themes was generated from the
175 individual analysis. Tentative master themes were also assessed for fittingness; data were re-
176 examined to explore the ways in which the data were divergent or convergent across individual
177 participants. Where necessary, themes were collapsed or expanded. NVivo, a qualitative data
178 analysis computer software package was used throughout the analysis [43].

179 Initial analysis was undertaken by the first author and then codes and themes were refined through
180 discussion by all three authors. Using this integrated method of analysis enabled a rigorous and
181 systematic analysis of the textual and visual data from individual experiential accounts of self-harm in
182 the first instance, before concentrating on themes which were common across cases.

183 As part of the interview, the participants were asked about their experience of photo-elicitation.
184 During analysis, the authors held extensive discussions on the nature of the images presented and on
185 the types of images that were not present. Notes from these discussions and from the participants'
186 responses were used to make an assessment of the role of images in the interviewing process, as
187 reported elsewhere [44, 45] .

188 **Results**

189 Consent to be contacted by a researcher was obtained from 28 people; however contact could only
190 be established with 20 people. Of these, thirteen consented to participate in the research; two
191 declined due to housing difficulties; two declined due to low mood; and three people declined due to
192 feeling unable to discuss their self-harm at the time of the research.

193 Of these thirteen, eight people provided data; three withdrew consent (reasons included further
194 inpatient treatment and issues with probation) and two did not respond to attempts to contact them.

195

196 The participants
197 Eight adults, two males and six females, aged between 21 and 65 participated in the study. A total of
198 eleven interviews lasting between 40 minutes and two hours were carried out and 143 photographs
199 were collected (mean number 18 images; range 0-66). One participant, presented without images and
200 an emergency topic guide was used.

201 Five of the participants reported a long history of self-harm using varied methods. Of those, one
202 participant also reported a long history of an eating disorder and addiction to alcohol. Three
203 participants, reported self-poisoning only during a particularly difficult period of their life.

204 Participants also reported having suffered varied mental health problems. Self-reported diagnoses
205 included schizophrenia, drug induced psychosis, depression, alcoholism, bulimia, and dissociative
206 identity disorder.

207

208 **Observations about the use of images**

209 *Number and variety of images*

210

211 In addition to the number of images presented by participants we noted their variety. For example,
212 familial and intimate relationships as well as close friendships were represented through images, as
213 were living and outdoor spaces. The range and number of images facilitated detailed discussions
214 about self-harm in terms of specific triggers, methods of harm and functions; they also elicited
215 discussions of the significance of people and place.

216 We were struck by the absence of some images that are frequently present on internet sites and
217 accessible via social media. We were shown no pictures at all of actual injuries. This might reflect a
218 difference in the personal uses to which people will put images, from those which lead others to place
219 images in the public domain. Since the purpose of the study was to explore the reasons why people
220 self-harm, participants may have chosen images that would enable a discussion of the purpose it
221 served for them, rather than the end result. Alternatively our proscription of pictures of identifiable

222 individuals may have been interpreted as an implicit instruction that only certain more impersonal
223 images were acceptable.

224 *Use of images in interviews*

225
226 The images were readily incorporated into the interviews and there were many occasions where
227 seemingly mundane images, such as a road works sign, unveiled complex narratives relating to self-
228 harm; the interaction between image and narrative was important in understanding what was being
229 communicated.

230 Both males in this study, participants 3 and 8, talked about their experiences in a very visual way.
231 Participant 3 in particular presented pictures to represent the contents of his flashbacks; four out of
232 five images represented traumatic experience which he found difficult to verbalise. One of the images
233 captured two birds, see Figure 1. He discussed how he wanted to capture an image of a heron; he
234 described a fear of herons and how the sight of one would trigger an act of self-harm. He went onto
235 describe how the image (of a replacement bird) represented a very abusive relationship with his
236 mother. His other images also featured images to represent different abusers and places of abuse.

237



Figure 1: The Birds

238

239

240 *Engagement with use of imagery*

241

242 Some participants seemed energised by the task of producing images; participant 2 had arranged
243 some of her images into a collage for the interview. Participant 6 described how the use of visuals had
244 allowed her to express her experiences in a way others could understand:

245

246 *“You could translate into something that somebody else could understand like, like*
247 *the volcano, how would you explain that? Whereas you show them the volcano it’s*
248 *more obvious than words. I suppose people will understand volcanos.” (Participant*
249 *6, p.14 line 614)*

250

251 We noted that some people seemed more familiar with, or receptive to, the idea of taking photographs
252 than others. Only one participant (participant 5) produced no pictures despite consenting. Some
253 respondents seemed more innately “visual” in their thinking. Participant 1 for instance noted how a
254 change in her emotional status also saw a change in her physical appearance:

255

256 *“every time I’ve done it [overdosed], I’ve dyed my hair...it’s a bit weird that like every*
257 *time I’ve done it I’ve kind of tried to change my appearance as well” (Participant 1,*
258 *p.12 line 483 interview 1)*

259

260

261 *A positive experience*

262 Participants reported having enjoyed using photographs to describe their experience of self-harm.
263 They described it as “helpful”, “a good thing” and “interesting”. Participant 1 described how the
264 photograph served as a tool which helped her begin and continue talking about her experience:

265

266 *"it's quite a good thing because if you were just to say come in and talk about it I*
267 *wouldn't know where to start and its good like, it's a talking point, like the picture*
268 *you can say I've taken this because and then it leads, like the picture of my dog, it's*
269 *a picture of a dog but it causes this and that you know what I mean" "*(Participant 1,
270 *p.11 line 511, interview 1)*

271
272 Participants reported feeling able to capture images which represented their personal experience of
273 self-harm. Each participant led their interview and for the most part they seemed at ease throughout.
274 Having prepared for the interview by taking and choosing images in advance, (and perhaps
275 considering what they wished to discuss in relation to each image prior to the interview), served to
276 facilitate the interview.

277

278 *A challenging experience*

279

280 Almost certainly, capturing images to represent experience of self-harm was more of a challenge for
281 some than others. For some the biggest challenge seemed to be getting started and thinking about
282 what they wanted to capture, and then finding the image (e.g. a heron). Most of the participants
283 described the process as something which gathered momentum. Finding images to express
284 emotional states was described as difficult by participant 1 but then she came up with her own
285 solution:

286 *"I don't understand how I can take a picture of anger, like I guess I could take a*
287 *picture of something that causes the anger which I did" (Participant 1, p.12, line*
288 *526, interview 1)*

289

290

291 Some participants apologised for their images and seemed to lack confidence when showing them.
292 Some seemed embarrassed and perhaps felt under pressure to produce images of great interest,
293 which in turn might have inhibited their ability to express their experience of self-harm.

294

295 **Explanations for self-harm**

296 *A response to distress*

297

298 The analysis identified a number of themes that support commonly recognised explanations for self-
299 harm such as: self-harm as punishment, self-harm as a relief from pain (affect regulation) and self-
300 harm as a counter to loneliness.

301 Loneliness was a common theme across all participants with discussion often centred on the scarcity
302 of human contact. Many of the images presented seemed to depict loneliness with a predominance of
303 bare rooms sometimes with single cups on a table.

304 Self-harm as a form of punishment was also a common theme. Participant 4 presented a number of
305 images of barbed wire and one of a rusty medieval looking arrow tip. She described how her self-
306 harm was an act of punishment for bad thoughts and deeds as well as things not done:

307

308 *“...it was punishment but it was kind of good punishment because it hurt but I got a*
309 *satisfaction out of it as well, and it served a purpose so it was, it’s always been a*
310 *very contradictory thing of pain only being soothed by more pain.” (Participant 4,*
311 *p.12 line 656)*

312

313 There was much discussion of self-harm as a way to manage emotions when things got too much.
314 For example, one of the images presented by participant 6 was of a closed door and she described
315 her self-harm as a way to take a pause on her life, not in the sense of contemplating suicide, but
316 temporarily taking a respite when things got too difficult.

317

318 *“Yeah just sick of dealing with all the shit cos it’s one thing after another after*
319 *another sometimes you think just let me step off for a bit and I can’t deal with*
320 *anymore shit thrown my way” (Participant 6, p.11 line 461)*

321

322 Participant 1 described how self-harm was a way to help her sleep and reach a sense of calm when
323 things became overwhelming and she presented a picture of her lying in front of a car seemingly “at
324 rest” see Figure 2.



Figure 2: At rest

325

326 It was an interesting choice of picture in that it could be interpreted as quite the opposite, for example
327 it might suggest vulnerability, risk and disorder. This interaction between the image and narrative was
328 important to really understand what was being communicated. Showing images which depicted the
329 opposite of what was said, and how they preferred to be perceived was particularly notable in the
330 narratives of participants 1 and 3. They both discussed a need to present a hardy persona. Participant
331 1 described how she preferred her friends think that she is fine, rather than “a mental bitch”.
332 Participant 4 similarly presented a number of images which depicted a desire to appear strong, yet on
333 the inside she felt completely broken. The discussion of images helped reveal both their internal and
334 external selves and describe how self-harm can be protective in that it allows the internal self to
335 remain hidden, whilst offering a sense of mastery (being in control of the perception of others).

336

337 *Self-harm as protective:*

338 Many of the participants reported experiencing adverse events throughout their lives, such as sexual
339 abuse, death of significant others and bullying. When discussing these experiences, a common
340 thread throughout the narratives was the apparent lack of protective factors within their life. This was
341 usually expressed through feelings of vulnerability, loneliness and a perceived lack of care from
342 others.

343 A sense of vulnerability was visually represented by participant 4 through images of glass sheets that
344 had been shattered but had not yet fallen apart. Her narrative picked up this theme by describing how
345 she always felt she was shattered on the inside but never actually broken. In reflecting on the images,
346 she described how her experiences had left her internally damaged but that she felt she needed to
347 project an external sense of herself as someone who would never break; they depicted something
348 brutally damaged but still intact, see Figure 3. Participant 4 also presented an image of a brick wall
349 which could both depict external strength but also act as a barrier to conceal her inner turmoil:



Figure 3: Broken glass

350
351 *“Stay upright, stay together and not cross those boundaries so people would find*
352 *out what was going on because that was something that I couldn’t do so I had to*
353 *internalise it.” (Participant 4, p.4 line 136)*

354

355 *A sense of mastery*

356 The theme of self-harm as a sense of mastery captures how feelings of control (or a lack thereof)
357 were experienced in different and complex ways as both an antecedent to and a function of self-harm.
358 Fundamentally control was something participants felt they lacked. It was described in terms of a
359 generalised feeling of lack of agency and also as a result of being controlled by another or others.
360 Participant 4, a young woman who had a long history of self-harm, discussed a dislike of her life of
361 'chaos' and disorder and central to her account was the value of being able to reduce her sense of
362 'chaos' through the act of self-harm. For example, to represent her chaotic life she chose images of
363 winding paths and dark stairwells which for her captured a sense of uncertainty. To counter this she
364 presented an image of a road sign to indicate roadworks ahead. She described the road works sign,
365 which for her represented the act of self-harm, as an indication that she could now sense what was
366 happening ahead and that there was the possibility of repairs to the chaos, see Figure 4.



Figure 4: Roadworks

367

368

369 Some participants reported feeling as though their lives were heavily controlled and manipulated; their
370 sense of control was lacking as they felt controlled by someone or something else. Participant 4
371 described an 'evil' inside her and self-harm was a way to exert some control over this, see Figure 5.

372



Figure 5: An evil inside

373

374 *"I had so many times where I was like, I need to cut because I need to, I can't stop*
375 *the evil, I can't stop it taking over and putting all these pictures in my head and I*
376 *thought ultimately it was going completely take over my personality and I was going*
377 *do all these horrible pictures that I was seeing in my head to other people. So I*
378 *needed to slow it down so it was very logical of ok how do I slow down something*
379 *that's in my blood would be to cut cos I'm releasing the blood therefore I can slow*
380 *down the evil"* (Participant 4, p.15 line 671)

381

382 This sense of control the participants gained through self-harm was also evident when participant 4
383 talked about being her own master of hurt; self-harm gave her control and although she was able to
384 reflect that this might seem irrational, she gained positive benefits from this thought.

385

386 *Self-harm and communication*

387

388 Across participants' accounts of self-harm the theme of communication was very apparent. Many of
389 the participants discussed images representative of communication difficulties.

390 For example, participant 6 presented an image of a women's mouth crossed shut with black strips,
391 see Figure 6. She discussed how she had tried to talk to people about her self-harm in the past but
392 she felt that they "just didn't get it".

393



Figure 6: Difficult to communicate

394

395

396

397 Being unable to communicate satisfactorily was expressed in several ways. First, the use of words
398 was sometimes described as inappropriate and ineffective, some difficult and sensitive experiences
399 were felt to be 'beyond words'. Some participants expressed an inability and reluctance to express
400 themselves through words because of negative experiences or a lack of experience in using words to
401 communicate issues of a sensitive nature.

402

403 *"Actions speak louder than words don't they" (Participant 7, p.3 line 112)*

404

405 *"I don't use my words, so the pressure builds then I, I cut and that's how I deal with*
406 *that" (Participant 4, p.9 line 415)*

407

408 Some participants did describe their self-harm as a form of communication to others of inner turmoil
409 or pain that they either could not find the words for or did not think the words were understood.

410 However, in this theme self-harm was more nuanced than simply social communication, seeking
411 attention or help. The act or injury was often seen as a signifier to the self that things were different, or
412 might be different going forward.

413

414 For example, participant 3 used a grammar metaphor to describe his self-harm. In this sense, the
415 communication was not with others but as a message to himself:

416

417 *"Self-harm is like a full stop, like punctuation, it's punctuation, it's a sort of*
418 *punctuation to moods or emotions or to a series of memories" (Participant 3, p. 8*
419 *line 359)*

420 There was a recognition from some of the participants that using self-harm as communication could
421 be problematic; participant 7 described how she had been criticised by others and at this point in the

422 interview she presented an image of her notebook which symbolised a shift in the way she now
423 expresses herself.

424

425 *“my notebook and erm since like the erm self-harming happened and stuff I’ve*
426 *started like writing like my negative thoughts and feelings down it’s like, its more*
427 *about how I’m dealing with it now...I find it really helpful to just write things down*
428 *that I’d want to say to him like angry feelings and how he made me feel so that I*
429 *won’t say them to him or to anybody else or I’ll like get back in that bad place”*
430 *(Participant 7, p.12 line 601)*

431

432 **Discussion**

433 The aim of this article was to explore whether using a novel method to elicit reasons for self-harm
434 would help participants talk about their experiences and therefore provide a more nuanced
435 understanding of why people self-harm.

436

437 **Utility of the method**

438

439 One of the main purposes of adopting a visual methods study with people who self-harm was to
440 enable them to feel as though they were in control of the research process and offer them a different
441 form of expression. It has been interesting to see how those key features were discussed by the
442 participants as their functions of self-harm. Perhaps through enabling a different form of expression
443 (from conventional methods), yet similar to their chosen form of expression (self-harm), participants
444 felt more able to express and communicate their experience of self-harm. For example, others have
445 suggested that people draw upon visual images during times of psychological distress [46-48] .
446 Holmes et al [47] and Hales et al [46] both reported how participants experienced detailed mental
447 imagery about future suicide attempts, which they termed ‘flash forwards’. They suggested

448 'flashforward' imagery warrants further investigation for formal universal clinical assessment
449 procedures.

450

451 Moreover, the use of metaphorical and figurative speech featured widely throughout most of the
452 participants' accounts which would suggest a propensity to describe experiences of distress through
453 imagery.

454

455 **Explaining self-harm**

456

457 *Self-harm as a response to distress and to punish oneself*

458 As described in reviews by Suyemoto [4], Klonsky [49] and more recently Edmondson et al [6],
459 evidence of self-harm serving to regulate affect (to get relief from negative feelings) and punish
460 oneself (show anger toward oneself to self-soothe) were also found in this study. Both functions are
461 particularly well documented in the literature; a systematic review of self-reported reasons for non-
462 suicidal self-injury, which included accounts of 29,350 participants, found the majority of studies
463 (49/152 articles, 98%) reported evidence of affect regulation as a function of self-harm. Over half
464 (92/152, 60%) reported punishment as a function of self-harm [6].

465

466 *Self-harm and sense of mastery*

467 Self-harm was described as a behaviour through which feelings of control, empowerment and
468 ownership could be sought. The subject of control has been well documented and the evidence
469 suggests that self-harm offers a feeling of control through feeling able to rid oneself of or reduce
470 unpleasant affective states, commonly referred to as affect regulation [4, 5, 18, 50-53]. The findings
471 from this study and others however have shown how control can be gained through the behaviour in
472 and of itself, for example through controlling the level of pain, depth of cut and the amount of blood
473 [18, 49, 51-55]. Moreover, our participants and others described a sense of ownership over their
474 behaviour, remarks such as "*it's mine*", "*there are certain things they can't have and that's [self-harm]*
475 *one of them*". Such statements suggest there are positive experiences to be gained through self-
476 harm. These sorts of experiences resonated with those participant responses in Shearer's [55],

477 Demming's [51] and Brooke and Horn's [53] studies who all studied women's reflections of their self-
478 harm. One participant in Demming's [51] study described her self-harm as something that belonged to
479 her, that she controlled and only she could stop it. Shearer [55] on the other hand included the
480 statement "*to do something I have control over and no one else can control*" within a questionnaire
481 and the item was ranked one of the top three functions by 22% of participants.

482 *Self-harm as protective*

483 Experiences of sexual abuse, death of significant others and mental health problems were common in
484 our participants as they are among most populations where repeated self-harm is found. In response
485 to such experiences self-harm seemed to function as a protection. Usually protective factors -
486 "predictors of positive outcomes among people at risk for developing problems as a result of adverse
487 life events or experiences" [56] - are thought of as a supportive network of family or friends [57]. How
488 can self-harm act as a substitute?

489 The protective properties of self-harm were expressed in different ways, again, some of which
490 resonated with functions such as affect regulation [4, 5] and anti-suicide (where a person self-harms
491 to avoid suicide) [4, 5].

492 The experiences captured in this study however, again, seemed encompassing of something more
493 than affect regulation and anti-suicide. For example, self-harm was described as a behaviour through
494 which feelings of protection and preservation could be sought. Similar descriptors have been reported
495 in other studies and articles, for example, metaphorical statements such as "*it's my life raft...a sort of*
496 *safety shield,*" [58].

497 Collectively these findings support the idea that self-harm serves to regulate feelings of distress, but
498 they also suggest that self-harm can be adaptive and can offer something positive beyond the
499 elimination of distress. For a more detailed discussion about positive and adaptive functions of self-
500 harm see [6].

501

502 *Self-harm and communication*

503 The theme of communication was very apparent throughout the personal accounts of self-harm.
504 Klonsky [5] and Suyemoto [4] both described how people use self-harm as a way of interacting with
505 their environment. Klonsky [5] refers to the 'interpersonal influence' model to describe how people use
506 self-harm to influence or manipulate people in their environment. Suyemoto [4] refers to the
507 environmental model to describe how self-harm creates environmental responses that are reinforcing.
508 The four function model [59, 60] proposes that people use self-harm as a language to serve a social
509 function that relates to items such as "to get other people to act differently or change", "to try and get
510 a reaction from someone, even if it's negative", and "to make others angry". Nock [61] also compared
511 self-harm as a language to somatoform behaviours, whereby physical symptoms are presented as an
512 alternative means to communicating psychological distress.

513

514 Although the environmental model does include how self-harm can be used to express the
515 inexpressible, which might seem related to the idea of using self-harm as a language, these models
516 do not satisfactorily explain how people used self-harm as a language in this study.

517 Messages were 'written on the body' in the same way Adshead [14] described, through the act of
518 self-harm and this was used to do the talking that participants felt unable to for the reasons discussed
519 – not just to seek help or for an immediate social function but in a more personal way – described in
520 other research as a form of remembrance, like creating physical reminders of important events" [49].

521

522 Strengths and Limitations

523 To the best of our knowledge this is the first study to use photo elicitation to explore reasons for self-
524 harm and to an extent, this method encouraged participants' to use images in the same way they use
525 their body, as a way of expression. This visual way of expression allowed the researcher to 'see' what
526 was often hidden and private but in a controlled way. All of the images were generated by the
527 participant which facilitated a safer, more controlled disclosure. For some, it was reported as the first
528 time they had ever spoken in such an honest and detailed way about their self-harm. The study
529 yielded rich, distinct, visual and verbal data (over ten hours of interview, featuring 143 images).
530 However, given the small sample size (n=8) we cannot be confident of saturation or transferability to

531 the population as a whole. Similarly, although some participants were interviewed on more than one
532 occasion, further interviews with all participants following a preliminary analysis would have allowed
533 further exploration of some of the more novel themes (i.e. protection and mastery), and a more
534 detailed discussion of all the images in cases where excessive numbers of images were generated.
535 More emphasis on the process of taking images could also have been discussed in subsequent
536 interviews to enable a more comprehensive critique of the method. Future research into self-harm
537 should consider the strengths and limitations of certain research approaches to ensure a more
538 complete understanding of the reasons why people self-harm, to help develop interventions which are
539 likely to meet the needs of people who self-harm.

540

541 Conclusions

542 Taking pictures is familiar; personal lives now seem perpetually pictorially documented through social
543 media. However, on reflection taking pictures to represent difficult experiences is not as familiar and
544 requires more thought. Using pictures to represent experiences of self-harm required effort, abstract
545 thinking and reflexivity [30] which some people struggled with more than others. For some this
546 approach was possibly perceived as a measure of their ability – observations made in a different
547 context by Mannay [62], Packard [63] and Frith and Harcourt [36].

548

549 These characteristics of photo-elicitation – the degree to which it requires concerted and unfamiliar
550 effort from the informant, and yet offers control over the content of what is discussed – are differences
551 from traditional language-based methods and arise directly from its use of images. We found that
552 most participants responded positively, produced multiple appropriate images and discussed them
553 actively – revealing aspects of their reasons for self-harm that are less well documented. These
554 observations suggest that photo-elicitation has potential as a method for clinical or research use in
555 self-harm work and further evaluation is justified.

556

557

558 **Declarations:**

559 Ethics approval and consent to participate: The study received ethical approval from NHS National
560 Research Ethics Service – Yorkshire & the Humber – Bradford (11/YH/0163). Consent to participate
561 was obtained in written form from all participants.

562 Consent for publication: Consent for publication (i.e. copies of all images) in journal publications was
563 obtained in written form from all participants.

564 Availability of data and material: The de-identified datasets used and/or analysed during the current
565 study are available from the corresponding author on reasonable request.

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570

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578

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742

743 Figure legends:

744 Figure 1: The birds

745 Figure 2: At rest

746 Figure 3: Broken glass

747 Figure 4: Roadworks

748 Figure 5: An evil inside me

749 Figure 6: Difficult to communicate

